ANDREA FERRARA

CURRICULUM VITAE AND PUBLICATION LIST

Scuola Normale Superiore
Pisa, Italy
Cosmology Professor

SCUOLA NORMALE SUPERIORE

HIGHLIGHTS

- Cosmology Professor at Scuola Normale Superiore, Pisa, Italy
- **Dean of the Class of Sciences, Scuola Normale Superiore, Pisa, Italy**
- Director, High Performance Computing Center, Scuola Normale Superiore, Pisa Italy
- Former Prorector for Education, Internationalization and Placement at Scuola Normale Superiore, Pisa, Italy
- INAF Board of Governors Member (2014 – 2015)
- Joint Professor at the Institute for the Physics and Mathematics of the Universe, Tokyo, Japan (2011-2021)
- **European Research Council (ERC) Advanced Grant Award (2017)**
- Honorary Blaauw Professorship, Groningen University, The Netherlands
- Beatrice Tinsley Centennial Professorship, University of Texas at Austin, USA
- Severo Ochoa Prize, Instituto de Astrofisica de Canarias, Spain
- Alexander von Humboldt Foundation, Humboldt Research Award
- In the World's Top 2% Scientists 2020 by Stanford University
- Top Italian Scientist #52
- **206** among Invited, Review and Summary talks at International Conferences
- **126** Colloquia in top scientific/academic institutes of **13** major countries
- Expert evaluator of EU, European Science Foundation and National Research Grants Programs of USA, Germany, Portugal, Holland, Israel, France, Ireland, Switzerland, Norway, Austria, Poland, Slovenia
- **72** among Master, PhD students and Post Docs supervised; **12** have received awards for their Thesis work
- Astronomy & Astrophysics Journal and Dataset Papers in Physics: Editorial Board Member
- **348** refereed papers in international Journals + **163** in conference proceedings (Scopus ID: 7201825167)
- From the Google Scholar database, the *H*-index is **91**; his *i10*-index is **321**
- The total number of citations to his papers is **28,823** (**11886** since 2017)
- His top five most cited papers have more than **3,408** citations.

EDUCATION

1986 National Research Council / CNR Pisa, Scientific Programming Course reg.# 5458
1988 University of Pisa, Pisa, **Laurea in Physics**;
Thesis: *Dust Expulsion from the Disk of Spiral Galaxies*
Advisor: Prof. Federico Ferrini
1988 University of Florence, Florence, Astronomy PhD School admission by competitive exam,
1989 NATO Advanced School, *Chemistry in Space*, Erice, Italy
1989 2nd European Pre-doctoral Astrophysics School, *Late Stages of Stellar Evolution and Numerical Hydrodynamics*', Ponte de Lima, Portugal
1990 NATO Advanced School, *Physics of Star Formation and Early Stellar Evolution*, Crete, Greece
1992 University of Florence, Florence, **PhD in Astronomy**
Thesis: *The Hot Component of the Interstellar Medium: Hydrodynamics and Role in the Disk/Halo Interaction in Spiral Galaxies*
Advisors: Prof. Claudio Chiuderi, Prof. Giorgio Einaudi
1992 Space Telescope Science Institute, Baltimore, USA, **PostDoc Fellow**
1994 Harvard Center for Astrophysics, Cambridge, USA, **PostDoc Fellow**

AFFILIATIONS

1991 INAF/Arcetri Observatory, Florence, **Research Astronomer**
2002 SISSA/International School for Advanced Studies, Trieste, Italy, **Associate Professor**
2008 Scuola Normale Superiore, Pisa, Italy, **Associate Professor**
2009 Institute for the Physics and Mathematics of the Universe, Tokyo, Japan, **Joint Professor**
2012 Scuola Normale Superiore, Pisa, Italy, **Full Professor**

AWARDS, HONORS & PRIZES

1995 Vigoni Fellow Award
1998 JILA/University of Colorado, Boulder, USA, Research Associate
2000 Center for Computational Physics, Tsukuba, Japan, Distinguished Visiting Professor
2000 Ecole Normale Supérieure, Paris, France, Visiting Professor
2002 Observatoire Midi-Pyrenees, Toulouse, France, Visiting Professor
2005 Cosmology Associated Editor: Astronomy & Astrophysics Journal
2008 Honorary Blaauw Professorship, appointed by the Faculty of Mathematics and Natural Sciences, Groningen University at the Kapteyn Astronomical Institute, The Netherlands
2009 National Astronomical Observatory of Japan, Tokyo, Japan, Visiting Professor
2010 Habilitation (Idoneità) as Full Professor in Cosmology
2011 Beatrice Tinsley Centennial Professorship, appointed by the Department of Astronomy, University of Texas at Austin, USA
2012 Editorial Board Member: Dataset Papers in Physics, Astrophysics Section
2013 SKA Science and Engineering Advisory Committee [SEAC], Deputy Chair
2014 INAF Board of Governors, appointed by the Italian Ministry of Research (MIUR)
2014 Virtual Immersions in Science (VIS), SNS Outreach program, Director
2014 G. Giorgi Medal for Science Popularization
2014 Confucius Institute, Advisory Board
2014 Director's Delegate for Internationalization &Outreach, Scuola Normale Superiore, Pisa, Italy
2015 Italian SKA Science Coordination Board, Chair
2015 Scientific Communication Prize (for VIS program), Italian Physical Society
2015 SKA Inter Governmental Organization, Italian Negotiator, appointed by Italian Ministry of Research (MIUR)
2016 Physics PhD School at Scuola Normale Superiore, Pisa, Italy, Coordinator
2016 SKA Science and Engineering Advisory Committee [SEAC], Chair
2016 SKA Italy Coordination Committee (SKAICC), Member
2016 Prorector for Didactics, Internationalization and Placement, Scuola Normale Superiore, Pisa, Italy
2017 European Research Council (ERC) Advanced Grant Award #740120 "INTERSTELLAR"
2018 Severo Ochoa Prize, appointed by Instituto de Astrofisica de Canarias, La Laguna, Spain
2018 Honorary Member, Scuola Terza Generazione, Università La Sapienza di Roma, Italy
2018 Dean of the Class of Sciences, Scuola Normale Superiore, Pisa, Italy
2018 LOFAR2.0, International Science Advisory Panel [SAP], appointed by ILF, Member
2018 LOFAR2.0, Italian Science Advisory Panel [SAP], appointed by INAF, Chair
2019 Alexander von Humboldt Foundation, Humboldt Research Award
The award is granted in recognition of a researcher's entire achievements to date to academics whose fundamental discoveries, new theories, or insights have had a significant impact on their own discipline and who are expected to continue producing cutting-edge achievements in the future.
2019 Associate, ESO Headquarters, Directorate for Science, Garching, Germany
2019 Istituto Carlo Azeglio Ciampi, Florence, Scientific Council, Member
2020 EELISA, European Academic Network, Scientific Council, Member
2022 SNS High Performance Computing Center, Director
2023 Computational Astrophysics and Cosmology PhD School at SNS, Pisa, Italy, Coordinator

INTERNATIONAL MEETINGS: PRESENTATIONS

INVITED (I), REVIEW (R) & SUMMARY (S) TALKS

1. 08/1993 The ISM in Galactic Halos: Current Views, Baltimore, USA, (I)

2. 06/1994 The Physics of the Interstellar and Intergalactic Medium, Marciana Marina, Italy, (I)
3. 07/1994 Dust Survival in Interstellar/Intergalactic Media, Baltimore, USA, (I)
4. 06/1995 The Physics of Lyman-alpha Forest Clouds, Baltimore, USA, (I)
5. 07/1995 The Interplay between Massive Star and the ISM in Galaxies, Paris, France, (I)
6. 03/1996 The Evolution of Low Surface Brightness and Dwarf Galaxies, Baltimore, USA, (I)
7. 04/1996 The Physics of Galactic Halos, Bad Honnef, Germany, (I)
8. 01/1997 Observational Tests of Cosmological Models, Aspen, USA, (I)
9. 02/1997 QSO Absorption Lines and Galaxy Formation, Padova, Italy, (I)
10. 04/1997 Prospects for the AAO/UKST Galactic Plane H-alpha Survey, Sydney, Australia, (I)
11. 04/1997 IAU Coll 166, The Local Bubble and Beyond, Garching, Germany, (I)
12. 12/1997 Molecular Hydrogen in the Early Universe, Firenze, Italy, (I)
13. 12/1997 Dark Matter-Italia 1997, Trieste, Italy, (I)
14. 03/1998 Dwarf Galaxies and Cosmology, Les Arcs, France, (I)
15. 04/1998 SAIT Meeting, Supercomputing Workshop, Palermo, Italy, (I)
16. 06/1998 Star formation, Interstellar Medium and the Evolution of Galaxies, Aspen, USA, (R)
17. 06/1998 The Next Generation Space Telescope, Liege, Belgium, (R)
18. 10/1998 Dust in The Local Interstellar Medium, Bern, Switzerland, (R)
19. 11/1998 The Global ISM, MPA Garching, Germany, (R)
20. 05/1999 Italian Galaxy Formation Network Meeting, Padova, Italy, (I)
21. 06/1999 Centennial AAS Meeting, Chicago, USA, (R)
22. 06/1999 Italian Cosmology Meeting, Asiago, Italy (I)
23. 08/1999 ESO/MPA Meeting The First Stars, Garching, Germany, (I)
24. 09/1999 TMR Workshop on Galaxy Formation, Asiago, Italy, (I)
25. 11/1999 Star Formation Near and Far, ESA/Noordwijk, Holland, (I)
26. 11/1999 Cosmic Structure and Galaxy Evolution, Puebla, Mexico, (I)
27. 03/2000 Stars, Gas and Dust in Galaxies: Exploring the Links, ESO La Serena, Chile, (I)
28. 05/2000 The First Generation of Cosmic Structures, CfA/Cambridge, USA, (I)
29. 07/2000 The Physics of Galaxy Formation, Tsukuba, Japan, (S)
30. 10/2000 Modes of Star Formation in Galaxies, MPIA Heidelberg, Germany, (I)
31. 01/2001 Dwarf Galaxies and their Environment, Bad Honnef, Germany, (I)
32. 02/2001 ESA Missions: NGST, Agenzia Spaziale Italiana, Rome, (I)
33. 05/2001 Chemical Enrichment of the Intracluster and Intergalactic Medium, Vulcano, Italy, (I)
34. 05/2001 Modeling Feedback in Galaxy Formation, IGM/TMR Workshop, Durham, UK, (I)
35. 06/2001 Gaseous Matter in Galaxies and Intergalactic Space, IAP Colloquium, Paris, France, (I)
36. 06/2001 First Stars and Reionization, IGM/TMR Workshop, Firenze, Italy, (I)
37. 07/2001 Star Formation in the Galactic Context, UC Santa Cruz Workshop, US, (I)
38. 08/2001 Low Mass Galaxies and Constraints on Dark Matter, Ringberg Castle, Germany, (I)
39. 09/2001 The Physics of the Intergalactic Medium, IGM/TMR Conference, Munich, Germany, (I)
40. 10/2001 Euroconference The Evolution of Galaxies II. Ile de la Reunion, France, (I)
41. 01/2002 Galactic Winds, Bologna, Italy, (S)
42. 03/2002 Low Z at low and high z: Early Chemical Evolution, Minneapolis, USA (I)
43. 07/2002 Euroconference The Evolution of Galaxies III. Kiel, Germany, (I)
44. 07/2002 Chemical Evolution of Dwarf Galaxies, Ringberg, Germany, (I)
45. 09/2002 The Physics of the Intergalactic Medium, IGM/TMR Conference, Gargonza, Italy, (I)
46. 11/2002 VI Congresso Nazionale Cosmologia, Monte Porzio, Italy, (I)
47. 12/2002 XXI Texas Symposium on Relativistic Astrophysics, Firenze, Italy, (I)
48. 03/2003 The Topology of Reionization, Tucson, USA, (I)
49. 04/2003 XLVII Congresso SAIt, Trieste, Italy, (I)
50. 05/2003 Astrophysical Dust, Estes Park, USA, (I)
51. 05/2003 First Stars II, Penn State University, USA, (I)
52. 07/2003 Galaxy Formation and Evolution, Irsee, Germany, (I)
53. 08/2003 Star and Structure Formation: from First Light to Milky Way, Zurich, Switzerland, (I)
54. 09/2003 The Physics of the Intergalactic Medium, TMR Conference, Ile d' Oleron, France, (I)
55. 09/2003 LIX Congresso Nazionale Societa' Italiana di Fisica, Parma, Italy, (R) Lecture
56. 09/2003 Thinking, Observing and Mining the Universe, Sorrento, Italy, (I)
57. 10/2003 Modelling the Intergalactic and Intracluster Media, Vulcano, Italia, (I)
58. 10/2003 Multiwavelength Mapping of Galaxy Formation and Evolution, Venice, Italy, (I)
59. 11/2003 LOFAR Science Meeting, Leiden, Holland, (I)
60. 12/2003 Joint Seminar Italy-Japan on Cosmology, Niigata, Japan, (I)
61. 05/2004 The IMF@50, A Meeting in honor of Ed Salpeter, Spineto, Italy, (I)

62. 06/2004 Extra-planar Gas, Dwingeloo, Holland, (I)
63. 09/2004 The Physics of the Intergalactic Medium, IGM/TMR Conference, Leiden, Holland, (I)
64. 10/2004 Baryons in Dark Matter Halos, Novigrad, Croatia, (I)
65. 10/2004 New Windows on Star Formation in the Cosmos, College Park, USA, (I)
66. 03/2005 Probing Galaxies Through QSO Absorption Lines, Shanghai, China, (I)
67. 05/2005 Massive Star Birth: a Crossroads of Astrophysics, IAU Symp. 227, Acireale, Italy, (I)
68. 05/2005 Numerical Cosmology, ICTP Trieste, Italy, (I)
69. 06/2005 The Fabulous Destiny of Galaxies, Vth LAM Conference, Marseille, France, (I)
70. 06/2005 Reionizing the Universe, Groningen, Holland, (S)
71. 08/2005 Open Questions in Cosmology, Garching, Germany, (R)
72. 08/2005 The Physics of the Intergalactic Medium, TMR Conference, Klost. Seeon, Germany, (I)
73. 03/2006 Sterile Neutrinos in Cosmology, Crans Montana, Switzerland, (I), [declined]
74. 03/2006 Dwarf Galaxies as Cosmological Probes, Ringberg, Germany, (I), [declined]
75. 05/2006 Massive Stars: from PopIII and GRBs to the Milky Way, STScI, USA, (I), [declined]
76. 06/2006 From Planets to Galaxies, ELTE Budapest, Hungary, (I)
77. 07/2006 First Stars, Institute for Nuclear Theory, University of Washington, Seattle, USA (I)
78. 07/2006 Star Formation from Galactic to Cosmological Scales, MPI Heidelberg, Germany (I)
79. 07/2006 Chemo-dynamics from First Stars to Local Galaxies, CRAL Lyon, France, (I)
80. 10/2006 Radiation Backgrounds from the First Stars, Galaxies, Black Holes, Maryland, USA, (I)
81. 10/2006 From Stars to Galaxies: Building the Blocks to Build the Universes, Venice, Italy, (I)
82. 12/2006 LOFAR and SKA: Status and Perspectives, INAF, Rome, Italy, (R)
83. 04/2007 Astrophysics in the LOFAR Era, Emmen, Holland, (I)
84. 05/2007 Structure formation in the Universe, Chamonix, France, (I)
85. 06/2007 Matter and Energy in the Universe, Blois, France, (I), [declined]
86. 06/2007 Dark Galaxies and Lost Baryons, IAU 244, Cardiff, UK, (I), [declined]
87. 06/2007 HI Survival through Cosmic Times, Spineto, Italy, (I)
88. 06/2007 Energetic Events in the Universe: from Physics to Cosmology, Marseille, France, (R)
89. 07/2007 First Stars III, Santa Fe, USA, (R)
90. 08/2007 Star Formation: Now and Then, KITP, Santa Barbara, USA, (R)
91. 09/2007 Next generation of computational models of baryonic physics in galaxy formation: from protostellar cores to disk galaxies, Zurich, Switzerland, (I)
92. 10/2007 From Planets to Dark Energy: the Modern Radio Universe, Manchester, UK, (R)
93. 04/2008 Marie Curie SKADS Workshop, Astronomy in the Next Decade: Synergies with SKA, Bonn, Germany, (R)
94. 05/2008 52nd National Congress of Italian Astronomical Society (SAIt), Teramo, Italy, (R)
95. 05/2008 Supernovae & GRBs in the Epoch of Reionization, Darjelling, India, (R)
96. 06/2008 LOFAR Science Workshop, Bologna, Italy, (R)
97. 06/2008 Low Metallicity Star Formation: from the First Stars to Dwarf Galaxies, IAU Symposium 255, Rapallo, Italy, (R)
98. 07/2008 Far Away: Light in the Young Universe at Redshift Beyond Three, XXIV IAP Colloquium, Paris, France, (I), [declined]
99. 07/2008 Frontiers in Computational Astrophysics: The Origin of Stars, Planets and Galaxies, Ascona, Switzerland, (I), [declined]
100. 07/2008 Cosmic Reionization, Kavli Institute Workshop, Beijing, China, (S)
101. 08/2008 Cosmology with the CMB and Large Scale Structure, TIFR/IUCAA Workshop, Pune, India, (I), [declined]
102. 09/2008 Probing the Stellar Populations of Distant Galaxies, Cefalù, Italy, (I)
103. 10/2008 The Impact of Simulations in Cosmology and Galaxy Formation, Trieste, Italy, (R)
104. 01/2009 7th Heidelberg Conf. on Dark Matter in Astro-Particle Physics, New Zealand, (R), [declined]
105. 02/2009 Particle Astrophysics and Cosmology, Snowbird, Utah, USA, (I) [declined]
106. 03/2009 The Cosmic Evolution of Helium and Hydrogen, Ringberg Castle, Germany, (R)
107. 03/2009 The Cosmic Evolution of Helium and Hydrogen, Ringberg Castle, Germany, (S)
108. 06/2009 Cosmic Dust, Niels Bohr Institute, Copenhagen, Denmark, (I)
109. 07/2009 The Lyman Alpha Universe, Institute d'Astrophysique de Paris, Paris, France, (R)
110. 09/2009 Tours Symposium on Nuclear Physics and Astrophysics VII, Kobe, Japan, (R)
111. 02/2010 The High-Redshift Universe: A Multi-Wavelength View, Aspen, USA, (S)
112. 02/2010 Cosmic Reionization, Allahabad, India (R) + (S)
113. 03/2010 The First Stars and Galaxies: Challenges for the Next Decade, Austin, USA, (R)
114. 07/2010 38th COSPAR Meeting, Probing the High Redshift Universe, Bremen, Germany, (R)

115. 09/2010 SIGRAV Meeting, Pisa, Italy, (I)
116. 11/2010 Cosmic Radiation Fields, DESY/Hamburg, Germany, (R)
117. 01/2011 NAOJ Workshop on Metal Poor Stars, Mitaka, Japan, (R)
118. 04/2011 International X-ray Observatory (IXO) Meeting, CNR Rome, Italy, (I)
119. 06/2011 The First Galaxies, Max-Planck Institute Workshop, Rindberg, Germany, (I)
120. 09/2011 Young and Bright: High Redshift Structures, AIP Potsdam, Germany, (S)
121. 11/2011 Galactic Archeology, 3rd International Subaru Conference, Shuzenji, Japan, (I)
122. 02/2012 Faint Galaxies and Faint Dwarfs, KITP Workshop, Santa Barbara, USA, (I)
123. 03/2012 Turbulence in Cosmic Structure Formation, Arizona State University, Tempe, USA, (I)
124. 04/2012 Reionization: When and How, IASF Milano, Italy, (R)
125. 05/2012 The Near Infrared Background, Austin, USA, (R)
126. 05/2012 First Stars IV, Kyoto, Japan, (S)
127. 06/2012 Metals in Tuscany Workshop, Spineto, Italy, (R)
128. 10/2012 The Low Metallicity ISM: Chemistry, Turbulence and Magnetic Fields, Goettingen, Germany, (I)
129. 01/2013 Gamma-Ray Bursts and their Host Galaxies, Sesto, Italy, (I)
130. 06/2013 The Near Infrared Background, LIBRAE/Euclid Workshop, NASA Goddard, USA, (I)
131. 06/2013 Cosmic Dawn, Max-Planck Institute Workshop, Rindberg, Germany, (I)
132. 07/2013 EWASS12, European Week of Astronomy and Space Science, Turku, Finland, (I)
133. 09/2013 Lyman-alpha as an astrophysical tool, Albanova Workshop, Stockholm, Sweden, (I)
134. 09/2013 DESY CASPAR Workshop, Hamburg, Germany, (I)
135. 06/2014 Powerful AGN and Their Host Galaxies Across Cosmic Time, Pt. Douglas, Australia (I), [declined]
136. 06/2014 Intergalactic Matters, Heidelberg, Germany (I) [declined]
137. 06/2014 The physics of first star and galaxy formation, Edinburgh, UK, (S)
138. 07/2014 EWASS13, European Week of Astronomy and Space Science, Geneva, Switzerland, (I), [declined]
139. 08/2014 ICTP Workshop, Cosmology from Baryons at High Redshift, Trieste, Italy (I)
140. 09/2014 Joint WISH + First Galaxies International Workshop, Marseille, France (I) [declined]
141. 11/2014 Biology in Space, Scuola Superiore Sant'Anna Workshop, Pisa, Italy (I)
142. 11/2014 Arcetri Extragalactic Retreat, Spineto, Italy (I)
143. 02/2015 Hubble Frontier Fields, Sesto, Italy (I)
144. 03/2015 Back at the Edge of the Universe, Sintra, Portugal (I)
145. 04/2015 South by High Redshift, Austin, USA (I)
146. 05/2015 ICTP Advanced Workshop on Cosmological Structures from Reionization to Galaxies, Trieste, Italy, (I)
147. 05/2015 SAIt LIX Congress, Catania, Italy (I)
148. 05/2015 The Near IR Background II: from Reionization to the Present Epoch, MPA Workshop, Garching, Germany (I)
149. 06/2015 Reionization: A Multi-wavelength Approach, Kruger Park, South Africa (I) [declined]
150. 06/2015 IGM@50 Is the Intergalactic Medium driving Star Formation?, Spineto, Italy (I)
151. 06/2015 First Stars, Galaxies and Black Holes: Now and Then, Groningen, Holland (R)
152. 06/2015 EWASS14, European Week of Astronomy and Space Science, Tenerife, Spain (I)
153. 07/2015 14th Marcel Grossman Meeting on General Relativity, Rome, Italy (I) [declined]
154. 09/2015 Italian Physical Society, 101st Conference, Rome, Italy (I)
155. 12/2015 28th Texas Symposium on Relativistic Astrophysics, Geneva, Switzerland [declined]
156. 10/2015 The Near Infrared Background, LIBRAE/Euclid Workshop, NASA Goddard, USA (I)
157. 12/2015 Cosmology and First Light, Lagrange Institute Conference, Paris France (I)
158. 12/2015 From L'Ile de France to the Edge of the Universe Workshop Paris, France (I)
159. 05/2016 Frontier Objects in Astrophysics and Particle Physics, Vulcano, Italy (I) [declined]
160. 03/2016 Cosmological Intensity Mapping Workshop, Stanford University, USA (I) [declined]
161. 03/2016 FLARE Workshop, LAM Marseille, France (I) [declined]
162. 04/2016 SPICA Workshop, INAF Rome, Italy (I) [declined]
163. 04/2016 MIAPP Cosmic Reionization Workshop, Garching, Germany (I)
164. 10/2016 CTA Consortium Meeting, Bologna, Italy (I)
165. 01/2017 The Growth of Galaxies, Sesto, Italy (I)
166. 06/2017 Second Annual Intensity Mapping Workshop at JHU, Baltimore, USA (I)
167. 06/2017 EWASS16, European Week of Astronomy and Space Science, Prague, Cech Republic, (I) [declined]

168. 07/2017 Whereabouts and Physics of the Roaming Baryons in the Universe, Sesto, Italy (I) [declined]
169. 09/2017 Emission Line Galaxies with MOS: from cosmic noon to the reionization era, Cambridge, UK (I)
170. 10/2017 Theseus Mission Workshop, Naples, Italy (I)
171. 11/2017 Galaxy Evolution and Environment (GEE5), Firenze, Italy (R)
172. 04/2018 A Star Was Born, Conference in Honor of Prof. M. Dopita, Spineto, Italy (I) [declined]
173. 01/2018 The Growth of Galaxies, Sesto, Italy (I)
174. 03/2018 Tokyo Spring Cosmic Lyman Alpha Workshop, Tokyo, Japan (S)
175. 04/2018 The ISM of high-redshift galaxies, MIAPP Workshop, Munich, Germany (I)
176. 06/2018 Shedding Light on the Dark Universe with ELTs, Trieste, Italy (I) [declined]
177. 06/2018 21 cm and dark matter, CERN Workshop, Geneve, Switzerland (I) [declined]
178. 06/2018 Venice Cosmology Workshop, Venice, Italy (I)
179. 07/2018 The Flatiron Institute Workshop, New York, USA (I)
180. 07/2018 15th Marcel Grossman Meeting, Cosmology and multi-messenger astrophysics with Gamma-Ray Bursts, Rome, Italy (I) [declined]
181. 09/2018 A BAM in the Anisotropic Universe, Torino, Italy [declined]
182. 09/2018 Understanding Emission-line galaxies for the next generation of cosmological surveys, Teruel, Spain (I) [declined]
183. 01/2019 Cosmology - The Next Decade, ICTS Bangalore, India [declined]
184. 09/2018 SIGRAV Meeting, Santa Margherita, Cagliari, Italy (I)
185. 12/2018 II National Workshop on SKA, Bologna, Italy (I)
186. 01/2019 The Growth of Galaxies, Sesto, Italy (I)
187. 02/2019 Intensity Mapping Workshop, Flatiron Institute, New York, USA (I)
188. 05/2019 Spica 2019 Conference, Hersonissos, Crete, Greece (I)
189. 06/2019 What matter(s) in between galaxies, Spineto, Italy (I)
190. 06/2019 Zoom-In and Out: From the Interstellar Medium to the Large Scale Structure of the Universe, Stockholm, Sweden (I)
191. 06/2019 EWASS18, European Week of Astronomy and Space Science, Lyon, France (I)
192. 07/2019 Lines in the Large Scale Structure, Marseille, France (S)
193. 11/2019 ALMA Workshop, Ringberg, Germany (I)
194. 01/2020 Observing the First Billion Years of the Universe using Next Generation Telescopes, Indore, India (I) [declined]
195. 01/2020 The Interstellar Medium of High Redshift Galaxies, Sesto, Italy (I)
196. 03/2021 Theseus Mission Workshop, Virtual Meeting (I)
197. 04/2021 Submillimeter and Millimeter Astronomy: Objectives and Instruments, AstroSpaceCenter Moscow, Russia, Virtual Meeting (I)
198. 06/2021 The Near Infrared Background, LIBRAE/Euclid Workshop, NASA Goddard, USA, (I)
199. 06/2021 Massively Parallel Large Area Spectroscopy from Space, Virtual Meeting, (I)
200. 09/2021 The Audible Universe, Lorentz Center, Leiden, The Netherlands, Virtual Meeting, (I)
201. 12/2021 Sazerac Sip, Early Galaxy Formation: Near and Far, Virtual Meeting (I)
202. 06/2022 From Stars to Galaxies II, Gothenburg, Sweden (I)
203. 07/2022 Hot Topics in Astrophysics, CfA, Sesto, Italy (I)
204. 08/2022 33rd IUPAP Conference on Computational Physics, UT Austin, USA (I)
205. 09/2022 Charting the Metallicity Evolution of the Universe, Catania, Italy (S)
206. 10/2022 MIAPP Workshop Star forming clumps across cosmic time, Garching, Germany (I)
207. 02/2023 EAS HERA 2023 Early Career Researchers Workshop, Garching, Germany (I)
208. 03/2023 Cosmic reionization, CfA, Sesto, Italy (I)
209. 03/2023 The Growth of Galaxies. VII, CfA, Sesto, Italy (I)
210. 04/2023 Submillimeter and Millimeter Astronomy: AstroSpaceCenter, Moscow, Russia (I)
211. 04/2023 Escape of Lyman Radiation from Galactic Labyrinths, Kolymbari, Greece (I)
212. 05/2023 First Stars, IFPU Focus Week, Trieste, Italy (I)
213. 05/2023 International Leading Research Workshop, NAOJ, Tokyo, Japan (I)
214. 06/2023 5th Italian Sub-mm Astronomy Workshop, Bologna, Italy (I)
215. 07/2023 Shedding new light on the first billion years of the Universe, Marseille, France (I)
216. 07/2023 European Astronomical Society, Annual Meeting, Krakow, Poland (I) [declined]
217. 07/2023 JWST turns one, Sesto, Italy (I)
218. 08/2023 Galaxy Workshop, Santa Cruz, USA (I)
219. 10/2023 15th symposium on Discovery, Fusion, Creation of New Knowledge by Multidisciplinary Computational Sciences, Tsukuba, Japan (I)

220. 10/2023 High-redshift black holes, IFPU Focus Week, Triste, Italy (I)
221. 11/2023 Metal Production and Distribution in a Hierarchical Universe, ESO Santiago, Chile (I)
222. 01/2024 I2I Workshop, Sesto, Italy (I)
223. 01/2024 Growth of Galaxies IX Workshop, Sesto, Italy (I)
224. 07/2024 Identification of Dark Matter (IDM) 2024, Gran Sasso, L'Aquila, Italy (I), [declined]

CONTRIBUTED TALKS

1. 07/1988 IAU Symposium N. 135, Interstellar Dust, UC Santa Clara, USA
2. 04/1989 IAU Colloquium N. 120, Structure and Dynamics of the ISM, Granada, Spain
3. 09/1989 Chemical and Dynamical Evolution of Galaxies, Marciana Marina, Italy
4. 06/1990 IAU Symposium N. 144, The Interstellar Disk--Halo Connection in Galaxies, Leiden, Holland
5. 05/1991 CTS Workshop, Evolution of Interstellar Matter and Dynamics of Galaxies, Prague, Czech Republic,
6. 06/1992 ESO/EIPC Workshop, Starburst Galaxies and their ISM, Marciana Marina, Italy
7. 10/1992 3rd Maryland Meeting, Back to The Galaxy, College Park, USA
8. 06/1993 Aspen Physics Center Workshop, The Physics of a Dynamic ISM, Aspen, USA
9. 09/1993 ISO Workshop, ESRIN-Frascati, Italy
10. 07/1994 Airborne Astronomy Symposium, NASA/Ames, USA
11. 08/1994 IAU Symp. 169, Unsolved Problems of the Milky Way, The Hague, The Netherlands
12. 09/1994 Dust, Molecules and Backgrounds, Capri, Italy
13. 06/1995 Polarimetry of the Interstellar Medium, Troy, USA
14. 08/1995 Cold Gas at High Redshift, Hoogeveen, The Netherlands
15. 11/1995 IV Congresso Nazionale Cosmologia, Frascati, Italy
16. 07/1996 Dark and Visible Matter in Galaxies, Sesto Pusteria, Italy
17. 05/1997 Normal Galaxies at High and Low Redshift, Accademia dei Lincei, Rome, Italy
18. 07/1997 Structure and Evolution of the IGM from QSO Absorption Line Systems, Paris, France
19. 09/1997 The Young Universe, Rome, Italy
20. 09/1999 H_2 in Space, IAP Paris
21. 07/2017 Spectral Diagnostics to Explore the Cosmic Dawn with JWST, STScI, Baltimore, USA

INTERNATIONAL MEETINGS: ORGANIZATION

SOC/LOC MEMBER (M) OR CHAIR (C)

08/1993 STScI Workshop, The ISM in Galactic Halos: Current Views, Baltimore, USA, SOC (M)
06/1994 Elba Workshop in honor of G. B. Field, The Physics of the Interstellar and Intergalactic Medium, Marciana Marina, Italy, SOC (C) + LOC (M)
08/1997 IAU JD Dwarf Galaxies: Probes for Galaxy Formation and Evolution, Kyoto, Japan, SOC (M)
03/1998 Dwarf Galaxies and Cosmology, Les Arcs, Moriond, France, SOC (M)
10/1999 Star Formation from the Small to the Large Scale, 33rd ESLAB Symp., Noordwijk, Holland, SOC (M)
06/2001 First Stars and Reionization, IGM/TMR Meeting, SOC (C)
06/2002 Early Cosmic Structures and the End of the Dark Ages, Marciana Marina, Italy, SOC (C) + LOC (C)
06/2002 Joint Seminar Italy-Japan on Cosmology, Firenze, Italy, SOC (C)
06/2002 The Physics of the Warm Intergalactic Medium, Vulcano, Italy, SOC (M)
05/2003 First Stars II, Penn State University, USA, SOC (M)
09/2004 Galaxy-IGM Interactions, Kavli Institute for Theoretical Physics, Santa Barbara, USA, Workshop Director
05/2005 Numerical Cosmology, ICTP Trieste, Italy, SOC (M)
06/2005 Reionizing the Universe, Groningen, Holland, SOC (M)
06/2005 Open Problems in Cosmology, MPA/ESO Garching, Germany, SOC (M)
07/2006 Chemodynamics from First Stars to Local Galaxies, CRAL Lyon, France, SOC (M)
08/2006 XXVI IAU General Assembly, Joint Discussion JD07, The Universe at $z>6$, Prague, Czech Republic, SOC (C)
10/2006 17th Astrophysics Conference in Maryland, College Park, Maryland, USA, SOC (M)
06/2007 HI Survival Through Cosmic Time, Spineto, Italy, SOC (M)

06/2008 The Cosmic Odyssey of the Elements, Aegina Island, Greece, SOC (M)
06/2008 IAU Symposium No. 255, Low-metallicity Star Formation: from the First Stars to Dwarf Galaxies, SOC (M)
09/2008 Star Forming Dwarf Galaxies, Kolymbari, Crete, Greece, SOC (M)
09/2009 Highlights in Astrophysics, PhD Astrophysics School, Rabac, Croatia, SOC (M)
09/2009 Tours Symposium on Nuclear Physics and Astrophysics VII, Kobe, Japan, SOC (M)
12/2010 Texas 2010 Symposium, Heidelberg, Germany, SOC (M)
05/2011 First Stars IV, Kyoto University, Japan, SOC (M)
05/2011 GRBs as Probes, Como, Italy, SOC (M)
09/2011 Young and Bright: High Redshift Structures, AIP Potsdam, Germany, SOC (M)
05/2012 The Near Infrared Background, UT Austin Workshop, SOC (M)
06/2012 The Italian Pathway to SKA, MIUR-Rome, SOC (M)
07/2012 EWASS12, European Week of Astronomy and Space Science, Rome, Italy, SOC (C)
08/2012 CECAM Workshop, Theoretical and Computational Astrochemistry, Pisa, Italy, SOC (C)
07/2013 EWASS13, European Week of Astronomy and Space Science, Turku, Finland, SOC (C)
07/2014 The First Billion Years of Galaxies and Black Holes, Sesto, Italy, SOC (C)
09/2014 Società Italiana di Fisica, Centennial Meeting, Pisa, Italy, Cosmology Section President (C)
05/2015 The Near IR Background II: from Reionization to the Present Epoch, MPA Workshop, Garching, Germany (M)
06/2015 Reionization: A Multiwavelength Approach, Kruger Park, South Africa, SOC (M)
07/2015 The Metal Enrichment of Diffuse Gas in the Universe, Sexten, Italy, SOC (M)
01/2016 The Physics of Cosmic Reionization in the SKA Era, Sexten, Italy, SOC (C)
04/2016 The Cold Universe, Kavli Institute for Theoretical Physics, Santa Barbara, USA, Workshop Director
07/2016 High-z 2016, Valletta, Malta, SOC (M)
08/2016 First Stars V, Heidelberg, Germany, SOC (M)
11/2016 The First Pietro Baracchi Conference: Italo-Australian Radio Astronomy in the Era of the SKA, Perth, Australia, SOC (M)
01/2017 The Dawn of Galaxies, Obergurgl, Austria, SOC (M)
03/2017 Collaborative Conference on Nuclear Physics, Siem Reap, Cambodia, SOC (M)
08/2017 Challenges in Galaxy Evolution: from black holes to cosmic web, Florence, Italy, SOC (M)
10/2017 Quantum Gases, Fundamental Interactions and Cosmology (QFC01), Pisa, Italy, SOC (M)
04/2018 The ISM of high-redshift galaxies, MIAPP Workshop, Munich, Germany (C)
06/2019 Zoom-In and Out: From the Interstellar Medium to the Large Scale Structure of the Universe, NORDITA, Stockholm, Sweden (M)
07/2019 Lines in the Large Scale Structure, Marseille, France (M)
01/2020 The Interstellar Medium of High-Redshift Galaxies, Sexten, Italy (C)
03/2020 First Stars VI, Conception, Chile (M)
04/2020 Opening a new window in GRB physics, Pisa, Italy (M)
09/2021 Quantum Gases, Fundamental Interactions and Cosmology (QFC02), Pisa, Italy, SOC (M)
11/2021 Chilean Golden Webinars, Scientific Panel (M)
06/2022 From Stars to Galaxies II, Gothenburg, Sweden (M)
09/2022 Physics and Chemistry of Star Formation, Puerto Varas, Chile (M)
01/2024 I2I2: back again to linking galaxy physics from ISM to IGM scales, Sesto, Italy (M)
07/2024 45th COSPAR scientific assembly, Busan, Korea (M)
10/2024 Cosmic Lyman Alpha Workshop, Kochel - Munich, Germany (M)

COLLOQUIA AT INTERNATIONAL INSTITUTIONS

07/1989 International Center for Theoretical Physics, Trieste, Italy
10/1989 Max Planck Institute for Astrophysics, Garching, Germany
01/1990 Physics Department, University of Pisa, Pisa, Italy
08/1991 Instituto de Astronomia, UNAM, Mexico
01/1992 Astronomy Department, University of Florence, Florence, Italy
09/1992 Tartu Observatory, Tartu, Estonia
02/1993 Space Telescope Science Institute, Baltimore, USA
03/1994 Harvard-Smithsonian CfA, Cambridge, USA
03/1994 Osservatorio Astronomico di Trieste, Trieste, Italy
04/1994 Istituto di Planetologia, CNR, Rome, Italy

04/1994 Sternberg Institute, Moscow, Russia
05/1994 Ioffa Institute, St. Petersburg, Russia
07/1994 Space Telescope Science Institute, Baltimore, USA
08/1994 Max-Planck-Institut für Radioastronomie, Bonn, Germany
08/1994 Max-Planck-Institut für Astronomie, Heidelberg, Germany
02/1995 JILA, University of Colorado, Boulder, USA
03/1995 Dept. of Astronomy, University of Minnesota, Minneapolis, USA
03/1995 University of Minnesota, Minneapolis, USA
03/1995 University of Virginia, Charlottesville, USA
06/1995 NASA Goddard Space Flight Center, Greenbelt, USA
03/1996 University of California, Berkeley, USA
03/1996 University of Virginia, Charlottesville, USA
03/1996 Space Telescope Science Institute, Baltimore, USA
04/1996 Osservatorio Astronomico di Roma, Monte Porzio, Italy
04/1996 Max-Planck-Institut für Astronomie, Heidelberg, Germany
05/1996 Physics Department, Ruhr Universitaet, Bochum, Germany
05/1996 Max-Planck-Institut für Radioastronomie, Bonn, Germany
06/1996 Osservatorio Astronomico di Bologna, Bologna, Italy
02/1997 Dipartimento di Astronomia, Università di Padova, Italy
05/1997 Dipartimento di Fisica, Università di Firenze, Italy
06/1997 University of Wales, Cardiff, UK
06/1997 University of Minnesota, Minneapolis, USA
08/1997 SISSA, Trieste, Italy
11/1997 ESO, Munich, Germany
11/1997 Harvard-Smithsonian CfA, Cambridge, USA
11/1997 University of Wisconsin, Madison, USA
01/1998 Osservatorio Astrofisico di Arcetri, Firenze, Italy
04/1998 Osservatorio Astronomico di Trieste, Trieste, Italy
08/1998 Department of Physics, University of California Santa Cruz, USA
08/1998 Astronomy Department, University of California Berkeley, USA
08/1998 JILA, University of Colorado, Boulder, USA
09/1998 Astronomy Department, University of Texas Austin, USA
09/1998 NRAO Socorro, USA
11/1998 Osservatorio Astronomico Brera, Milano, Italy
01/1999 Dipartimento di Astronomia, Università di Padova, Italy
05/1999 Astronomy Department, Yale University, New Haven, USA
05/1999 Royal Observatory Edinburgh, Edinburgh, UK
01/2000 Astronomy Department, UC San Diego, San Diego, USA
03/2000 ESO, Munich, Germany
03/2000 Observatoire de Paris, Paris, France
05/2000 Space Telescope Science Institute, Baltimore, USA
07/2000 Center for Computational Physics, Tsukuba, Japan
08/2000 Yukawa Center for Physics, Kyoto, Japan
09/2000 National Astronomical Observatory, Tokyo, Japan
11/2000 Institute of Astronomy, Cambridge University, UK
11/2000 Department of Astronomy, Oxford University, UK
11/2000 Ecole Normale Supérieure, Paris, France
11/2000 Institute de Astrophysique, Paris, France
02/2001 Osservatorio Astronomico, Trieste, Italy
03/2001 Osservatorio Astrofisico Arcetri, Firenze, Italy
03/2001 Osservatorio Astronomico, Bologna, Italy
05/2001 Osservatorio Astronomico, Roma, Italy
03/2002 Observatoire Midi-Pyrenees, Toulouse, France
05/2002 Osservatorio Astronomico di Brera, Milano, Italy
10/2002 Sterrewacht Leiden, Leiden, The Netherlands, NOVA Lecture Series
10/2002 Kapteyn Laboratory, Groningen, The Netherlands, NOVA Lecture Series
10/2002 Astronomical Institute, Utrecht, The Netherlands, NOVA Lecture Series
06/2003 Osservatorio Astrofisico di Arcetri, Firenze, Italy
06/2003 Osservatorio Astronomico di Trieste, Trieste, Italy
11/2003 Observatoire de Paris, Meudon, France

06/2004 Max-Planck-Institut für Astronomie, Heidelberg, Germany
05/2005 Observatoire de Geneve, Switzerland
10/2005 Osservatorio Astronomico di Bologna, Bologna, Italy
01/2006 Sterrenwacht Leiden, Leiden, The Netherlands
01/2006 Astronomical Institute, Utrecht, The Netherlands
11/2006 VIRGO/European Gravitational Observatory, Cascina, Italy
12/2006 Scuola Normale Superiore, Pisa, Italy
03/2007 Osservatorio Astrofisico di Arcetri, Firenze, Italy
12/2007 Argelander Institute, Bonn, Germany
09/2008 Institute de Astrophysique, Paris, France
12/2008 Blaauw Prize Lecture, Groningen, Holland
01/2009 Center for Computational Physics, Tsukuba, Japan
01/2009 National Astronomical Observatory, Tokyo, Japan
01/2009 Institute for Physical, Mathematical and Universe Sciences (IPMU), Tokyo, Japan
05/2009 Observatoire de Geneve, Switzerland
05/2009 Institute of Astronomy, Cambridge University, UK
04/2011 Osservatorio Astronomico di Roma, Monte Porzio, Italy
04/2012 Department of Astronomy, University of Texas, Austin, USA
10/2012 Royal Observatory Edinburgh, Edinburgh, UK
11/2012 Physics Department, Columbia University, New York, USA
11/2012 Institute for Theory and Computation, Harvard University, Cambridge, USA
01/2013 LAM, Laboratoire de Astrophysique de Marseille, Marseille, France
04/2013 Osservatorio Astrofisico di Arcetri, Firenze, Italy
04/2013 Princeton University, USA
04/2013 Institute for Advanced Study, Princeton, USA
06/2013 INAF/Rome Observatory, Rome. Italy
06/2013 INAF/Capodimonte Observatory, Naples, Italy
11/2013 Kavli Institute, Cambridge University, UK
02/2014 Astronomy Department, University of Bologna, Italy
04/2014 Physics Dept., University of Pisa, Pisa, Italy
01/2015 Munich Joint Astronomy Colloquium, ESO Garching, Germany
04/2015 Institute of Physics, Amsterdam University, Amsterdam, Holland
06/2015 Kapteyn Laboratory, Groningen, Holland
10/2016 Observatoire de Paris, Meudon, France
12/2016 Gran Sasso Science Institute (GSSI), L'Aquila, Italy
04/2017 Sterrenwacht Hamburg, Hamburg, Germany
04/2017 ETH, Zurich, Switzerland
10/2017 Sterrenwacht Leiden, Leiden, The Netherlands
12/2017 Dublin Institute for Advanced Studies, Ireland
12/2017 Queen University Belfast, Northern Ireland
07/2018 Flatiron Institute, New York, USA
10/2018 Instituto de Astrofisica de Canarias, Tenerife, Spain, I.
10/2018 Instituto de Astrofisica de Canarias, Tenerife, Spain, II.
11/2018 Albert Einstein Center, University of Bern, Bern, Switzerland
11/2018 LAM, Laboratoire de Astrophysique de Marseille, Marseille, France
05/2019 Scuola Normale Superiore, Pisa, Italy
09/2019 Max-Planck for Astrophysics, Garching, Germany
06/2020 ESO Duologues, Garching, Germany
03/2021 Physics Department, University of Padova, Padova, Italy
04/2021 Munich Joint Astronomy Colloquium, ESO Garching, Germany
05/2021 King's College University, London, UK
06/2021 Great Western Seminar Series, Cardiff, UK
09/2021 Dept. of Physics, University of Science and Technology, Pabna, Bangladesh
06/2022 Joint Astrophysics Colloquium, Rome, Italy
10/2022 SETI Institute, Mountain View, CA, USA
10/2022 INAF Observatory, Trieste, Italy
11/2022 Dept. of Physics, University of Naples Federico II, Naples, Italy
03/2023 Racah Institute of Physics, The Hebrew University of Jerusalem, Israel

POSITIONS IN SCIENCE POLICY COMMITTEES

PANEL MEMBER (M) OR CHAIR (C)

1994 SL9-Jupiter Impact Observation Coordinating Panel, (M)
1998 Next Generation Space Telescope, European Science Working Team, (M)
1998 European Consortium for the ESA/NGST Visible Camera, (M)
1998 Italian Consortium for the ESA/NGST Visible Camera, Scientific Committee, (C)
1999 Italian Consortium for the ESA/NGST Data Management Study, (M)
1999 INTAS/NIS Network The Intergalactic Medium, (C)
1999 TMR Network The Intergalactic Medium, Italian Node (C)
2000 INTAS, Evaluating Panel (M)
2000 VLT/UVES Large Project The Cosmic Evolution of the Intergalactic Medium, (M)
2002 Istituto Nazionale di Astrofisica (INAF), Cosmology Working Group Panel, (M)
2006 ASTRONET Science Vision Working Group (SVWG), Cosmology Panel (M)
2007 German DFG Priority Program 1177/2 Witnesses of Cosmic History: Formation and Evolution of Galaxies, Black Holes, and their Environment, Evaluating Panel (M)
2008 NSF Astronomy Division, Grant Proposal Evaluation, Galaxies: Theory, Evaluating Panel (M)
2008 SAGACE Space Telescope, Science Working Group, (M)
2008 Dutch WSRT/LOFAR Program Committee, (M)
2008 ESA Euclid Dark Energy Mission, Science Team (M)
2012 SKA, Italian Consortium, Science Team (M)
2012 Portuguese FCT, Exact Sciences and Engineering, Evaluating Panel (M)
2012 German DFG Research Grants Program, Evaluating Panel (M)
2012 Science Journal, Newcomb Cleveland Prize, Evaluating Panel (M)
2012 OPTICON Project, University of Edinburgh, UK, Evaluating Panel (M)
2013 LIBRAE (Looking at Infrared Background Radiation Anisotropies with Euclid), NASA-selected project for EUCLID, Science Team (M)
2013 EUCLID Primordial Universe/Cosmic reionization Science Working Group (C)
2013 SKA Science and Engineering Advisory Committee [SEAC], Deputy Chair
2013 La Limonaia Scienza Viva, Board of Governors (M)
2013 Scuola Normale Superiore Library, Scientific Council (M)
2014 International Astrostatistics Association (M)
2014 Tuscany University Orientering (TUO) Program, Regione Toscana, SNS Delegate
2014 Japanese Subaru Telescope, Time Allocation Committee (M)
2015 "Enrico Fermi" Prize, Società Italiana di Fisica, Awarding Committee, Appointed Member (M)
2015 INAF SKA Science Coordination Board, Director (C)
2015 Hiring Committee, Professorship Search, University of Oslo, Norway (M)
2015 JSPS Japanese Scientific Research on Innovative Areas, Steering Committee, (M)
2015 EU ERC Advanced Grants, Evaluator
2016 THESEUS Mission, Science Working Group (M)
2016 AstronomiAmo, Association for the Popularization of Scientific Culture, Honorary Member
2016 SKA Science and Engineering Advisory Committee [SEAC], Chair
2017 Irish Research Council Laureate Awards Programme, Assessor
2017 Japanese Subaru Telescope, Time Allocation Committee (M)
2018 International LOFAR, Cycle11, Italian Time Allocation Committee (C)
2018 European Science Foundation, College of Expert Reviewers (M)
2019 THESEUS Mission, Synergy Working Group (C)
2019 MAESTRO Program, National Science Centre (NSC), Poland, Evaluation Panel (M)
2021 Agencie Nationale de la Recherche (ANR), France, Evaluation Panel (M)
2021 EU ERC Starting Grants Panel PE9 'Universe Sciences', (M)
2021 HST Cycle 29 TAC, At-Large Member (M)
2021 Hiring Committee, Professorship Search, University of Genova, Genova, Italy (M)
2022 Agencie Nationale de la Recherche (ANR), France, Evaluation Panel (M)
2022 Leibnitz-Institute für Astrophysik Potsdam, Germany, Evaluating Committee (M)
2022 Slovenian Research Agency (ARRS), Slovenia, National Research Call, Evaluator
2023 JWST Cycle 2 Time Allocation Committee Expert Reviewer (M)
2023 ALMA Cycle 10, Large Programs, Science Assessor (declined)
2023 INAF Large Programs, Evaluation Panel (M)

2023 The Probe Far-IR Mission for Astrophysics (PRIMA) Science Working Group (M)
2023 EU ERC Advanced Grants Panel PE9 'Universe Sciences', (M)
2023 Natural Sciences and Engineering Research Council of Canada, Discovery Grants, Evaluator

PHD/MASTER STUDENTS AND POSTDOC SUPERVISION

PHD (PHD), MASTER (M) OR POSTDOC (PD)

1. 1995 S. Bianchi, *Extinction and Polarization of Radiation in Spiral Galaxies*, Physics (M)
2. 1996 M. Ricotti, *Energy Dissipation in Interstellar Cloud Collisions*, Physics (M)
3. 1996 F. Miniati, *Kelvin-Helmholtz Instabilities in the Interstellar Gas,* Physics (M)
4. 1996 B. Ciardi, *Ly-alpha Absorbers Associated with Dwarf Galaxies in a CDM Cosmological Scenario*, Physics (M)
5. 1997 S. Marri, *Gravitational Magnification of High Redshift Supernovae in Hierarchical Cosmological Models*, Physics (M)
6. 1998 B. Ciardi, *Population III Objects and the Early Universe*, Astrophysics (PhD), Gratton Prize Mention of Honor, Marie Curie Excellence Award
7. 1999 M. Bruscoli, *CMB Anisotropies Due to Inhomogeneous Reionization*, Physics (M)
8. 1999 P. Todini, *Dust Formation in the Early Universe*, Physics (M)
9. 1999 X. Hernandez, Research Area: Fate of First Stars, (PD)
10. 2000 M. Bruscoli *The Impact of Reionization on the CMB*, Astrophysics (PhD)
11. 2000 R. Schneider, Research Area: Feedbacks in Galaxy Formation, (PD), ERC Starting Grant Awardee
12. 2000 I. Iliev, Research Area: Feedbacks in Galaxy Formation, (PD)
13. 2000 N. Spillantini, *Supernova Explosions in the First Objects*, Physics (M)
14. 2000 A. Maselli, *Cosmological Radiative Transfer and Reionization of the Universe*, Physics (M)
15. 2000 F. Sigward, *Cosmic Explosions: Effects on Galaxy Formation*, Physics (M)
16. 2001 H. Hirashita, Research Area: Chemical Evolution of Galaxies Formation, (PD)
17. 2001 L. Zappacosta, *The Missing Baryons in the Local Universe*, Astrophysics (PhD)
18. 2001 R. Salvaterra, *Reionization Imprints on the CMB*, Astrophysics (PhD), Gratton Prize Honorable Mention; Tacchini Prize Award
19. 2001 E. Scannapieco, Research Area: Formation of Low-Mass Galaxies at High Redshift (PD)
20. 2002 P. Richter, Research Area: QSO Absorption Lines, (PD)
21. 2003 A. Fangano, *The Influence of Galaxy Formation on the Cosmic Environment*, Physics (M)
22. 2003 M. Valdes, *HI 21cm Line Signals from Reionization*, Physics (M)
23. 2003 S. Gallerani, *Reionization Signatures in Quasar Absorption Spectra*, Astrophysics (PhD), Puppi Prize Honorable Mention; Gratton Prize Award
24. 2003 M. Mapelli, *Relic Signatures of Cosmic Reionization*, Astrophysics (PhD), Tacchini Prize Award; Gratton Prize Award; MERAC Prize for the Best Early Career Researcher; ERC Consolidator Grant Laureate 2017
25. 2004 N. Mori, *Ly-Alpha Emission from Forming Protogalaxies,* Physics (M)
26. 2004 T. Choudhury, Research Area: QSO Absorption Lines, (PD)
27. 2004 S. Salvadori, *Metallicity distribution of Metal Poor Stars in the Galaxy*, Physics (M)
28. 2005 L. Tornatore, Research Area: Cosmological simulations, (PD)
29. 2005 S. Salvadori, *Metallicity distribution of Metal Poor Stars in the Galaxy*, Astrophysics (PhD), Gratton Prize Award, Marie Curie Award, ERC Starting Grant 2018
30. 2006 P. Dayal, *The most distant luminous sources*, Astrophysics (PhD), ERC Starting Grant Awardee, International Union of Pure and Applied Physics Young Scientist Medal 2017
31. 2006 C. Evoli, *Cosmic ray effects in the early universe*, Astrophysics (PhD)
32. 2008 F. Shu-Kitaura, Research Area: Bayesian reconstruction methods (PD)
33. 2008 Y. Xu, *HI 21cm radiation from the Dark Ages*, Astrophysics (PhD)
34. 2009 S. Baek, Research Area: HI 21 cm radiation from the Dark Ages, (PD)
35. 2010 M. Valdès, Research Area: Dark matter indirect detection, (PD)
36. 2010 A. Rorai, *Cosmic Radiative Feedbacks*, Physics (M)
37. 2011 A. Petri, *Supermasive Black Hole Formation*, Physics (M)
38. 2011 L. Vallini, *Molecular Content of Lyman Alpha Emitters*, Physics (M)
39. 2011 A. Pallottini, *Quasar Scintillation and the Warm Intergalactic Medium*, Physics (M)

40. 2011 A. Mesinger, Research Area: Cosmic Reionization and HI 21 cm, ERC Starting Grant Laureate (PD)
41. 2012 S. Gallerani, Research Area: Molecules at high redshift, (PD)
42. 2012 L. Vallini, *Molecular Content of Lyman Alpha Emitters*, Physics (PhD), Marie Curie Award
43. 2012 A. Pallottini, *Metal Enrichment of the Intergalactic Medium*, Physics (PhD)
44. 2012 S. Manti, *HI 21cm and primordial non-Gaussianities*, Physics (PhD)
45. 2012 A. Aykutalp, Research Area: Radiative feedback and galaxy formation (PD)
46. 2013 F. Pacucci, *The First Black Holes in the Cosmic Dark Ages,* Physics (PhD), Gratton Prize Award, IAU PhD Prize Award
47. 2013 B. Yue, Research Area: Cosmic Near Infrared Background (PD)
48. 2014 P. Comaschi, *Lyman Alpha Intensity Mapping,* Physics (M)
49. 2014 A. Das, *Cosmic reionization: sources and evolution,* Physics (PhD)
50. 2014 C. Feruglio, Research Area: FIR spectroscopy (PD)
51. 2015 M. Orofino, *Detecting the Most Distant Quasars,* Physics (M)
52. 2015 G. Ucci, *Using JWST to Investigate the Reionization Epoch,* Physics (PhD)
53. 2016 D. Decataldo, *Molecular Clumps in QSO Outflows,* Physics (M)
54. 2016 D. Decataldo, *The Physics of High Redshift Molecular Clouds,* Physics (PhD)
55. 2016 M. Kohandel, *Feedback-regulated growth of the early black hole population,* Physics (PhD)
56. 2018 C. Behrens, Research Area: Lya line radiation transfer (PD)
57. 2018 V. Allevato, Research Area: Supermassive black hole clustering (PD), Marie Curie Award
58. 2018 A. Lupi, Research Area: Black holes in high-z galaxies (PD), ERC AdG Fellow
59. 2018 S. Carniani, Research Area: ISM of high-z galaxies (PD), ERC AdG Fellow, ERC Starting Grant 2021 Awardee
60. 2018 L. Sommovigo, *IR Emission from High Redshift Galaxies*, Physics (M)
61. 2018 G. M. Tomaselli, *Lyman Alpha radation pressure: a model,* Physics (M)
62. 2019 S. Fiaschi, *Gravitational lensing of high-redshift galaxies,* Physics (M)
63. 2019 P. Comaschi, *Intensity Mapping as a Tool to Study High-z Galaxies,* Physics (PhD)
64. 2019 L. Sommovigo, *Dust in the Early Universe*, Physics (PhD)
65. 2020 E. Ntormousi, Research Area: Magnetic fields in high-z galaxies (PD), ERC AdG Fellow
66. 2020 L. Vallini, Research Area: ISM of high-z galaxies (PD), ERC AdG Fellow
67. 2020 M. Kohandel, Research Area: Dynamics of high-z galaxies (PD), ERC AdG Fellow
68. 2020 F. Ziparo, *Primordial Black Holes,* Physics (PhD)
69. 2021 V. Markov, Research Area: Emission lines from high-z galaxies (PD), ERC AdG Fellow
70. 2021 A. Roy, Research Area: First stars and dwarf galaxies (PD)
71. 2021 E. Pizzati, *Galactic outflows and their role in extended halos formation*, Physics (M), Ciampi Prize Award, Geppina Coppola Prize Award
72. 2022 S. Facchiano, *Searching for massive black holes at high-z with emission lines*, Physics (M)
73. 2022 A. Matteri, *Cosmic reionization,* Physics (M)
74. 2022 D. Manzoni, *Near Infrared Background,* Physics (PhD)

INTERNATIONAL PHD THESIS COMMITTEES

Foreign expert in most recent examination committees for the:
2009 PhD defense by Dr. Sunghye Baek, Université Paris VI Pierre and Marie Curie, Paris, France
2009 PhD defense by Dr. Smadar Naoz, Tel Aviv University, Tel Aviv, Israel
2010 PhD defense by Dr. Peter Laursen, University of Copenhagen, Denmark
2010 PhD defense by Dr. Jan-Pieter Pardekooper, Leiden University, Leiden, The Netherlands
2011 PhD defense by Dr. Jochen Sebastian Klar, Technische Universität Berlin, Berlin, Germany
2011 PhD defense by Dr. Girish Kulkarni, Harish-Chandra Research Institute, Allahabad, India
2011 PhD defense by Dr. Silvia Galli, Université Paris Diderot Paris VII, Paris, France
2012 PhD defense by Dr. Sudhir Raskutti, University of Melbourne, Melbourne, Australia
2012 PhD defense by Dr. Karl Joakim Rosdahl, Université C. Bernard Lyon I, Lyon, France
2012 PhD defense by Dr. Aycin Aykutalp, Groningen University, Groningen, The Netherlands
2013 PhD defense by Dr. Jacopo Chevallard, Université Paris VI Pierre and Marie Curie, Paris
2016 PhD defense by Dr. S. Recchia, Dr. I. Drachnev, GSSI L'Aquila, Italy
2020 PhD defense by Dr. L. Liang, University of Zurich, Switzerland
2020 PhD defense by Dr. B Liu, University of Texas, Austin, USA

TEACHING EXPERIENCE

2002-2008 SISSA, Trieste, Graduate course: "Basic Cosmology"
2009-2011 SNS, Pisa, Undergraduate/Graduate level course: "Cosmology after Recombination"
2011-2013 SNS, Pisa, Undergraduate/Graduate level course: "Astrobiology"
2014- SNS, Pisa, Undergraduate/Graduate level course: "Introduction to Physical Cosmology"
2014- SNS, Pisa, Graduate level course: "Frontiers of Cosmology and Astrophysics"

EDITORIAL ACTIVITIES

Cosmology Editor: (a) Astronomy & Astrophysics Journal (2005-2018)
(b) Dataset Papers in Physics Journal, Astrophysics Section (2010-2015)
Referee: Nature, Science, The Astrophysical Journal, Monthly Notices of the Royal Astronomical Society, Astronomy & Astrophysics, New Astronomy, JCAP, PASJ, Astronomical Society of the Pacific
Book Editing: Publications of the Astronomical Society of the Pacific, Cambridge University Press, Springer-Verlag, Berlin, Germany

EDUCATIONAL AND PUBLIC ACTIVITIES

EDUCATIONAL (E) OR PUBLIC (P)

1997 The Evolution of the Universe, Moggiona, Italy, (P)
1998 Scuola Nazionale di Dottorato, AGN - Interstellar Medium, Riccione, Italy, (E)
2001 Arcetri Lecture Series, High Energy, Particle Astrophysics and Cosmology, Florence, Italy, (E)
2002 Cosmic Frontiers, Università dell'Età Libera, Firenze, Italy, (P)
2002 Early Structures in the Universe, Società Astrofili Fiorentini, Firenze, Italy, (P)
2002 Hubble Expansion, Settimana della Scienza, Istituto Stensen, Firenze, Italy, (P)
2003 SIGRAV School in Contemporary Relativity and Gravitational Physics, Como, Italy, (E)
2004 Varenna School on Background Microwave Radiation and Cosmology, Varenna, Italy, (E)
2006 TIARA Cosmology Winter School, Taipei, Taiwan, (E)
2006 Saas Fee School on First Light in the Universe, Les Diablerets, Switzerland, (E)
2006 ICTP Summer School on Cosmology and Astroparticle, Trieste, Italy, (E)
2007 Fiat Lux, PhD School, Novigrad, Croatia, (E)
2007 ICTP School on Astrophysical Fluid Dynamics, Trieste, Italy, (E)
2008 Supernovae & GRBs in the Epoch of Reionization, Darjelling, India, (E)
2008 Kavli School on Cosmic Reionization, Beijing, China (E)
2008 TIFR/IUCAA School Cosmology with the CMB, Pune, India, (E)
2008 The First Cosmic Billion Year, Blaauw Prize Public Lecture, Groningen, Holland, (P)
2009 The First Cosmic Billion Year, Pianeta Galileo, Firenze, Italy, (P)
2009 National PhD Astrophysics School, Spineto, Italy, (E)
2009 PhD Astrophysics School Highlights in Astrophysics, Rabac, Croatia, (E)
2010 IMPRS PhD School, First Stars and Cosmic Reionization, Heidelberg, Germany, (E)
2010 The Cosmic Dawn, Fondazione Bancaria CR Pistoia, Quarrata, Italy, (P)
2010 L'Universo dei Sensi, Gabinetto Viesseux, Firenze, Italy, (P)
2010 Fondazione Bancaria CR Pistoia, The Cosmic Dawn, Quarrata, Italy (P)
2010 The Cosmic Dawn, Pianeta Galileo, Firenze, Italy, (P)
2011 CPS 7th School of Planetary Sciences, Kobe, Japan, (E)
2011 Cosmology and Religion, EGO-Virgo Public Conference Series. I. Pisa, Italy, (P)
2011 Music and the Universe, EGO-Virgo Public Conference Series. II. Pisa, Italy, (P)
2012 The Universe: Origin and Evolution, Rotary Club Lucca, Lucca, Italy, (P)
2012 Dubbi Cosmologici, in *Dubito ergo sum,* Fondazione Niels Stensen, Firenze, Italy (P)
2012 Comprendiamo il nostro Universo?, Villa Bottini, Lucca, Italy (P)
2013 Le Origini del Cosmo secondo la Scienza, Comune di Capannori, Italy (P)
2013 1^{o} Premio Nazionale di Divulgazione Scientifica, AIL, Scientific Committee Member
2013 Varenna School on New Horizons for Observational Cosmology, Varenna, Italy, (E)
2013 Cosmologia, Progetto Toscana Università Orientamento (EU-TUO), Firenze, Italy (E)
2013 SHINE! The Researchers Night, EU-FP7 PEOPLE Program, Coordinator (P)
2013 Cosmologia, Corso di Orientamento SNS-Università di Trento, Rovereto, Italy (E)
2013 SHINE! The Researchers Night, EU-FP7 PEOPLE Program, Public Lecture, Pisa, Italy (P)
2013 11th Livio Gratton Prize, Public Lecture, Frascati, Italy (P)
2013 Associazione Italiana del Libro, Premio per la Divulgazione Scientifica, Board Member (P)

2014 Public Japanese TV (NHK), "Cosmic Front", interview for the documentary (P)
2014 Public Italian Radio (RAI), "Caterpillar", interview (P)
2014 L'universo e il suo passato, Università della Terza Età, Lucca. Italy (P)
2014 L'universo e il suo futuro, Università della Terza Età, Lucca, Italy (P)
2014 Dal vuoto a qui e dopo ancora, Museo della Scienza e Tecnica, Firenze, Italy, (P)
2014 Cosmologia, Corso di Orientamento SNS, San Miniato, Italy (E)
2014 Cosmologia, Corso di Orientamento Scuola Superiore Sant'Anna, Volterra, Italy (E)
2014 Cosmologia, Progetto Toscana Università Orientamento (EU-TUO), Firenze, Italy (E)
2014 Cosmologia, Progetto Toscana Università Orientamento (EU-TUO), Pisa, Italy (E)
2014 Fondazione Bancaria CR Pistoia, Corso di Orientamento, Quarrata, Italy (E)
2015 L'alba del cosmo, in *l'Astronomia,* Fondazione Niels Stensen, Firenze, Italy (P)
2015 ExoHomes, Rotary Club Lucca, Lucca, Italy, (P)
2015 ICTP School on Cosmology, Trieste, Italy (E)
2015 Cosmologia, Corso di Orientamento SNS, San Miniato, Italy (E)
2015 Cosmologia, Corso di Orientamento Scuola Superiore Sant'Anna, Pavia, Italy (E)
2016 Scusi, il suo pianeta è abitabile? Università della Terza Età, Lucca, Italy (P)
2016 The first black holes, RAI Radio3 Scienza, broadcasted interview (P)
2016 C'è qualcuno là fuori?, Università della Terza Età, Lucca, Italy (P)
2016 C'è qualcuno là fuori?, 1st Italian Astrochemistry Workshop, Firenze, Italy (P)
2016 Enrico, c'è qualcuno là fuori?, Corso di Orientamento Scuola Superiore Sant'Anna, Pisa, Italy (E)
2016 L'universo e il suo futuro, Star Party AstronomiAmo, Orcignano, Italy (P)
2016 Undestanding Hawking's radiation, RAI Radio3 Scienza, broadcasted interview (P)
2016 Do we understand our universe?, Corso di Orientamento SNS, San Miniato, Italy (E)
2016 Primordial chemistry and the first stars, KROME School, Firenze, Italy (E)
2016 Nello spazio, nel cosmo, Italian Ministry of Defence Workshop, Florence, Italy (P)
2016 Rosso come un buco nero, BRIGHT European Researchers' Night, Pisa, Italy (P)
2016 Galassie all'alba del cosmo, Società Astrofili Fiorentini, Firenze, Italy, (P)
2017 Comprendiamo l'Universo?, Liceo Scientifico L. Dini, Pisa, Italy (E)
2017 Rosso come un buco nero, Università della Terza Età, Lucca. Italy (P)
2017 Event Horizon Telescope, RAI Radio3 Scienza, broadcasted interview (P)
2017 First stars and Cosmic Reionization, Spetses PhD School, Spetses, Greece (E)
2017 Cosmologia, Corso di Orientamento SNS, San Miniato, Italy (E)
2017 Cosmologia, Corso di Orientamento Scuola Superiore Sant'Anna, Pavia, Italy (E)
2017 PhD Cosmology School, Fuerteventura, Spain (E)
2017 Nello spazio, verso le origini del cosmo, BRIGHT European Researchers' Night, Pisa, Italy (P)
2018 C'è qualcuno là fuori?, Istituto Ilaria Alpi, Vicopisano, Italy (E)
2018 Eternal inflation, RAI Radio3 Scienza, broadcasted interview (P)
2017 2001 Space Odissey, Punto Radio, broadcasted interview (P)
2018 Le Notti dei Cavalieri, Il tempo, public talk show, Pisa, Italy (P)
2018 Flatiron Institute Workshop/School, New York, USA (E)
2018 Premio Nazionale di Divulgazione Scientifica *Cosmos,* Jury Member (P)
2018 Cosmologia, Corso di Orientamento SNS, Napoli, Italy (E)
2018 Il nostro Universo, Convegno BIOGem, Ariano Irpino, Italy, (P)
2019 50 anni dall'allunaggio, Punto Radio, broadcasted interview (P)
2019 Il futuro del nostro Universo, Società Astrofili Fiorentini, Firenze, Italy, (P)
2019 Event Horizon Telescope, RAI Radio3 Scienza, broadcasted interview (P)
2019 Event Horizon Telescope, Punto Radio, broadcasted interview (P)
2019 Event Horizon Telescope, Scuola Normale Superiore, Pisa, Italy (P)
2019 Nuit Sciences et Lettres de l'Ecole Normale Supérieure, Paris, France (P)
2019 Popular Series of 30 books "Viaggio nell'Universo" in collaboration with the national newspaper *Corriere della Sera* and RAI Libri (P)
2019 Broadcasted TV interview with Piero Angela on RAI2 channel on "Viaggio nell'Universo" (P)
2019 Broadcasted TV interview on RAI2 on the 1969 Moon Landing (P)
2019 Beyond the Moon*,* Internet Festival, Pisa, Italy (P)
2019 Event Horizon Telescope, Le Vie della Scienza, Valdagno, Italy (P)
2020 Il primo inquinamento cosmico, Webinar, AstronomiAmo (P)
2020 Cosmologia, Corso di Orientamento SNS (online videconference), Pisa, Italy (E)
2020 Leggere per non dimenticare, Firenze, Italy (P)
2020 L'Universo, entry in the Treccani Encyclopedia, Parole del XXI secolo (E)
2020 QPlayLearn Launch Event: Outreach Web Platform, Turku, Finland (P)

2021 Cosmos Prize for the Students, book presentation, virtual meeting (P)
2021 Beyond the Moon*,* Società Astrofili Fiorentini, Firenze, Italy (P)
2021 Il nostro Universo, TraninING, Ordine Ingegneri, Varese, Italy (P)
2021 Premio Internazionale *Federico II e i Poeti tra le stelle*, Jury Member (P)
2021 The many-worlds interpretation of Quantum Mechanics, Web Radio Rock, talk show (P)
2021 International Summer School on the Interstellar Medium of Galaxies, from the Epoch of Reionization to the Milky Way, Lecturer, online event (E).
2021 Cascina Europa, The State of Italian Research, Round Table, Cascina, Italy (P)
2021 Event Horizon Telescope, Scuola di Astronomia, Cassano delle Murgie, Bari, Italy (P)
2021 STEM: un gioco da ragazze, Scuola Superiore S. Anna, Pisa, Italy (P)
2021 The REBELS Discovery, National television, RAI Italia, TV show (P)
2021 The Future of School, ImparaDigitale, Bergamo, Italy (P)
2021 La Normale a Scuola, 3rd Edition, Opening Lecture (E)
2022 Webinar Pensiero scientifico e apprendimento, ImparaDigitale (P)
2021 Cosmos Prize for the Students, book presentation, virtual meeting (P)
2022 IAA-CSIC Severo Ochoa Advanced School on Galaxy Evolution, Granada, Spain (E)
2022 Dubbi Cosmologici, Astronomiamo, Rome, Italy (P)
2022 Broadcasted TV interview on RAI3 on the JWST results (P)
2022 Broadcasted Radio interview on Punto Radio on JWST results (P)
2022 Interview for italian newspaper La Repubblica on JWST results (P)
2022 The dawn of the Universe, Carl Friederich von Siemens Foundation, Munich, Germany (P)
2022 The dawn of the Universe, Premio Nazionale di Divulgazione Scientifica *Cosmos,* (P)
2022 Premio Nazionale di Divulgazione Scientifica *Cosmos*, Reggio Calabria, Italy, Jury Member (P)
2022 Comprendiamo il nostro Universo? *Cauthamente,* Festival della Scienza, Cortona, Italy (P)
2022 Viaggi nell'Universo (virtuale), ImparaDigitale, Bergamo, Italy (P)
2022 Interview for italian newspaper La Repubblica on GJ1002 exoplanet discovery (P)
2022 Broadcasted Radio interview on Controradio on GJ1002 exoplanet discovery (P)
2022 Broadcasted Radio interview on Radio Number One on GJ1002 exoplanet discovery (P)
2022 Interview for Earth and Water Agency on GJ1002 exoplanet discovery (P)
2023 Il Sole24, Platinum, Nuove galassie che parlano italiano, article featuring our JWST project (P)
2023 Galaxies and Black Holes, National television, RAI Italia, TV show (P)
2023 Red Glows, Alexander von Humboldt Stiftung 70th anniversary, Plenary Lecture, Rome, Italy (P)
2023 Grasping the Cosmos, La Science de l'Art,Villa il Gioiello, Firenze, Italy (P)
2024 Cosmos Prize for the Students, book presentation, virtual meeting (P)

PUBLICATIONS

JOURNAL IMPACT FACTORS

Font: ISI Web of Knowledge as of year 2018
The Astrophysical Journal (ApJ) IF=6.308
Nature IF=29.273
Monthly Notices of the Royal Astronomical Society (MNRAS) IF=5.352
Astronomy & Astrophysics (A&A) IF=4.223
New Astronomy (NewA) IF=1.921

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3. **Ferrara, A.**, Ferrini, F., Franco, J., & Barsella, B., 1991, Evolution of Dust Grains through a Hot Gaseous Halo, ApJ, 381, 137
4. Einaudi G. & **Ferrara, A.**, 1991, Hydrodynamics of the Hot Component of the Galactic Halo. I. Steady--State Solutions, ApJ, 371, 571
5. **Ferrara, A.** & Einaudi G., 1992, Hydrodynamics of the Hot Component of the Galactic Halo. II. Radiative and convective instabilities, ApJ, 395, 475

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8. Franco, J., **Ferrara, A.**, Tenorio-Tagle, G., Roczyska, M., & Cox, D.P. 1993, The Impact of Supernova Fragments in Multi-Supernova Remnants, ApJ, 407, 100
9. **Ferrara, A.** 1993, Can Galactic HI be Radiatively Supported?, ApJ, 407, 157
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11. **Ferrara, A.** & Field, G.B. 1994, On the Distance Determination and the Ionization of the High Velocity Clouds, ApJ, 423, 665
12. **Ferrara, A.** & Dettmar, R. J. 1994, Radio Emitting Dust in The Free Electron Layer of Spiral Galaxies: Testing the Disk/Halo Interface, ApJ, 427, 155
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RECENT FUNDING ID

2022 PNNR National Center for High Performance Computing, Spoke 3
2019 Italian PRIN, Project #2017T4ARJ5 "The Quest for the First Stars"
2018 Munich Institute for Astro- and Particle Physics, The ISM Medium of High Redshift Galaxies
2017 European Research Council (ERC) Advanced Grant, Proposal #740120 INTERSTELLAR
2017 INAF-PRIN Square Kilometer Array
2017 EU Maria Skłodowska Curie Action Grant #749348, CACHEM
2017 Scuola Normale Superiore, Internal Grant #709
2016 Kavli Institute, University of Santa Barbara, The Cold Universe
2016 Centro Enrico Fermi, Triennial Project, CORTES
2016 Virtual Immersions in Science, MIUR Legge 6
2015 Scuola Normale Superiore, Internal Grant #300142
2014 Scuola Normale Superiore, Internal Grant #2347
2013 Virtual Immersions in Science (MIUR), SNS Outreach Program
2012 Research Projects of National Interest (PRIN-MIUR), project # 2010LY5N2T, 'Chemical and dynamical evolution of the Milky Way and Local Group galaxies'
2012 High Performance Computing Grant, CINECA Class-C

2012 European Southern Observatory, Contract F031/12
2012 Scuola Normale Superiore, Internal Grant #2145
2011 HPC Europa, High Performance Computing Grant
2011 Centre Européen de Calcul Atomique et Moléculaire Grant, 'Theoretical and Computational Astrochemistry'
2011 Italian PRIN-INAF project #5228 "The First Cosmic Billion Years"
2009 HPC Europa, High Performance Computing Grant
2008 EU Marie Curie Grant, project #221783 MCMCLYMAN
Yearly - Editorial Grant ESO

LANGUAGES

Fluent: Italian, English, Spanish
Basic: French
Programming: APL, BASIC, C, FORTRAN, PYTHON

PERSONAL DATA

Born: Udine, March 29, 1961
Fiscal Code: FRRNDR61C29L483Y

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Piazza dei Cavalieri, 7
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Curriculum Vitae Servoli Leonello (updated to 17-05-2024).

Leonello Servoli (08-nov-1961) graduated summa cum laude in Physics at the University of Perugia (Italy) November 15th, 1985.
Since 1991 he is a Researcher with Istituto Nazionale di Fisica Nucleare (Perugia Research Unit), currently Senior Researcher.

Main responsibilities and scientific memberships:
→ Member of the SLD (5 years), L3 (11 years) and CMS (21 years) high energy physics experiments at SLAC and CERN.
→ Member of the National Computing and Network INFN Committee (8 years) and local coordinator of the scientific INFN computing.
→ Member of the3rd National Scientific Committee of INFN (2 years).
→ Member and Deputy of the 5th National Scientific Committee of INFN (7 years).
→ Referee of about 30 INFN experiments, on behalf of the National V INFN Committee.
→ National coordinator of the "High Availability" INFN computing project (2 years);
→ National coordinator of the RAPID INFN experiment (4 years);
→ National coordinator of the 3D-SOD INFN experiment (3 years).
→ National coordinator of the 3DOSE INFN experiment (3 years).
→ Local coordinator of the INFNGRID computing initiative (7 years);
→ Local coordinator of the DACEL2 INFN experiment (2 years);
→ Local coordinator of the FOOT INFN experiment (6 years, in progress);
→ Member of the FP7 AIDA project (4 years);
→ Local coordinator of the RD42 experiment (8 years, in progress);
→ Member of the Italian Association of Medical Physics (AIFM, 6 years, in progress);
→ Member of the Società Italiana per la Ricerca sulle Radiazioni – SIRR (5 years, in progress);
→ National Coordinator of the HASPIDE INFN experiment (in progress);

He is the author, co-author or corresponding author of more than 530 scientific papers and conference proceedings published on international scientific journals (Scopus, Web of Science), of which more than 140 on detector development. **H-index are the following: Scopus = 62, Web of Science Citation Report = 59, Google Scholar = 81, and about 75000 citations.**
He has been in the organizing committee of several national and international conferences.
He has been teaching from 1991 at Perugia University several courses both at graduate, master and PhD levels. He has been the supervisor of more than 100 thesis works of graduate, master and Phd level for Physics, Computing and Electronic Engineering curricula.

Main fields of interest:
[A] Gaseous ionizing radiation detectors R&D:
He has worked on gaseous detectors (proportional chambers, limited streamer tubes) from 1984 to 1990 (SLD experiment at SLAC). He studied the gas mixtures to be used in the limited streamer tubes, to optimize the signal formation, reduce the dead time and the afterpulse effect, to improve the drift velocity and to obtain a non-flammable mixture. He also participated in the construction, installation and operation of the Warm Iron Calorimeter of the SLD experiment at SLAC.

[B] Solid state ionizing radiation detectors R&D: silicon microstrips:
He has worked on development and characterization of semiconductor detectors for tracking charged particles in High Energy experiments (L3 and CMS) from 1991 to present days. He has been involved in the following items:
1) Study of the sensor element for the basic sensor unit of the L3 microvertex system: single and double sided silicon microstrip sensors (1991-1994).
2) Installation and commissioning of the L3 silicon microvertex detector (1993-1995).
3) Study of the sensor element of the CMS Silicon Strip Detector single and double sided silicon microstrip sensors (1995-2000); focus on detector performance and on radiation damage resistance.
4) Construction, Installation and commissioning of CMS Silicon Strip Detector (2000-2005).
5) Development, Characterization and Installation of thin microstrip detectors for the MicroStrip Detector (MSD) of the FOOT esperiment (2016-today)

[C] Solid state ionizing radiation detectors R&D: Active Silicon Pixel Sensors:
He has been actively working on pixel detectors for tracking charged particles in High Energy experiments (RAPS, SHARPS, VIPIX, CMS) from 2001 to present days. He has been involved in the following items:
1) test of hybrid pixel detectors for the CMS experiment: response, calibration, detection efficiency;
2) development of Active Pixel Sensors, to prove that they are capable of detecting ionizing radiation with good S/N performances (S/N at least 20).
3) development and test of stacked pixel devices, to measure the direction of incoming charged particles, instead than a single point, with a precision of few degrees.
4) study of CMOS Imagers as ionizing radiation sensors, to prove that standard imagers optimized for visible light collection are also capable of ionizing radiation detection with high S/N (about 30 and more) and almost 100% detection efficiency.
5) Precision measurement of ionizing radiation interaction with solid state detectors, mainly silicon ones, using innovative experimental techniques, like charged particles impinging at grazing angle.

[D] Solid state ionizing radiation detectors R&D: Diamond Sensors both 3D, Silicon-On-Diamond and Hydrogenated Amorphous Silicon:
He has been actively developing new type of devices to detect ionizing radiation based on diamond substrate, both scCVD and pcCVD (experiments DIAPIX and 3D-SOD) and a-Si:H. These are the main branches:
1) creation of conductive paths inside the diamond bulk, or on its surface, using a focused pulsed fs laser to graphitize the diamond bulk and surface (3D diamond);
2) bonding a layer of silicon with embedded CMOS electronics, typically thinned (tens of micrometers) Monolithic Active Pixel Sensors, to a diamond substrate, both scCVD than pcCVD (Silicon-On-Diamond approach). Also this technique requires a pulsed laser to give enough energy to the silicon surface to be transmitted to the diamond surfece producing a rearrangement of the crystals structure creating an amorphous interface mechanically resistant, hence obtaining a single device with finely pixellated readout.
3) development of a-Si:H sensors, both planar than 3D, for single ionizing radiation detection and flux measurements. Goals are to produce devices capable of beam monitoring and dosimetry of clinical beams, measurement of ionizing radiation fluxes in space, neutron detection.

[E] Development of devices for medical applications.
He is working to apply ionizing radiation sensors for use in the medical field. This research is structured in different approaches:
1) development of a wireless real-time dosimeter for medical operators in Interventional Radiology procedures; he his the National Coordinator of an INFN project (RAPID), aiming to produce a dosimeter capable of real-time recording of dose-rate, wireless data transmission, and linearity in the entire range of dose-rate due to X-ray photons diffused by the patient's body;
2) measurement of the dose absorbed during medical procedures and identification of criteria to reduce the dose absorbed by the operators;
3) development of new methodologies to measure the beam profile of radiotherapeutic beams using CMOS imagers (patent obtained);
4) design and test of new type of diamond detectors for dosimetry of small field photon beams;
5) design and test of a-Si:H diodes for fluximetry of beams at accelerators
6) use of SiPM as direct detection devices for ionizing radiation beams (patent obtained).
7) use of CMOS Imaging Sensors as detectors for a probe for radio-guided surgery.

[F] Scientific Computing.
He has been actively working on the definition, development and testing of computing models and computing facilities, devoted to the scientific computing in several areas (MONARC, GRID, MACGO) from 1999 to 2011. He has been local responsible of several computing projects and has been involved in:
1) definition of the computing model for the LHC experiments;
2) study of performance of an open source batch system and development of optimization tools;
3) use of open source virtual operating systems to implement a flexible batch system on demand;
4) development of a framework to implement scientific computing programs on Graphic Processing Units.
5) development of a dedicated system for Level-1 triggering using the tracker information for CMS experiment at LHC.
6) porting of algorithms from CPU to GPU (MACGO)

DICHIARAZIONE SOSTITUTIVA DI CERTIFICAZIONE
DICHIARAZIONE SOSTITUTIVA DELL'ATTO DI NOTORIETÁ
(art. 46 e 47 del DPR 445/2000)

La sottoscritta ANNABELLA ASTORINO, nata a COSENZA (CS) il 10/10/1968, residente in Via L. REPACI 22 - 87036, RENDE (CS), consapevole che le dichiarazioni false comportano l'applicazione delle sanzioni penali previste dall'art. 76 del D.P.R. 445/2000, dichiara che le informazioni riportate nel seguente curriculum vitae corrispondono a veritá.

Curriculum Vitae

di Annabella Astorino

Informazioni personali

Cognome/i nome/i	**Astorino Annabella**
Indirizzo/i	Via L. Repaci, n. 22 - 87036 Rende (Cosenza)
Telefono/i	+39 328 0476379
Email	annabella.astorino@dimes.unical.it; annabella.astorino@pec.it
Nazionalità	Italiana
Data di nascita	10 Ottobre 1968
Sesso	Femminile

Posizione corrente

• Date	31/10/2022 →
Livello e posizione ricoperta	Ricercatore ai sensi dell'art. 24 comma 3, lettera b), Legge n. 240/2010
Nome e indirizzo del datore di lavoro	Dipartimento di Ingegneria Informatica, Modellistica, Elettronica e Sistemistica (DIMES), Universitá della Calabria – Via P. Bucci, Cubo 41-C, 87036 Rende (CS), Italia
Area scientifico-disciplinare	Settore concorsuale 01/A5, Settore Scientifico Disciplinare MAT/08 – Analisi Numerica

Posizioni precedenti

• Date	Dal 02/03/2020 al 30/10/2022
Livello e posizione ricoperta	II livello – profilo PRIMO RICERCATORE
Nome e indirizzo del datore di lavoro	ISTITUTO DI CALCOLO E RETI AD ALTE PRESTAZIONI – CNR, Via Pietro Bucci, Cubo 8/9C, Rende (CS)
Area scientifico-disciplinare	01 - Scienze matematiche e informatiche

• Date	Dal 04/12/2000 al 01/03/2020
Lavoro e posizione ricoperta	III livello – profilo RICERCATORE
Nome e indirizzo del datore di lavoro	ISTITUTO DI CALCOLO E RETI AD ALTE PRESTAZIONI – CNR, Via Pietro Bucci, Cubo 8/9C, Rende (CS)
Area scientifico-disciplinare	01 - Scienze matematiche e informatiche

Borse di Studio

• Date	31/03/1996 – 31/03/1997
Posizione ricoperta	Borsista
Area Disciplinare	Elettronica, Informatica e Sistemistica
Descrizione	Regione Calabria, Borsa di Studio della Regione Calabria – Programmazione 94
Sede	Universitá degli Studi della Calabria – Dip. di Elettronica Informatica e Sistemistica
Referente Scientifico	Prof. M. Gaudioso

• Date	01/06/1995 – 31/03/1996
Posizione ricoperta	Borsista
Titolo della ricerca	Progetto di Formazione e Ricerca su tecniche e metodologie di sviluppo di sistemi portuali e dei sistemi intermodali connessi: il caso del Porto di Sibari
Descrizione	Regione Calabria, Borsa di Studio POP 90/93 – Azione: Capitale Umano e Mobilitá della Regione Calabria
Sedi	Universitá degli Studi della Calabria – Dip. di Economia Politica e CRAI (Consorzio per la Ricerca e le Applicazioni di Informatica)
Referente Scientifico	Prof. G. Paletta

Abilitazioni scientifiche

• Date	05/04/2018 – 05/04/2028
	Abilitata, ai sensi dell'art. 16 della legge 240/2010, alla posizione di Professore di II fascia nel settore scientifico-disciplinare Mat/08 - Analisi Numerica (Settore Concorsuale **01/A5 - II Fascia).**
• Date	21/11/2017 – 21/11/2027
	Abilitata, ai sensi dell'art. 16 della legge 240/2010, alla posizione di Professore di I fascia nel settore scientifico-disciplinare Mat/09 - Ricerca Operativa (Settore Concorsuale **01/A6 - I Fascia).**
• Date	30/03/2017 – 30/03/2027
	Abilitata, ai sensi dell'art. 16 della legge 240/2010, alla posizione di Professore di II fascia nel settore scientifico-disciplinare Mat/09 - Ricerca Operativa (Settore Concorsuale **01/A6 - II Fascia).**

Formazione

Scuole Internazionali

• Date	12/09/2004 – 25/09/2004
Posizione ricoperta	Partecipante
Descrizione	Scuola "MACHINE LEARNING SUMMER SCHOOL 2004", Berder Island, France. Supported by "Centre National de la Recherche Scientifique", Research Network AS66 and PASCAL Network of Excellence.

Organizzatori	O. Bouschet, M. Davy, B. Scholkopf, A. Smola.

Dottorato di Ricerca

• Date	01/02/1997 – 12/04/2000
Titolo della qualifica rilasciata	Dottore di Ricerca in Ricerca Operativa – XII Ciclo
Titolo della tesi	"Programmazione Matematica e Classificazione". Relatori: Prof. M. Gaudioso, Prof. S. Lucidi. Coordinatore Prof. G. Di Pillo.
Sede	Università degli Studi di Roma "La Sapienza".

Laurea

• Date	05/04/1995
Titolo della qualifica rilasciata	Laurea in Ingegneria Elettronica
Titolo della tesi	"Metodi di Ottimizzazione Globale'. Relatore: Prof. S. Lucidi
Sede	Facoltà di Ingegneria, Università degli Studi di Roma "La Sapienza"

Area di ricerca

• Descrizione

Studio e implementazione di algoritmi di calcolo numerico per la minimizzazione di funzioni non lineari di molte variabili reali, in assenza di ipotesi di differenziabilitá. La caratteristica principale della ricerca svolta risiede nel fatto che i problemi trattati sono di tipo strutturato, assumono, cioé, forme particolari, dettate da esigenze concrete di modellizzazione di processi decisionali in specifici settori applicativi.

Metodi numerici per l'ottimizzazione non differenziabile

- Approcci numerici per problemi DC.
- Metodi Bundle di tipo prossimale non monotono.
- Modelli di tipo Multiplier Driven Cutting Plane.

Modelli di ottimizzazione per il machine learning e relative tecniche numeriche di risoluzione

- Approcci di separazione poliedrale, sferica ed ellissoidale per problemi di apprendimento a istanze multiple (MIL).
- Tecniche di clustering basate sull'ottimizzazione DC.
- Approcci di separazione poliedrale ed ellissoidale per problemi di classificazione utilizzando tecniche di ottimizzazione DC e Semidefinita.

Collaborazioni di Ricerca

Ambito Internazionale

•	**Federation University Australia**
	Dal 2018
Descrizione	Collaborazione scientifica con il prof. Adil Baghirov
Tematiche di ricerca	Non-smooth optimisation, Optimisation methods in machine learning

•	**University of Avignon**
	Dal 2014
Descrizione	Collaborazione scientifica con il prof. Alberto Seeger
Tematiche di ricerca	Convex optimization, Max-min problem, DC-optimization, Conical separation, Revolution cone, Proximal point techniques, Classification
•	**University of Vienna**
	Dal 2012
Descrizione	Collaborazione scientifica con il prof. Immanuel Bomze
Tematiche di ricerca	Spherical separation, Robust classification, Non-smooth optimization
•	**University of Porto**
	Dal 2012
Descrizione	Collaborazione scientifica con la prof.ssa Paula Brito
Tematiche di ricerca	Spherical separation, Robust classification, Non-smooth optimization
•	**Universitat Karlsruhe**
	2010-2011
Descrizione	Collaborazione scientifica con il prof. D. Pallaschke
Tematiche di ricerca	Data classification, Semi-supervised learning, Nonsmooth optimization
•	**St. Petersburg State University**
	2001
Descrizione	Collaborazione scientifica con il prof. V. F. Demyanov
Tematiche di ricerca	Non-smooth analysis, Necessary optimality conditions, Diagnostic problem

Ambito Nazionale

•	**Universitá di Cagliari**
	Dal 2020
Descrizione	Collaborazione scientifica con il prof. Massimo Di Francesco e i ricercatori Manca Benedetto e Enrico Gorgone
Tematiche di ricerca	Ottimizzazione convessa, Ottimizzazione non-differenziabile, Ottimizzazione DC, Programmazione semidefinita, Machine learning
•	**Universitá di Pisa**
Date	Dal 2011
Descrizione	Collaborazione scientifica con il prof. Antonio Frangioni
Tematiche di ricerca	Ottimizzazione convessa, Ottimizzazione non-differenziabile, Programmazione semidefinita, Machine learning
•	**Universitá della Calabria**
Date	Dal 1996
Descrizione	Collaborazione scientifica con i proff. Manlio Gaudioso, Antonio Fuduli e Giovanni Giallombardo e la ricercatrice Giovanna Miglionico
Tematiche di ricerca	Ottimizzazione convessa, Ottimizzazione non-differenziabile, Ottimizzazione DC, Machine learning, Logistica

Pubblicazioni

Alcuni parametri bibliometrici

• Scopus

Publications: 43
H-index: 18
Citations: 711

Articoli

- A. Astorino, M. Avolio, and A. Fuduli. Maximum-margin polyhedral separation for binary multiple instance learning. *EURO Journal on Computational Optimization*, 11, 2023.
SJR: 0,805 – SJR Best Quartile: Q1
Categories: Modeling and Simulation (Q1); Computational Mathematics (Q2); Control and Optimization (Q2); Management Science and Operations Research (Q2)

- A. Astorino, A. Frangioni, E. Gorgone, and B. Manca. Ellipsoidal classification via semidefinite programming. *Operations Research Letters*, 51(2):197–203, 2023.
SJR: 0,718 – SJR Best Quartile: Q1
Categories: Industrial and Manufacturing Engineering (Q1); Applied Mathematics (Q2); Management Science and Operations Research (Q2); Software (Q2)

- A. Astorino, M. Avolio, A. Canino, Crupi T., and A. Fuduli. Partitional clustering via successive transportation problems. *Operations Research Letters*, 51(1):40–46, 2023.
SJR: 0,718 – SJR Best Quartile: Q1
Categories: Industrial and Manufacturing Engineering (Q1); Applied Mathematics (Q2); Management Science and Operations Research (Q2); Software (Q2)

- A. Astorino, M. Avolio, and A. Fuduli. A maximum-margin multisphere approach for binary multiple instance learning. *European Journal of Operational Research*, 299(2):642–652, 2022.
SJR: 2,354 – SJR Best Quartile: Q1
Categories: Applied Mathematics (Q1); Artificial Intelligence (Q1); Computational Theory and Mathematics (Q1); Computer Vision and Pattern Recognition (Q1); Software (Q1)

- A. Astorino, M.D. Francesco, M. Gaudioso, E. Gorgone, and B. Manca. Polyhedral separation via difference of convex (DC) programming. *Soft Computing*, 25(19):12605–12613, 2021.
SJR: 0,879 – SJR Best Quartile: Q2
Categories: Geometry and Topology (Q2); Software (Q2); Theoretical Computer Science (Q2)

- A. Astorino, M. Gaudioso, and G. Miglionico. A lagrangean relaxation approach to lifetime maximization of directional sensor networks. *Networks*, 78(1):5–16, 2021.
SJR: 0,734 – SJR Best Quartile: Q2
Categories: Computer Networks and Communications (Q2); Control and Optimization (Q2); Management Science and Operations Research (Q2)

- A. Astorino and A. Fuduli. Spherical separation with infinitely far center. *Soft Computing*, 24(23):17751–17759, 2020.
SJR: 0,626 – SJR Best Quartile: Q2
Categories: Geometry and Topology (Q2); Software (Q2); Theoretical Computer Science (Q2)

- A. Astorino, A. Fuduli, P. Veltri, and E. Vocaturo. Melanoma detection by means of multiple instance learning. *Interdisciplinary Sciences, Computational Life Sciences*, 12(1):24–31, 2020
  SJR: 0,401 – SJR Best Quartile: Q3
  Categories: Biochemistry, Genetics and Molecular Biology (miscellaneous) (Q3); Computer Science Applications (Q3); Health Informatics (Q3)

- A. Astorino, A. Fuduli, G. Giallombardo, and G. Miglionico. Svm-based multiple instance classification via DC optimization. *Algorithms*, 12(12), 2019.
  SJR: 0,358 – SJR Best Quartile: Q3
  Categories: Computational Mathematics (Q3); Computational Theory and Mathematics (Q3); Numerical Analysis (Q3); Theoretical Computer Science (Q3)

- A. Astorino, A. Fuduli, and M. Gaudioso. A lagrangian relaxation approach for binary multiple instance classification. *IEEE Transactions on Neural Networks and Learning Systems*, 30(9):2662–2671, 2019.
  SJR: 3,555 – SJR Best Quartile: Q1
  Categories: Artificial Intelligence (Q1); Computer Networks and Communications (Q1); Computer Science Applications (Q1); Software (Q1)

- A. Astorino, M. Gaudioso, and G. Miglionico. Lagrangian relaxation for the directional sensor coverage problem with continuous orientation. *Omega (United Kingdom)*, 75:1339–1351, 2018.
  SJR: 3,292 – SJR Best Quartile: Q1
  Categories: Information Systems and Management (Q1); Management Science and Operations Research (Q1); Strategy and Management (Q1)

- A. Astorino, A. Chiarello, M. Gaudioso, and A. Piccolo. Malicious url detection via spherical classification. *Neural Computing and Applications*, 28:699–705, 2017.
  SJR: 0,7 – SJR Best Quartile: Q1
  Categories: Software (Q1); Artificial Intelligence (Q2)

- A. Astorino, M. Gaudioso, and E. Gorgone. A method for convex minimization based on translated first-order approximations. *Numerical Algorithms*, 76(3):745–760, 2017.
  SJR: 0,981 – SJR Best Quartile: Q2
  Categories: Applied Mathematics (Q2)

- A. Astorino, I. Bomze, A. Fuduli, and M. Gaudioso. Robust spherical separation. *Optimization*, 66(6):925–938, 2017.
  SJR: 0,736 – SJR Best Quartile: Q2
  Categories: Applied Mathematics (Q2); Control and Optimization (Q2); Management Science and Operations Research (Q2)

- W. Khalaf, A. Astorino, P. D'Alessandro, and M. Gaudioso. A DC optimization-based clustering technique for edge detection. *Optimization Letters*, 11(3):627–640, 2017.
  SJR: 0,721 – SJR Best Quartile: Q2
  Categories: Control and Optimization (Q2)

- A. Astorino, M. Gaudioso, and A. Seeger. Central axes and peripheral points in high dimensional directional datasets. *Computational Optimization and Applications*, 65(2):313–338, 2016
  SJR: 1,254 – SJR Best Quartile: Q1
  Categories: Applied Mathematics (Q1); Computational Mathematics (Q1); Control and Optimization (Q1)

- A. Astorino, M. Gaudioso, and A. Seeger. An illumination problem with tradeoff between coverage of a dataset and aperture angle of a conic light beam. *Optimization and Engineering*, 17(3):557–575, 2016
  SJR: 0,45 – SJR Best Quartile: Q2
  Categories: Aerospace Engineering (Q2); Civil and Structural Engineering (Q2); Electrical and Electronic Engineering (Q2); Mechanical Engineering (Q2); Software (Q2); Control and Optimization (Q3)

- A. Astorino and A. Fuduli. The proximal trajectory algorithm in SVM cross validation. *IEEE Transactions on Neural Networks and Learning Systems*, 27(5):966–977, 2016.
  SJR: 2,564 – SJR Best Quartile: Q1
  Categories: Artificial Intelligence (Q1); Computer Networks and Communications (Q1); Computer Science Applications (Q1); Software (Q1)

- A. Astorino and G. Miglionico. Optimizing sensor cover energy via DC programming. *Optimization Letters*, 10(2):355–368, 2016.
  SJR: 0,897 – SJR Best Quartile: Q1
  Categories: Control and Optimization (Q1)

- A. Astorino and A. Fuduli. Semisupervised spherical separation. *Applied Mathematical Modelling*, 39(20):6351–6358, 2015.
  SJR: 1,199 – SJR Best Quartile: Q1
  Categories: Applied Mathematics (Q1); Modeling and Simulation (Q1)

- A. Astorino and A. Fuduli. Support vector machine polyhedral separability in semisupervised learning. *Journal of Optimization Theory and Applications*, 164(3):1039–1050, 2015.
  SJR: 0,878 – SJR Best Quartile: Q1
  Categories: Control and Optimization (Q1); Applied Mathematics (Q2); Management Science and Operations Research (Q2)

- A. Astorino, M. Gaudioso, and W. Khalaf. Edge detection by spherical separation. *Computational Management Science*, 11(4):517–530, 2014.
  SJR: 0,65 – SJR Best Quartile: Q2
  Categories: Information Systems (Q2); Management Information Systems (Q2)

- A. Astorino, M. Gaudioso, and A. Seeger. Conic separation of finite sets II. The nonhomogeneous case. *Journal of Convex Analysis*, 21(3):819–831, 2014.
  SJR: 1,004 – SJR Best Quartile: Q1
  Categories: Mathematics (miscellaneous) (Q1); Analysis (Q2)

- A. Astorino, M. Gaudioso, and A. Seeger. Conic separation of finite sets I. The homogeneous case. *Journal of Convex Analysis*, 21(1):1–28, 2014.
  SJR: 1,004 – SJR Best Quartile: Q1
  Categories: Mathematics (miscellaneous) (Q1); Analysis (Q2)

- A. Astorino, M. Gaudioso, and A. Seeger. An illumination problem: Optimal apex and optimal orientation for a cone of light. *Journal of Global Optimization*, 58(4):729–750, 2014.
  SJR: 1,062 – SJR Best Quartile: Q1
  Categories: Applied Mathematics (Q1); Computer Science Applications (Q1); Control and Optimization (Q1); Management Science and Operations Research (Q1)

- A. Astorino, A. Frangioni, A. Fuduli, and E. Gorgone. A nonmonotone proximal bundle method with (potentially) continuous step decisions. *SIAM Journal on Optimization*, 23(3):1784–1809, 2013.
  SJR: 2,043 – SJR Best Quartile: Q1
  Categories: Software (Q1); Theoretical Computer Science (Q1)

- A. Astorino, A. Fuduli, and M. Gaudioso. Margin maximization in spherical separation. *Computational Optimization and Applications*, 53(2):301–322, 2012.
  SJR: 1,089 – SJR Best Quartile: Q1
  Categories: Applied Mathematics (Q1); Computational Mathematics (Q1); Control and Optimization (Q1)

- A. Astorino, A. Frangioni, M. Gaudioso, and E. Gorgone. Piecewise-quadratic approximations in convex numerical optimization. *SIAM Journal on Optimization*, 21(4):1418–1438, 2011.
  SJR: 2,178 – SJR Best Quartile: Q1
  Categories: Software (Q1); Theoretical Computer Science (Q1)

- A. Astorino, E. Gorgone, M. Gaudioso, and D. Pallaschke. Data preprocessing in semisupervised SVM classification. *Optimization*, 60(1-2):143–151, 2011.
  SJR: 0,539 – SJR Best Quartile: Q2
  Categories: Management Science and Operations Research (Q2); Applied Mathematics (Q3); Control and Optimization (Q3)

- A. Astorino, A. Fuduli, and M. Gaudioso. DC models for spherical separation. *Journal of Global Optimization*, 48(4):657–669, 2010.
  SJR: 1,078 – SJR Best Quartile: Q1
  Categories: Applied Mathematics (Q1); Computer Science Applications (Q1); Control and Optimization (Q1); Management Science and Operations Research (Q1)

- F. Angiulli and A. Astorino. Scaling up support vector machines using nearest neighbor condensation. *IEEE Transactions on Neural Networks*, 21(2):351–357, 2010.
  SJR: 1,222 – SJR Best Quartile: Q1
  Categories: Artificial Intelligence (Q1); Computer Networks and Communications (Q1); Computer Science Applications (Q1); Software (Q1)

- A. Astorino and M. Gaudioso. A fixed-center spherical separation algorithm with kernel transformations for classification problems. *Computational Management Science*, 6(3):357–372, 2009.
  SJR: 0,59 – SJR Best Quartile: Q2
  Categories: Information Systems (Q2); Management Information Systems (Q2)

- A. Astorino, A. Fuduli, and E. Gorgone. Non-smoothness in classification problems. *Optimization Methods and Software*, 23(5):675–688, 2008.
  SJR: 0,553 – SJR Best Quartile: Q2
  Categories: Control and Optimization (Q2); Software (Q2); Applied Mathematics (Q3)

- A. Astorino and A. Fuduli. Nonsmooth optimization techniques for semisupervised classification. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 29(12):2135–2142, 2007.
  SJR: 3,394 – SJR Best Quartile: Q1
  Categories: Applied Mathematics (Q1); Artificial Intelligence (Q1); Computational Theory and Mathematics (Q1); Computer Vision and Pattern Recognition (Q1); Software (Q1)

- A. Astorino and M. Gaudioso. Ellipsoidal separation for classification problems. *Optimization Methods and Software*, 20(2-3):267–276, 2005.
  SJR: 0,981 – SJR Best Quartile: Q1
  Categories: Control and Optimization (Q1); Software (Q1); Applied Mathematics (Q2)

- A. Astorino and M. Gaudioso. Polyhedral separability through successive LP. *Journal of Optimization Theory and Applications*, 112(2):265–293, 2002.
SJR: 0,763 – SJR Best Quartile: Q2
Categories: Applied Mathematics (Q2); Control and Optimization (Q2); Management Science and Operations Research (Q2)

- A. Astorino. Programmazione matematica e classificazione. *Bollettino della Unione Matematica Italiana A*, 3(3):263–266, 2000.
SJR: 0,16 – SJR Best Quartile: Q4
Categories: Mathematics (miscellaneous) (Q4)

Proceedings

- A. Astorino, R. Berti, A. Astorino, V. Bitonti, M. De Marco, V. Feraco, A. Palumbo, F. Porti, and I. Zannino. Early detection of eating disorders through machine learning techniques. *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 12096 LNCS:33–39, 2020

- A. Astorino, A. Fuduli, M. Gaudioso, and E. Vocaturo. Multiple instance learning algorithm for medical image classification. *CEUR Workshop Proceedings*, 2400, 2019

- A. Astorino, M. Gaudioso, A. Fuduli, and E. Vocaturo. A multiple instance learning algorithm for color images classification. *ACM International Conference Proceeding Series*, pages 262–266, 2018

- A. Astorino, A. Fuduli, P. Veltri, and E. Vocaturo. On a recent algorithm for multiple instance learning. preliminary applications in image classification. *Proceedings - 2017 IEEE International Conference on Bioinformatics and Biomedicine, BIBM 2017*, 2017-January:1615–1619, 2017

- A. Astorino, A. Fuduli, and M. Gaudioso. Nonlinear programming for classification problems in machine learning. *AIP Conference Proceedings*, 1776, 2016

- A. Astorino, M. Gaudioso, and G. Miglionico. Optimizing sensor cover energy for directional sensors. *AIP Conference Proceedings*, 1776, 2016

Capitoli di libri

- A. Astorino and A. Fuduli. Comparing Linear and Spherical Separation Using Grossone-Based Numerical Infinities in Classification Problems. In Numerical Infinities and Infinitesimals in Optimization. Editors: Yaroslav D. Sergeyev, Renato De Leone. Springer, 2022.

- Astorino, A., Bomze, I. M., Brito, P. and Gaudioso, M.. Two-Sphere Separation Procedures via Non-Smooth Optimization. In: “Recent Advances in Nonlinear Optimization and Equilibrium Problems: a Tribute to Marco D’Apuzzo”, De Simone, V., di Serafino, D. and Toraldo, G. (Eds.), Quaderni di Matematica, Dipartimento di Matematica della Seconda Universitá di Napoli, vol. 27, Aracne, ISBN 978-88-548-5687-5.

- Demyanov, V. F. and Astorino, A. and Gaudioso, M.. Nonsmooth Problems in Mathematical Diagnostics. In Advances in Convex Analysis and Global Optimization: Honoring the Memory of C. Caratheodory (1873–1950). Editors: Hadjisavvas, Nicolas and Pardalos, Panos M.. Springer US, Boston, MA. Pages: 11–30. DOI:10.1007/978-1-4613-0279-7_2. 2001.

Tesi per il conseguimento di un titolo

- A. Astorino. “Programmazione Matematica e Classificazione”. Ph.D. Thesis. Dipartimento di Informatica e Sistemistica “A. Ruberti”, Universitá degli Studi di Roma “La Sapienza” (2000).
- A. Astorino. “Tecniche di ottimizzazione globale”. Tesi di Laurea in Ingegneria Elettronica. Dipartimento di Informatica e Sistemistica “A. Ruberti”, Universitá degli Studi di Roma “La Sapienza” (1995).

Pacchetti Software Open Source

- A. Astorino, M. Gaudioso. “SPSEP (SPerichal SEParation)”, Pacchetto Software per solving spherical separation problems, anno 2004.

Convegni di carattere scientifico

PC chair

- NUMTA 2023: 4th International Conference and Summer School “Numerical Computations: Theory and Algorithms”, 14 – 20 June 2023, Pizzo Calabro, Italy.

Organizzatore di sessione

- NUMTA 2023: 4th International Conference and Summer School “Numerical Computations: Theory and Algorithms”, 14 – 20 June 2023, Pizzo Calabro, Italy.

Sessioni
– Numerical optimization and machine learning.
– Computational tools and new trends in math and science education.

- 26th European Conference on Operational Research - XXVI EURO – INFORMS, Rome -Italy, 1-4 July 2013.

Sessione
Numerical methods of nonsmooth optimization. Stream: Nonsmooth Optimization.

- AIRO 2010 XLI ANNUAL CONFERENCE ITALIAN OPERATIONAL RESEARCH SOCIETY OPERATIONS RESEARCH FOR COMPLEX DECISION MAKING, Santa Trada, Italy, September 7–10, 2010.

Sessione
Machine Learning and Bioinformatics.

- 24th European Conference on Operational Research, Lisbona, 11 – 14 Luglio 2010.

Sessione
Mathematical Nonsmooth Optimization and Its Applications.
Stream Nonsmooth Optimization.

- 23rd European Conference on Operational Research , Bonn, 5 – 8 Luglio 2009.

Sessioni
– Mathematical Programming Problems in Machine Learning.
Stream Mathematical Programming);
– Mathematical Programming Problems in Machine Learning 2.
Stream Mathematical Programming).

Presentazioni

- SIMAI 2023: bi-annual congress of “Italian Society of Applied and Industrial Mathematics”, Matera, August 28th – September 1st, 2023.
  Talk: Multiple Instance Learning for Medical Image Classification (A. Astorino, A. Fuduli, E. Vocaturo).
- ODS 2022: International Conference on Optimization and Decision Sciences, Firenze (Italy), August 30th – September 2nd, 2022.
  Talk: Spherical and Polyhedral separation approaches for Multiple Instance Learning (A. Astorino, M. Avolio, A. Fuduli).
- IFCS 2022: Classification and Data Science in the Digital Age – 17th conference of the International Federation of Classification Societies, Porto, Portugal, 19 – 23 July 2022.
  Talks:
  - Nonlinear Approaches for Multiple Instance Learning (A. Astorino, M. Avolio, A. Fuduli).
  - Spherical Separation in Machine Learning (M. Avolio, A. Astorino, A. Fuduli).
- ODS 2021: International Conference on Optimization and Decision Sciences, Rome, Universitá degli studi di Roma La Sapienza, 14 – 17 September 2021, 50th Conference of Italian Operations Research Society, Optimization in Artificial Intelligence and Data Science.
  Talks:
  - Polyhedral separation in Multiple Instance Learning problems (Annabella Astorino, Matteo Avolio, Antonio Fuduli);
  - Binary Classification via Ellipsoidal Separation (Benedetto Manca, Annabella Astorino, Antonio Frangioni, Enrico Gorgone);
  - Sparse Optimization in Adversarial Support Vector Machine (SVM) (Enrico Gorgone, Annabella Astorino, Massimo Di Francesco, Benedetto Manca, Manlio Gaudioso);
  - Spherical approaches for Multiple Instance Learning (Antonio Fuduli, Matteo Avolio, Annabella Astorino).
- EURO 2021 - 31st European Conference on Operational Research, 11 – 14 July 2021, Athens, Greece.
  Talks:
  - A multi-sphere approach for Multiple Instance Learning classification (Matteo Avolio, Annabella Astorino, Antonio Fuduli);
  - Multiple Instance Learning by Polyhedral Approaches (Annabella Astorino, Matteo Avolio, Antonio Fuduli).
- ODS 2019, Genova, 4 – 7/09/2019.
  Talk: Some spherical separation variants for classification problems (A. Astorino, A. Fuduli).
- EURO 2019 – 30th European Conference on Operational Research, 23rd - 26th June, Dublin, Ireland.

Talks:

- Dual ascent methods for directional sensor networks (G. Miglionico, A. Astorino, M. Gaudioso);
- Polyhedral separation approaches for pattern classification problems (A. Astorino, A. Fuduli, M. Gaudioso).

- NUMTA 2019 - The 3rd International Conference and Summer School - Numerical Computations: Theory and Algorithms, Le Castella - Isola Capo Rizzuto Crotone, Italy, June 15-21, 2019.
  Talk: A Spherical Separation Approach for Multiple Instance Learning (A. Fuduli, A. Astorino, M. Avolio).
- Workshop on Computational Optimization, University of Vienna, Austria, 17-19/12/2018.
  Talk: A piecewise linear Support Vector Machines approach (A. Astorino, A. M. Bagirov, A. Fuduli).
- ODS 2018, Taormina, 10-13/09/2018.
  Talks:
  - Applying a multiple instance learning technique to image classification (A. Fuduli, A. Astorino, M. Gaudioso, W. Khalaf, E. Vocaturo);
  - On some optimization problems related to revolution cones (M. Gaudioso, A. Astorino).
- EUROPT 2018 - 16th EUROPT Workshop on Advances in Continuous Optimization, Almeria, Spain, 12-13/07/2018.
  Talk: Mathematical programming models for Multiple Instance Learning (A. Astorino, A. Fuduli, G. Giallombardo, G. Miglionico).
- IDEAS 2018 - 22nd International Database Engineering and Applications Symposium, Villa San Giovanni, Italy, 18-20/06/2018.
  Talk: A multiple instance learning algorithm for color images classification (A. Annabella, M. Gaudioso, A. Fuduli, E. Vocaturo).
- CMStatistics 2017 - 10th International Conference of the ERCIM WG on Computational and Methodological Statistics, Senate House, University of London, UK, December 16-18 2017.
  Talk: Optimization approaches for multiple instance classification (A. Astorino, A. Fuduli, M. Gaudioso).
- EEE BIBM 2017 - IEEE International Conference on Bioinformatics and Biomedicine - Workshop Computer based processes and algorithms for biomedicine and life quality improvement, Westin Kansas City at Crown Center, USA, 13-16/11/2017.
  Talk: On a recent algorithm for Multiple Instance Learning. Preliminary applications in image classification (A. Astorino, A. Fuduli, P. Veltri; E. Vocaturo).
- ODS2017 - international Conference on Optimization and Decision Science, Sorrento, September 4-7 2017.
  Talk: A Lagrangean relaxation technique for multiple instance learning (A. Astorino, A. Fuduli, G. Giallombardo, G. Miglionico).
- LION11, The 2017 Learning and Intelligent Optimization Conference, Nizhny Novgorod, Russia, June 19-21 2017.

Talk: A Lagrangian relaxation approach for binary multiple instance classification (A. Astorino, A. Fuduli, M. Gaudioso).

- ISCO 2016 - 4th International Symposium on Combinatorial Optimization, Vietri sul Mare (SA), May 16-18 2016.
  Talk: The directional sensor coverage problem with continuous orientation (A. Astorino, M. Gaudioso, G. Miglionico).

- AIRO 2015 Conference, 43rd Annual Conference of the Italian Operational Research Society, Graph Algorithms and Optimization, Vietri sul Mare (SA), September 4-7 2012.
  Talk: Classification By Means Of Revolution Cones (A. Astorino, M. Gaudioso, A. Seeger).

- AIRO 2014, 44th Annual Conference of the Italian Operational Research Society-DECISION MODELS for SMARTER CITIES - AIRO 2014, Como-Italy, 2-5 September 2014.
  Talk: Solving energy-efficient coverage problems in wireless sensor networks via DC Programming (A. Astorino, G. Miglionico).

- 20th Conference of the International Federation of Operational Research Societies - IFORS, Barcelona - Spain, 13-18 July 2014.
  Talks:
  - Illumination by Cones and Outliers Detection (A. Astorino, M. Gaudioso, A. Seeger);
  - A Robust Approach for Spherical Separation (A. Fuduli, A. Astorino, I. Bomze, M. Gaudioso).

- 26th European Conference on Operational Research - XXVI EURO – INFORMS, Rome -Italy, 1-4 July 2013.
  Talks:
  - Conjugate subgradient revisited (M. Gaudioso, A. Astorino, E. Gorgone);
  - SVM Polyhedral Separability (A. Astorino, A. Fuduli);
  - The proximal trajectory algorithm in SVM model selection (A. Fuduli, A. Astorino).

- AIRO 2012 Conference, 43rd Annual Conference of the Italian Operational Research Society, Graph Algorithms and Optimization, Vietri sul Mare (SA), September 4-7 2012.
  Talk: Classification By Means Of Revolution Cones (A. Astorino, M. Gaudioso, A. Seeger).

- Constructive Nonsmooth Analysis and Related Topics, June 18-23 , 2012, Euler International Mathematical Institute, St. Petersburg, RUSSIA.
  Talk: A Nonmonotone Proximal Bundle Method with (Potentially) Continuous Decisions on Stepsize (A. Astorino, A. Frangioni, A. Fuduli, E. Gorgone).

- SIAM Conference on Optimization, Society for Industrial and Applied Mathematics, Darmstadt, Germany, SIAM, Maggio 2011.
  Talk: Piecewise quadratic approximations in convex numerical optimization (A. Astorino, A. Frangioni, M. Gaudioso, E. Gorgone).

- 15th Austrian-French-German Conference on Optimization, Tolosa, Francia, 19 – 23 Settembre 2011.
  Talk: Applications of DC programming and algorithms in classification (A. Astorino, A. Fuduli, M. Gaudioso).

- AIRO 2010 XLI ANNUAL CONFERENCE ITALIAN OPERATIONAL RESEARCH SOCIETY OPERATIONS RESEARCH FOR COMPLEX DECISION MAKING, Santa Trada, Italy, September 7–10, 2010.
  Talk: Models for spherical separation with margin (A. Astorino, A. Fuduli, M. Gaudioso).
- 24th European Conference on Operational Research, Lisbona, 11 – 14 Luglio 2010.
  Talk: Nonsmooth Convex Optimization via Piecewise Quadratic Approximations (A. Astorino, A. Frangioni, M. Gaudioso, E. Gorgone).
- 52nd Workshop: Nonlinear Optimization, Variational Inequalities and Equilibrium Problems , Erice, Italia, 2 – 10 Luglio 2010.
  Talk: DC models for classification problems (A. Astorino, A. Fuduli, M. Gaudioso).
- AIRO 2009 XL Annual Conference of the Italian Operations Research Society - Decision and Optimization Models for Evaluation and Management , Siena, Italia, 8 – 11 Settembre 2009.
  Talks:
  - Piecewise quadratic approximations for convex programs (A. Astorino, M. Gaudioso, E. Gorgone);
  - Separation by means of disjoint spheres (A. Astorino, I. Bomze, P. Brito, M. Gaudioso);
  - Some models for single sphere classification (A. Astorino, A. Fuduli).
- 23rd European Conference on Operational Research , Bonn, 5 – 8 Luglio 2009.
  Talks:
  - DC Programming and Spherical separation (A. Astorino, A. Fuduli e M. Gaudioso);
  - A two phase approach to semisupervised classification (A. Astorino, A. Fuduli, M. Gaudioso, E. Gorgone e D. Pallaschke).
- AIRO 2007 XXXVIII Annual Conference of the Italian Operations Research Society Optimization and Decision Sciences , Genova, Italia, 5 – 8 Settembre 2007.
  Talk: Classification problems via SVM and Nearest Neighbor Condensation (F. Angiulli, A. Astorino).
- 2nd Conference on Optimization Methods & Software , Prague, Czech Republic, 4 – 7 Luglio 2007.
  Talks:
  - Applying SVMs to Large Data Sets through Nearest Neighbor Condensation (F. Angiulli, A. Astorino);
  - DC programming and pattern classification (A. Astorino, A. Fuduli, M. Gaudioso).
- AIRO 2006 XXXVII Annual Conference of the Italian Operations Research Society - Optimization and Decision Sciences Urban and Regional Logistics and Transportation: New Challenges for Modelling and Optimization , Cesena, Italia, 12–15 Settembre 2006.
  Talk: Kernel methods and semi-supervised classification (A. Astorino, A. Fuduli).
- Workshop Mathematics and Medical Diagnosis , Erice, Italia, 10 – 20 Luglio 2006.

Talk: Nonsmooth optimization techniques for Transductive Support Vector Machine (A. Astorino, A. Fuduli).

- AIRO 2005 XXXVI Annual Conference of the Italian Operations Research Society , Camerino, Italia, 6-9 Settembre 2005.
  Talk: Nonsmoothness in classification problems (A. Astorino, A. Fuduli).
- Workshop Optimization in Medicine , Coimbra, Portogallo, 20 - 22 Luglio 2005.
  Talk: Semi-supervised classification by nonsmooth nonconvex optimization (A. Astorino, A. Fuduli).
- AIRO 2003 XXXIV Annual Conference of the Italian Operations Research Society , Veneziao, Italia, 2 – 5 Settembre 2003.
  Talk: Ellipsoidal and Spherical Separation for Classification Problems (A. Astorino, M. Gaudioso).
- 36th Workshop on Mathematical Diagnostics , Erice, Italia, 17 – 25 Luglio 2002.
  Talk: Applications of Nonlinear Optimization to Separation of Sets (A. Astorino, M. Gaudioso).
- XXIV Convegno Nazionale Stradale AIPCR, Saint-Vincent, Valle D'Aosta, Italia, 26 – 29 giugno 2002.
  Talk: Una metodologia di gestione della sicurezza stradale attraverso l'analisi degli scenari di incidente (A. Astorino, D. Greco, R. Grossi).
- AIRO 2002 XXXIII Annual Conference of the Italian Operations Research Society - Integrating Operations Research and Information Technology to Support Decisions in Real World System, L'Aquila, Italia, 10-13 Settembre 2002.
  Talk: Un problema di Programmazione Lineare Binaria per la gestione della sicurezza stradale (A. Astorino, M. Gaudioso, D. Greco and R. Grossi).
- AIRO 2000 XXXI Annual Conference of the Italian Operations Research Society - Optimization Models of Operational and Strategic Decisions in Finance, Telecommunication and Transportation, Milano, Italia, 18 – 21 Settembre 2000.
  Talk: Una tecnica di classificazione applicata alla previsione delle insolvenze aziendali (A. Astorino).
- AIRO 1999 XXX Annual Conference of the Italian Operations Research Society - Simulation and Optimization in Operations Management, Napoli, Italia, 21 – 24 Settembre 1999.
  Talk: A classification technique for the follow-up of kidney transplants (A. Astorino, R. Bonofiglio, M. Nicoletta).
- Sixth SIAM Conference on Optimization, Atlanta, Georgia (USA).10-12 Maggio 1999.
  Talk: Polyhedral separability through successive LP (A. Astorino, M. Gaudioso).
- Workshop ERICE98 Nonlinear Optimization and Applications, Erice, Italia, 23 Giugno – 2 Luglio 1998.
  Talk: Polyhedral separability through successive LP (A. Astorino, M. Gaudioso).

Seminari su invito

- A. Astorino. DC models for machine learning problems. OGDA 2018 - Workshop on Optimization, Game Theory, and Data Analysis 2018, University of Vienna, Austria, 20-21/12/2018.

- A. Astorino, A. Fuduli, M. Gaudioso, E. Gorgone. Non smooth optimization and classification problems. Convegno conclusivo Progetto FIRB 2001 Large Scale Nonlinear Optimization, Capri 19 – 20 Aprile 2007, Villa Orlandi.
- A. Astorino, M. Gaudioso. I Modelli matematici per la classificazione e la loro classificazione e la loro applicazione in campo applicazione in campo medico. Presentazione dei contenuti e degli obiettivi del progetto “Matematica e Diagnosi Medica”, Aula Magna della Scuola Medica, Via Roma, 55, 8/1/2007 Pisa.
- A. Astorino. Tecniche di separazione non lineare, nell’ambito di Seminari su “Alcune applicazioni e questioni aperte in Ottimizzazione Non Lineare”, Modena, Italia, 23 – 24 Gennaio 2002.

Progetti di Ricerca

Responsabilitá scientifica

• Ruolo	Responsabile Unitá Operativa
Titolo	Obiettivo Realizzativo OR1-IMPR-ICAR: APPLICAZIONE DI MODELLI AVANZATI DI OTTIMIZZAZIONE A LARGA SCALA AI SISTEMI LOGISTICI
Tipologia - Finanziamento	AZIONE 2 Laboratorio tecnologico (POR 2000-2006 Misura 3.16.B2) - Progetto LOGICA del Distretto Tecnologico della Logistica e Trasformazione della Regione Calabria.
Periodo di attivitá	Dal 21/12/2005 al 20/12/2007

Partecipazioni

• Ruolo	Partecipante
Titolo	Optimizing Sustainable Multi-mOdal and multi-tasking last-mile distribuTION system with carbon-free autonomous vehicles, ground robots, drones, and public transport- SMOTION
Tipologia - Finanziamento	PIANO NAZIONALE DI RIPRESA E RESILIENZA (PNRR) - MISSIONE 4 COMPONENTE 2 INVESTIMENTO 1.1
Decorrenza	01/12/2023
Durata	720 ore
• Ruolo	Partecipante
Titolo	APPIA - Altilia Product and Price Intelligence Advisor
Tipologia - Finanziamento	POR Calabria FESR-FSE 2014-2020 Asse I – Promozione della Ricerca e dell’Innovazione
Decorrenza	02/01/2018
Durata	1000 ore
• Ruolo	Partecipante
Titolo	GLAMOUR - Green Learning and Adaptive Multi-interface iOt enabled devices throUgh social inteRactions
Tipologia - Finanziamento	POR Calabria FESR-FSE 2014-2020 Asse I – Promozione della Ricerca e dell’Innovazione
Decorrenza	15/12/2017
Durata	700 ore
• Ruolo	Partecipante
Titolo	DISTRETTO TECNOLOGICO CYBER SECURITY-DEMATERIALIZZAZIONE SICURA
Tipologia - Finanziamento	PON03PE_00032_3

Decorrenza	01/09/2015
Durata	600 ore
• Ruolo	Partecipante
Titolo	BA2KNOW - Business Analytics to Know
Tipologia - Finanziamento	PON03PE_00001_1
Periodo di attivitá	Dal 01/07/2015 al 09/12/2016
• Ruolo	Partecipante
Titolo	OSMESO
Tipologia - Finanziamento	Progetto POR Calabria 2007-2013 Linee 1.1.1.2 Avviso Agenda Strategica Poli di Innovazione
Periodo di attivitá	Dal 01/01/2015 al 31/12/2015
• Ruolo	Partecipante
Titolo	DISTRETTO TECNOLOGICO DOMUS – PROGETTO 1, “Piattaforma intelligente per il monitoraggio e la gestione della sicurezza in-home di persone e strutture”
Tipologia - Finanziamento	PON03PE_00050_1
Periodo di attivitá	Dal 01/09/2013 al 31/12/2016
• Ruolo	Partecipante
Titolo	Progetto FIT C02/000823/02/X/17
Tipologia - Finanziamento	Decreto: n. 2143 del 24/07/2013. Finanziamento: MISE.
Periodo di attivitá	Dal 01/03/2010 al 28/02/2013
• Ruolo	Partecipante
Titolo	DICET - INMOTO - ORCHESTRA
Tipologia - Finanziamento	PON04a2_D
Periodo di attivitá	Dal 01/11/2012 al 30/05/2015
• Ruolo	Partecipante
Titolo	Infrastruttura Operativa a supporto dell’interoperabilitá delle soluzioni territoriali di FSE
Tipologia - Finanziamento	Decreto: n. 91279 del 17/12/2010. Presidenza del Consiglio.
Periodo di attivitá	Dal 17/12/2010 al 16/06/2012
• Ruolo	Partecipante
Titolo	FSE - Progetto Infrastruttura tecnologica del Fascicolo Sanitario Elettronico
Tipologia - Finanziamento	Presidenza del Consiglio dei Ministri, Dipartimento per la Digitalizzazione della Pubblica Amministrazione e l’innovazione Tecnologica
Periodo di attivitá	Dal 01/07/2007 al 30/06/2009
• Ruolo	Partecipante
Titolo	DM21301 OpenKnowTech: Laboratorio di Tecnologie per la Integrazione, Gestione e Distribuzione di Dati, Processi e Conoscenza
Tipologia - Finanziamento	Presentato al MUR ai sensi dell’art. 12/Lab del DM 593/2000, Laboratorio 11 Laboratorio pubblico- privato sulle risorse finalizzate su open source del software
Periodo di attivitá	Dal: 01/07/2007 Al: 30/06/2009
• Ruolo	Partecipante
Titolo	Progetto AUTOMA AUTOmobile logistic MAnagment
Tipologia - Finanziamento	POR 2000/2006 – Progetto LogNET – Azione 4: Ricerca Industriale (DM 395/200 art. 13)
Periodo di attivitá	Dal 21/12/2005 al 20/12/2007
• Ruolo	Partecipante

Titolo	Progetto PROMIS logistic PROcess Management and Intelligence System
Tipologia - Finanziamento	POR 2000/2006 – Progetto LogNET – Azione 4: Ricerca Industriale (DM 395/200 art. 13)
Periodo di attivitá	Dal 21/12/2005 al 20/12/2007
• Ruolo	Partecipante
Titolo	SFIDA-PMI: Soluzioni Informatiche per filiere, distretti ed associazioni di PMI
Tipologia - Finanziamento	MIUR-FAR (DM 593/2000)
Periodo di attivitá	Dal: 01/01/2005 Al: 31/12/2008
• Ruolo	Partecipante
Titolo	Il Terminal Marittimo di Gioia Tauro: Strategie, gestione ed integrazione con il territorio
Tipologia - Finanziamento	MIUR-FAR n. 11584
Periodo di attivitá	Dal: 15/04/2004 Al: 14/04/2008
• Ruolo	Partecipante
Titolo	P2P-CKMS-SSDM: Modelli e Tecnologie Collaborativi a Supporto Di Sistemi Sanitari Distribuiti
Tipologia - Finanziamento	Azione 3.16.d Ricerca e Sviluppo Tecnologico nelle Imprese Regionali - Sub-Azione 3.16.d.1Azioni di RSTI Cooperativa per le Imprese
Periodo di attivitá	Dal: 01/04/2004 Al: 31/08/2005
• Ruolo	Partecipante
Titolo	ELLADE - ELectronic Live ADaptive lEarning
Tipologia - Finanziamento	Azione 3.16.d Ricerca e Sviluppo Tecnologico nelle Imprese Regionali - Sub-Azione 3.16.d.1 Azioni di RSTI Cooperativa per le Imprese
Periodo di attivitá	Dal: 22/03/2004 Al: 31/08/2005
• Ruolo	Partecipante
Titolo	Reti Internet: efficienza, integrazione e sicurezza
Tipologia - Finanziamento	CNR-MIUR (Legge 449/97) Societá dell'informazione SP1
Periodo di attivitá	Dal: 31/12/2002 Al: 28/02/2005
• Ruolo	Partecipante
Titolo	Agenti autonomi e ottimizzazione dei terminal containers
Tipologia - Finanziamento	progetto di ricerca scientifica e tecnologica (art. 65 del D.P.R. 382/1980 quota 40%).
Unitá di Ricerca	Universitá della Calabria
Nominativo responsabile	Prof. Manlio Gaudioso
Area	09 Ingegneria industriale e dell'informazione
Durata	12 mesi
Bando	1996
Data consuntivo del programma di ricerca	23/12/1999.
• Ruolo	Partecipante
Titolo	Ottimizzazione per la logistica e agenti autonomi
Tipologia - Finanziamento	Protocollo Progetto: 9709A6758_013
Unitá di Ricerca	Universitá della Calabria
Nominativo responsabile	Prof. Manlio Gaudioso
Area	09 Ingegneria industriale e dell'informazione
Durata	24 mesi
Bando	1997

Data consuntivo del programma di ricerca	27/06/2000
• Ruolo	Partecipante
Titolo	Metodi di classificazione basati sulla minimizzazione di funzioni poliedrali
Tipologia - Finanziamento	Programma CNR- AGENZIA2000. Codice Progetto: CNRC0022A3_002
Unitá di Ricerca	Universitá della Calabria
Responsabile Scientifico	Prof. M.F. Monaco
Durata:	1 anno
Periodo di attivitá	anno 2002
• Ruolo	Partecipante
Titolo	Ottimizzazione Nonlineare su Larga Scala
Tipologia - Finanziamento	FIRB 2001. Codice Progetto: RBNE01WBBB_003
Unitá di Ricerca	Universitá della Calabria
Responsabile Scientifico	Prof. Manlio Gaudioso
Decorrenza	05/11/2002 Termine: 05/11/2005
• Ruolo	Partecipante
Titolo	Matematica e Diagnosi Medica
Altre informazioni	Centro Enrico Fermi.
Periodo di attivitá	Anni 2005-2006
• Ruolo	Partecipante
Titolo	Metodi per la programmazione nonlineare
Tipologia - Finanziamento	Progetto di Ricerca Annuale EX MURST 60%
Nominativo responsabile	Prof. Manlio Gaudioso
Area	01 Scienze matematiche e informatiche.
Anno finanziario	2005
• Ruolo	Partecipante
Titolo	Metodi numerici per l'ottimizzazione globale e per alcune classi di problemi di ottimizzazione nondifferenziabile
Tipologia - Finanziamento	PRIN 2005. Protocollo Progetto: 2005017083_002
Unitá di Ricerca	Universitá della Calabria
Responsabile Scientifico	Prof. Manlio Gaudioso
Area	01 Scienze matematiche e informatiche.
Durata	24 mesi
Decorrenza	30/01/2006
• Ruolo	Partecipante
Titolo	Metodi numerici per l'ottimizzazione nondifferenziabile
Tipologia - Finanziamento	Progetto di Ricerca Annuale EX MURST 60%
Nominativo responsabile	Prof. Manlio Gaudioso
Area	01 Scienze matematiche e informatiche.
Anno finanziario	2006.
• Ruolo	Partecipante
Titolo	Ottimizzazione nonlineare e applicazioni
Tipologia - Finanziamento	PRIN 2007: 20079PLLN7_003
Unitá di Ricerca	Universitá della Calabria
Responsabile Scientifico	Prof. Manlio Gaudioso
Area	01 Scienze matematiche e informatiche.

Durata	24 mesi
Decorrenza	22/09/2008

Attivitá Editoriale ed Organizzativa

Comitati di convegni scientifici

• Date	19 – 21 giugno 2017
Posizione ricoperta	Membro del comitato tecnico di programma del Convegno LION11, THE 11TH LEARNING AND INTELLIGENT OPTIMIZATION CONFERENCE, Nizhny Novgorod, Russia.
• Date	7 – 10 settembre 2010.
Posizione ricoperta	Membro del comitato organizzativo del Congresso AIRO 2010, Villa San Giovanni, Italia.

Attivitá di revisione

• Date	01-01-2004 →
Posizione ricoperta	Revisore
Descrizione	Attivitá di revisione per le seguenti riviste a diffusione internazionale:

- IEEE Transactions on Pattern Analysis and Machine Intelligence;
- Computers & Operations Research;
- Optimization Methods and Software;
- Mathematical Programming;
- Journal of Global Optimization;
- Information Processing Letters;
- IEEE Transactions on Knowledge and Data Engineering;
- Central European Journal of Mathematics;
- Journal of Optimization Theory and Applications;
- Optimization Letters;
- European Journal of Operational Research;
- Applied Mathematics and Computation;
- Information Sciences;
- International Journal of Machine Learning and Cybernetics;
- Machine Learning & Knowledge Extraction;
- Journal of Psychiatric Research;
- Computational Optimization and Applications;
- Computer Methods and Programs in Biomedicine.

Periodo all'estero

• Date	03/05/2004 – 30/06/2004
Posizione ricoperta	GUEST SCIENTIST
Descrizione	Max Planck Institute for Biological Cybernetics – Department Empirical Inference for Machine Learning and Perception. Director Dr. Bernhard Scholkopf.
Sede	Tubingen, Germany

Altre Partecipazioni Internazionali

Commissioni di dottorato

• Date	A.A. 2020-2021
Posizione ricoperta	Esaminatore
Descrizione	Partecipazione alla commissione di Dottorato del candidato PAUL JAVAL che ha condotto il suo lavoro di tesi presso Center of Applied Mathematics, Mines ParisTech, in un progetto sponsorizzato da Electricite de France.
Sede	Mines ParisTech
• Date	07/05/2018 – 02/07/2018
Posizione ricoperta	Opponent (Esaminatore)
Descrizione	Official opponent in the dissertation "Bundle methods in nonsmooth DC optimization" of Ms. KAISA JOKI, Master of Science. Docent Napsu Karmitsa will be Custos (chairman) for the dissertation.
Sede	University of Turku

Altre Partecipazioni Nazionali

Collegio di Dottorato

• Date	2013 →
Lavoro o posizione ricoperti	Membro del Collegio di Dottorato
Descrizione	Collegio docenti del Dottorato in Information and Communication Technologies
Sede	Universitá della Calabria
• Date	2005 – 2012
Lavoro o posizione ricoperti	Membro del Collegio di Dottorato
Descrizione	Collegio docenti del Dottorato in Ricerca Operativa
Sede	Universitá della Calabria

Organismi di natura tecnico-scientifica ed organizzativa

• Date	22/10/2020 – 30/06/2022

Posizione ricoperta	Componente GEV
Descrizione	GEV – Area scientifica 1, per lo svolgimento delle attivitá di valutazione nell'ambito dell'esercizio VQR 2015-2019
Sede	ANVUR
• Date	21/05/2020 →
Posizione ricoperta	Membro Consiglio d'Istituto
Descrizione	Consiglio d'Istituto dell'ICAR – CNR
Sede	Rende
• Date	2018 e 2020 →
Posizione ricoperta	Aderente
Descrizione	GNCS - Gruppo Nazionale per il Calcolo Scientifico
• Date	1999 →
Posizione ricoperta	Membro
Descrizione	AIRO, Associazione Italiana di Ricerca Operativa

Commissioni di dottorato

• Date	A.A. 2020-2021
Posizione ricoperta	Valutatore
Descrizione	Valutazione della tesi di dottorato di DANIEL FACCINI numero ciclo 34, dal titolo Models and Approximations for Optimization Problems under Uncertainty with Applications to Support Vector Machine and Revenue Management, Corso di dottorato in APPLIED ECONOMICS AND MANAGEMENT (AEM).
Sede	Universitá degli Studi di Bergamo

Commissioni di concorso

Posizione ricoperta	Membro
Descrizione	Partecipazione ai lavori delle seguenti commissioni:

- PUBBLICA SELEZIONE PER IL CONFERIMENTO DI N. 1 ASSEGNO DI RICERCA PER ATTIVITÁ DA SVOLGERSI NELL'AMBITO DELL'OBIETTIVO REALIZZATIVO OR1-IMPR-ICAR: APPLICAZIONE DI MODELLI AVANZATI DI OTTIMIZZAZIONE A LARGA SCALA AI SISTEMI LOGISTICI DELL'AZIONE 2 LOGICA DEL DISTRETTO TECNOLOGICO DELLA LOGISTICA E TRASFORMAZIONE DELLA REGIONE CALABRIA. - Bando n. 01/2007-ICAR. Protocollo ICAR-CNR Numero: 2007/317 – Data: 02/03/2007
- Selezione n. 1/2009 ICAR, per l'assunzione con contratto di lavoro a tempo determinato, ai sensi dell'art. 23 del D.P.R. 12 febbraio 1991 n. 171, di n. 1 unitá di personale con profilo di Ricercatore, III livello professionale, presso l'Istituto di Calcolo e Reti ad Alte Prestazioni del Consiglio Nazionale delle Ricerche, Sede di Rende (CS). Protocollo ICAR-CNR Numero: 2009/931– Data: 13/07/2009

Attivitá Didattica

Corsi universitari

• Date	dall'A.A. '23/24
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	MATEMATICA 2
Corso di Laurea	Laurea in Ingegneria Informatica
Sede	Rende
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Università della Calabria
• Date	dall'A.A. '23/24
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	ANALISI MATEMATICA
Corso di Laurea	Laurea in Ingegneria Informatica e Biomedica
Sede	Catanzaro
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Università degli studi "Magna Graecia" di Catanzaro
• Date	dall'A.A. '21/22 all'A.A. '22/23
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	ANALISI I
Corso di Laurea	Laurea in Ingegneria Chimica
Sede	Rende
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Università della Calabria
• Date	dall'A.A. '15/'16 all'A.A. '22/23
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	ELEMENTI DI MATEMATICA COMPUTAZIONALE – Corso A
Corso di Laurea	Laurea in Ingegneria Informatica
Sede	Rende
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	D.I.M.E.S., Università della Calabria
• Date	dall'A.A. '04/'05 all'A.A. '09/'10
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	STRUMENTI DI SUPPORTO ALLE DECISIONI
Corso di Laurea	Laurea in Ingegneria Gestionale
Sede	Polo didattico di Crotone
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Facoltà di Ingegneria, Università della Calabria
• Date	dall'A.A. '06/'07 all'A.A. '07/'08 – A.A. '09/'10
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	RICERCA OPERATIVA 2
Corso di Laurea	Laurea in Ingegneria Gestionale
Sede	Polo didattico di Crotone

Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Facoltà di Ingegneria, Università della Calabria
• Date	dall'A.A. '04/'05 all'A.A. '06/'07
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	METODI QUANTITATIVI PER L'INGEGNERIA
Corso di Laurea	Laurea Specialistica in Ingegneria Informatica e dei Sistemi Sanitari, Facoltá di Medicina e Chirurgia
Sede	Catanzaro
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Università degli Studi "Magna Graecia" di Catanzaro
• Date	dall'A.A. '04/'05 all'A.A. '05/'06
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	RICERCA OPERATIVA 1
Corso di Laurea	Laurea in Ingegneria Gestionale
Sede	Polo didattico di Crotone
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Facoltà di Ingegneria, Università della Calabria
• Date	dall'A.A. '02/'03 all'A.A. '03/'04
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	LOGISTICA II
Corso di Laurea	Laurea in Ingegneria Gestionale
Sede	Polo didattico di Crotone
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Facoltà di Ingegneria, Università della Calabria
• Date	dall'A.A. '02/'03 all'A.A. '03/'04
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	SISTEMI DI SERVIZIO
Corso di Laurea	Laurea in Ingegneria Gestionale
Sede	Rende
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Facoltà di Ingegneria, Università della Calabria
• Date	dall'A.A. '02/'03 all'A.A. '03/'04
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	SISTEMI DI SERVIZIO
Corso di Laurea	Laurea in Ingegneria Gestionale
Sede	Polo didattico di Crotone
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Facoltà di Ingegneria, Università della Calabria
• Date	dall'A.A. '00/'01 all'A.A. '01/'02
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	MODELLI DI SISTEMI DI PRODUZIONE
Corso di Laurea	Diploma Universitario in Ingegneria Logistica e della Produzione
Sede	Rende
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Facoltà di Ingegneria, Università della Calabria
• Date	dall'A.A. '00/'01 all'A.A. '01/'02
Lavoro o posizione ricoperti	Titolare del corso (Docente)

Nome del corso	MODELLI DI SISTEMI DI PRODUZIONE
Corso di Laurea	Diploma Universitario in Ingegneria Logistica e della Produzione
Sede	Polo didattico di Crotone
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Facoltà di Ingegneria, Università della Calabria
• Date	A.A. 1999/2000
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	MODELLI DI SISTEMI DI PRODUZIONE
Corso di Laurea	Diploma Universitario in Ingegneria Logistica
Sede	Rende
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Facoltà di Ingegneria, Università della Calabria
• Date	A.A. 1999/2000
Lavoro o posizione ricoperti	Titolare del corso (Docente)
Nome del corso	RICERCA OPERATIVA B
Corso di Laurea	Diploma Universitario in Ingegneria Logistica
Sede	Rende
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Facoltà di Ingegneria, Università della Calabria

Corsi master e scuole di specializzazione

• Date	01/04/2007 – 31/05/2007
Lavoro o posizione ricoperti	Docente
Nome del corso	GESTIONE DELLA PRODUZIONE
Titolo del Master	(Programma FAR Prot. n. 4411/ICT) - Corso per Ricercatori industriali orientati all'analisi e alla progettazione dei processi logistici e degli strumenti a supporto della logistica
Sede	Rende
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	DEIS, Università della Calabria
Altre informazioni	Progetto di Formazione art. 12 D.M. 593/2000 - Decreto Direttoriale n. 130 /Ric del MIUR del 16 febbraio 2004 - Progetti di Ricerca e formazione nel settore dell'ICT PILOT Piattaforma di Interoperabilitá per la Logistica ed i Trasporti
• Date	01/10/2006 – 30/11/2006
Lavoro o posizione ricoperti	Docente
Nome del corso	RICERCA OPERATIVA
Titolo del Master	(Programma FAR Prot. n. 4411/ICT) - Corso per Ricercatori industriali orientati all'analisi e alla progettazione dei processi logistici e degli strumenti a supporto della logistica
Sede	Rende
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	DEIS, Università della Calabria
Altre informazioni	Progetto di Formazione art. 12 D.M. 593/2000 - Decreto Direttoriale n. 130 /Ric del MIUR del 16 febbraio 2004 - Progetti di Ricerca e formazione nel settore dell'ICT PILOT Piattaforma di Interoperabilitá per la Logistica ed i Trasporti
• Date	01/10/2006 – 30/11/2006
Lavoro o posizione ricoperti	Docente
Nome del corso	RICERCA OPERATIVA
Titolo del Master	(Programma FAR Prot. n. 4411/ICT) - Corso per Tecnici di ricerca industriale orientati all'applicazione di tecniche a supporto della logistica

Sede	Rende
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	DEIS, Università della Calabria
Altre informazioni	Progetto di Formazione art. 12 D.M. 593/2000 - Decreto Direttoriale n. 130 /Ric del MIUR del 16 febbraio 2004 - Progetti di Ricerca e formazione nel settore dell'ICT PILOT Piattaforma di Interoperabilitá per la Logistica ed i Trasporti
• Date	09/2005
Lavoro o posizione ricoperti	Docente
Nome del corso	OTTIMIZZAZIONE
Titolo del Master	Programma Operativo Nazionale "Ricerca Scientifica Sviluppo tecnologico, Alta Formazione 2000/06", Avviso n. 4391/01, Mis. III.4 Prog. Master in Logistica Integrata - codice MIUR 5341/176
Sede	Rende
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	CIES, Università della Calabria
• Date	09/2005
Lavoro o posizione ricoperti	Docente
Nome del corso	SIMULAZIONE
Titolo del Master	Programma Operativo Nazionale "Ricerca Scientifica Sviluppo tecnologico, Alta Formazione 2000/06", Avviso n. 4391/01, Mis. III.4 Prog. Master in Logistica Integrata - codice MIUR 5341/176
Sede	Rende
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	CIES, Università della Calabria
• Date	09/2003
Lavoro o posizione ricoperti	Docente
Nome del corso	PROBABILITÁ E STATISTICA
Titolo del Master	Master in Programmazione dei Sistemi di Trasporto CollettIvo MAST
Sede	Reggio Calabria
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Consorzio Istituto Superiore Trasporti, Reggio Calabria
• Date	02/2000
Lavoro o posizione ricoperti	Docente
Nome del corso	PRODUZIONE E LOGISTICA
Titolo del Master	Master in General Management - Progetto "CE.L.I. - Centro di Logistica Integrata"
Sede	Gioia Tauro (RC)
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Laboratorio di tecnologie della conoscenza didattiche e informative c/o Universitá degli studi di Reggio Calabria

Relatrice tesi di laurea

Lavoro o posizione ricoperti	Correlatrice delle seguenti tesi di Laurea
•	Titolo Tesi: Programmazione DC e traiettorie prossimali Tesista: Antonio Bitonti Relatori: Ing. Annabella Astorino, Prof. Antonio Fuduli Corso di Laurea Magistrale in Matematica Universitá degli Studi della Calabria A.A. 2019/20

- Titolo Tesi: La classificazione, un'applicazione per la ricognizione di aziende a rischio
  Tesista: Gaetana Rubino
  Relatori: Ing. A. Astorino, Prof. M. Gaudioso
  Corso di Laurea Magistrale in Ingegneria Gestionale
  Universitá degli Studi della Calabria
  A.A. 2015/16

- Titolo Tesi: Tecniche di classificazione di spettri di proteine per la diagnosi del cancro alla prostata
  Tesista: Tucci Salvatore
  Relatori: Ing. A. Astorino, Prof. M. Gaudioso
  Corso di Laurea Magistrale in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2006/07

- Titolo Tesi: Tecniche di classificazione: un modello basato sulla separazione sferica
  Tesista: Imbrogno Carolina
  Relatori: Ing. A. Astorino, Ing. A. Fuduli
  Corso di Laurea in Informatica, Facoltá di Scienze Matematiche Fisiche e Naturali
  Universitá degli Studi della Calabria
  A.A. 2006/07

- Titolo Tesi: Modelli ed Algoritmi per il Clustering ed Applicazioni
  Tesisti: G. De Rosa, I. Tarallo
  Relatori: Ing. A. Astorino, Prof. M. Gaudioso
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2005/06

- Titolo Tesi: Il problema della gestione delle scorte del magazzino medicinali dell'Istituto S. Anna
  Tesista: Garzieri Antonella
  Relatore: Ing. A. Astorino
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2005/06

- Titolo Tesi: Modelli ed Algoritmi per il Clustering ed Applicazioni
  Tesista: Longo Alfredo
  Relatori: Prof. L. Filice, Ing. A. Astorino, Ing. G. Ambrogio
  Corso di Laurea in Ingegneria Meccanica, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2005/06

- Titolo Tesi: Tecniche di Classificazione Multipla ed Applicazioni
  Tesista: Franco Sabrina
  Relatori: Ing. A. Astorino, Prof. M. Gaudioso
  Corso di Laurea Specialistica in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2004/05

- Titolo Tesi: Aspetti organizzativi, gestionali e di controllo delle giacenze nel magazzino farmaci dell'Istituto Sant'Anna di Crotone
  Tesista: Gargano Alessandra
  Relatori: Ing. A. Astorino, Dott. G. Pugliese
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2004/05

- Titolo Tesi: L'analisi decisionale clinica: valutazione sperimentale sull'addestramento di un classificatore con Support Vector Machine in ambito neuro riabilitativo all'Istituto S. Anna di Crotone
  Tesista: Mercurio Giuseppe
  Relatori: Ing. A. Astorino, Dott. G. Pugliese
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2004/05

- Titolo Tesi: Evoluzione nella gestione delle scorte: il magazzino virtuale
  Tesista: Cavallaro Mario
  Relatore: Ing. A. Astorino
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2004/05

- Titolo Tesi: Applicazioni della separazione sferica a problemi di multiclassificazione
  Tesista: Bifano Roberta
  Relatore: Ing. A. Astorino
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2004/05

- Titolo Tesi: Metodi DEA per la valutazione dell'efficienza delle attivitá di Day Hospital presso l'ospedale San Giovanni di Dio di Crotone
  Tesista: Caligiuri Carla
  Relatore: Ing. A. Astorino
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2004/05

- Titolo Tesi: Formulazioni di Programmazione Lineare per problemi di classificazione
  Tesista: Cannatá Valeria
  Relatore: Ing. A. Astorino
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2004/05

- Titolo Tesi: Tecniche di classificazione multipla
  Tesista: Terranova Rosetta
  Relatori: Ing. A. Astorino, Prof. M. Gaudioso
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2003/04

- Titolo Tesi: Algoritmi per problemi di classificazione multipla
  Tesista: Scarcello Licia Dora
  Relatori: Ing. A. Astorino, Prof. M. Gaudioso
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2003/04

- Titolo Tesi: La separazione sferica per un problema di multiclassificazione
  Tesista: Mancuso Caterina
  Relatore: Ing. A. Astorino
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2003/04

- Titolo Tesi: La gestione delle scorte in una azienda di distribuzione
  Tesista: Alessi Pasquale
  Relatore: Ing. A. Astorino
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2003/04

- Titolo Tesi: Modelli per la gestione delle scorte. Applicazione alla produzione della cellulosa
  Tesista: De Simone Maria
  Relatori: Ing. A. Astorino, Dott. G. Lorenzano
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2003/04

- Titolo Tesi: Algoritmi per Problemi di Programmazione Semidefinita e Applicazioni
  Tesista: Greco Debora
  Relatori: Ing. A. Astorino, Prof. M. Gaudioso
  Corso di Laurea Magistrale in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2002/03

- Titolo Tesi: Support Vector Machine e metodi kernel: applicazioni ad un caso medico
  Tesista: Franco Sabrina
  Relatore: Ing. A. Astorino
  Corso di Laurea in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2002/03

- Titolo Tesi: Metodi numerici per la classificazione attraverso superfici non lineari
  Tesisti: Frandina Salvatore, FranzÃ¨ Daniele
  Relatori: Ing. A. Astorino, Prof. M. Gaudioso
  Corso di Laurea Magistrale in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2001/02

- Titolo Tesi: Programmazione matematica e “Data Mining”. Metodi SVM (Support Vector Machine)
  Tesista: Stasi Francesco
  Relatori: Ing. A. Astorino, Prof. M. Gaudioso
  Corso di Laurea Magistrale in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 2000/01

- Titolo Tesi: Modelli per la classificazione ed applicazioni ai bilanci delle imprese
  Tesista: Pollola Giuseppe
  Relatori: Ing. A. Astorino, Prof. M. Gaudioso
  Corso di Laurea Magistrale in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 1998/99

- Titolo Tesi: Tecniche di Classificazione basate sulla Programmazione Matematica
  Tesista: Bencardino Carmelo
  Relatori: Ing. A. Astorino, Prof. M. Gaudioso
  Corso di Laurea Magistrale in Ingegneria Gestionale, Facoltá di Ingegneria
  Universitá degli Studi della Calabria
  A.A. 1996/97

Esperienza didattica nelle Scuole Superiori

• Date	Da gennaio 2023 a giugno 2023
Lavoro o posizione ricoperti	Docente nell'ambito del progetto PNRR "Orientamento attivo nella transizione scuola-universitá", Progetto Or.S.I "Orientamento Sostenibile Inclusivo".
• Date	Dal 09 /03/2018 al 21/09/2018
Lavoro o posizione ricoperti	Docente nell'ambito del progetto formativo di Alternanza Scuola Lavoro dal titolo "Apprendere dai Dati", presso l'Istituto d'Istruzione Superiore L.S. – ISA – IPSIA Indirizzo Liceo Scientifico di San Giovanni in Fiore (CS)

Capacità e competenze personali

Madrelingua/e **Italiano**

Autovalutazione
Livello europeo(*)

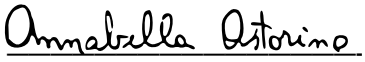
	Comprensione				Parlato				Scritto	
	Ascolto		Lettura		Interazione		Produzione orale			
Inglese	B2	Livello intermedio	B2	Livello intermedio	B2	Livello intermedio	B2	Livello intermedio	C1	Livello avanzato

(*) *Quadro comune europeo di riferimento per le lingue*

Aree di Ricerca	Programmazione Matematica · Metodi Numerici per l'Ottimizzazione Non-differenziabile · Machine Learning
Capacità e competenze informatiche	Conoscenza della maggior parte dei linguaggi di programmazione ed esperienza con risolutori di problemi di programmazione matematica
Patente	Automobilistica (patente B)

Si autorizza il trattamento dei dati personali ai sensi della Legge 675/96 e del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".

Rende, 17/05/2024



europass Curriculum vitae

PERSONAL INFORMATION

Alexandro Saro

Via S. Marco 55, 34144 - Trieste, Italy

+39 351 727 5056

alexandro.saro@inaf.it

https://alexsaro.wixsite.com/website

ORCID 0000-0002-9288-862X

Date of birth 22 August 2022 | Nationality Italian

WORK EXPERIENCE

01/10/2021 – Present — Associate Professor (Full Professor italian abilitation since 2021)
Department of Physics at the University of Trieste

01/03/2019 – 30/09/2021 — Ricercatore Tempo Determinato B (Tenure Track)
Department of Physics at the University of Trieste

01/09/2017 – 28/02/2019 — Primo Ricercatore (equivalent to Associate Professor)
Observatory of Trieste - INAF

01/10/2012 – 31/08/2017 — Assistant Professor
Department of Physics (Munich Observatory) at the Ludwig-Maximilians University of Munich in the Large Scale Structure group led by Prof. Joseph Mohr

01/09/2010 – 30/09/2012 — Post-doctoral fellowship
Munich Observatory of the Ludwig-Maximilians University of Munich and at the Excellence Cluster Institute of Munich in the Large Scale Structure group led by Prof. Joseph Mohr

01/01/2009 – 30/06/2010 — 18 months post-doctoral position
University of Trieste: “Cosmological models of galaxy formation: semi-analytic methods and numerical simulations”, advisor Prof. S. Borgani

EDUCATION AND TRAINING

3 April 2009 — PhD in Physics –Università degli Studi di Trieste
Thesis Title: Cluster galaxy populations in cosmological hierarchical models – Supervisor: Prof. S. Borgani

7 November 2005 — Master Degree – Astrophysics – Università degli Studi di Trieste
Thesis Title: Properties of Galaxies in Cosmological Hydrodynamical Simulations – Supervisor: Prof. S. Borgani

26 September 2002 — Bachelor Degree – Physics – Università degli Studi di Trieste
Thesis Title: The Cosmological Constant – Supervisor: Dr. P. Monaco

PRIZES

2003 — Prof. Paolo Poropat Best Bachelor Degree

AFFILIATIONS

- Astronomy Unit, Physics Department, University of Trieste, via Tiepolo 11, 34131 TS, Italy
- INAF - Osservatorio Astronomico di Trieste, via G. B. Tiepolo 11, 34143 Trieste, Italy
- IFPU - Institute for Fundamental Physics of the Universe, Via Beirut 2, 34014 Trieste, Italy
- INFN - National Institute for Nuclear Physics, Via Valerio 2, 34127 Trieste, Italy
- ICSC - Italian Research Center on High Performance Computing, Big Data and Quantum Computing, Italy

RESEARCH INTERESTS

Numerical Cosmology and Astrophysics

- Large computer simulations of cosmic structures
- Cosmological hydrodynamical simulations of galaxy clusters, galaxies and of the distribution of cosmic baryons
- Semi-analytical models of galaxy formation
- Comparison between simulated and observed properties of galaxies in the optical/near-IR band
- Mock observations from numerical simulations

Observational Cosmology and Astrophysics

- Tests of cosmological models through the evolution of the population of galaxy clusters and of their large-scale distribution
- Mass calibration with X-ray, optical/dynamical and SZE observations
- X-ray, SZE and dynamical properties of galaxy clusters
- Galaxy formation and evolution
- Forecasts for future cluster surveys
- Multiwavelenght Surveys
- Constraints on Non-standard cosmological models
- Joint X-ray and SZE observations
- High-redshift clusters and protoclusters

FUNDINGS

- PI of an European Research Council Starting Grant (1.230.403 euro), 2016
- PI of a FARE-RICERCA IN ITALIA: Framework per l'attrazione e il rafforzamento delle eccellenza per la ricerca in Italia Grant Awarded (169.796 Euro), 2017
- PI of a Progetti Rilevanti Interesse Nazionale - PRIN - (Total Cost 307.946 Euro), 2022.
- PI of a Ricerca Fondamentale INAF Large Grant (200.000 Euro), 2022.
- CO-I of PRIN-PNRR (Total Cost 299.213 Euro), 2022.
- Co-funding of a postdoctoral position at UniTS (11.472,45 euro), 2021
- Fondo Ricerca di Ateneo FRA – assegnazioni Linea C (18.365,28 euro), 2022
- Co-funding of a postdoctoral position at UniTS from Brookhaven National Laboratory (30.000 euro), 2023
- 5 months European EARA Marie Curie fellowship in the year 2006-2007 at the Max-Planck-Institut für Astrophysik, Garching bei München
- Rubicon Fellowship to work in collaboration with Prof. George Miley at the Leiden University (declined), 2010
- AstroFlt2 Marie Skłodowska-Curie Actions Fellowship (declined), 2018

SCIENTIFIC AND MANAGEMENT ROLES

- PI of an European Research Council Starting Grant, 2016
- PI of a FARE-RICERCA IN ITALIA: Framework per l'attrazione e il rafforzamento delle eccellenza per la ricerca in Italia Grant Awarded, 2017
- PI of an accepted INAF in-kind contribution for The Rubin Legacy Survey of Space and Time (LSST)
- PI of INAF-CINECA class-B proposal
- PI of ALMA observations (Cycle 6)
- PI of INAF-CINECA class-B proposal
- Co-PI of the Research Project "Cosmology with Galaxy Clusters" at IFPU
- Co-I of several observing proposals for HST, Spitzer, Chandra, JVLA, ALMA, ESO, MeerKAT, uGMRT, and computational proposals at CINECA, LRZ

SCIENTIFIC AND MANAGEMENT RESPONSIBILITIES

- Leader and coordinator of the four Work Packages of the ClusterXCosmo group
- Co-organizer of the Euclid Cluster Cosmology Challenge
- Co-leader of the Key project papers KP-CG-3 Paper 2 and KP-CL-5 Paper 2 within the Euclid Collaboration

MANAGEMENT RESPONSIBILITIES WITHIN INSTITUTES

- Co-organizer of the joint UniTS-INAF seminars
- Member of the Commissione Paritetica Docenti Studenti within the Physics Department of the University of Trieste
- Member of the PhD selection committee for the PhD in Physics at the University of Trieste
- Member of the doctoral committee for the PhD defense at UniTS and LMU
- Member of the selection committee for one RTD position at INAF (winner Sartoris), one RTD-A position at UniTS (winner Bischetti), four AdR at OATs (winners Singh, Costanzi, Salvati, Castro), one Borsa di Studio at OATs (winner Marini), three AdR at UniTS (winners Di Mascolo, Pannella, Arsioli)
- Appointee from the Department of Physics of the University of Trieste to contribute to the definition of the forming LM44 Laurea Magistrale in Scientific and Data Intensive Computing at UniTS
- Board member of the PhD in Applied Data Science and Artificial Intelligence of the University of Trieste.
- Member of the Bachelor degree in Physics at Units review committee

MAJOR COLLABORATIONS

- South Pole Telescope (SPT) member, since 2010
- Dark Energy Survey (DES) member, since 2010
- eROSITA member, 2010-2019
- Euclid Member, since 2012
- Nifty simulated clusters, since 2014
- SDSS-IV Spiders (External Collaborator), since 2016
- XMM-Heritage Cluster Project collaboration, since 2019
- POLARBEAR (External Collaborator), since 2019
- LSST-DESC, PIship since 2022

COMMISSIONS OF TRUST

- Referee for the Astrophysical Journal, Astronomy & Astrophysics Journals, the Monthly Notices of the Royal Astronomical Society, Advances in Astronomy, Journal of Cosmology and Astroparticle Physics, Galaxies MDPI
- Reviewing Editor for the Experimental Results Journal (Cambridge University Press)
- NASA-ADAP reviewer panel in the “Large Scale Cosmic Structure" research area
- Invited to serve as a referee for the evaluation of proposals for grants of the NWO – the Dutch Research Council and for the Slovenian Research Agency (ARRS)
- Referee for PhD thesis at LMU and Roma2 Tor Vergata University
- Referee for JWST proposals

TUTORING

- Scientific supervisor of the following postdocs at the Observatory of Trieste:
  Dr. Priyanka Singh, Dr. Matteo Costanzi, Dr. Raffaella Capasso, Dr. Laura Salvati, Dr. Maurilio Pannella, Dr. Tiago Batalha De Castro, Dr. Barbara Sartoris
- Scientific supervisor of the following postdocs at the Department of Physics at the University of Trieste:
  Dr. Matteo Costanzi, Dr. Veronica Strazzullo, Dr. Maurilio Pannella, Dr. Luca Di Mascolo, Dr. Alessandra Fumagalli
- Co-Supervisor of Bachelor Students at the Department of Physics at the University of Trieste:
  Giovanni Stel, Francisco Javier Resola
- Supervisor of Bachelor Students at the Department of Physics at the University of Trieste:
  Camilla Di Giusto
- Co-Supervisor of Master students in the Group of Large Scale Structure led by Prof. Joseph Mohr:
  Gráinne Temple, Javier Osado Sanchez, Xingjian Shao
- Co-Supervisor of Master Students at the Department of Physics at the University of Trieste:
  Alessandra Fumagalli
- Supervisor of Master Students at the Department of Physics at the University of Trieste:
  Ilaria Marini, Giovanni Stel
- Co-Supervisor of PhD students in the Group of Large Scale Structure led by Prof. Joseph Mohr:
  Dr. Jiayi Liu, Dr. Sebastian Bocquet, Dr. I-non Chiu, Dr. Nikhel Gupta, Dr. Raffaella Capasso, Dr. Sebastian Grandis
- Supervisor of PhD students at UniTS:
  Dr. Alessandra Fumagalli
- Co-Supervisor of PhD students at UniTS:
  Dr. Ilaria Marini

TEACHING ACTIVITIES

- Teaching requirement as Assistant Professor 2012-2017: 5 hours per week, including:
  - Tutor for “Frontiers of Observational Cosmology” (Summer Semester 2011/2012 and Summer Semester 2012/2013).
  - Tutor for “Essential Astrophysics” (Winter Semester 2012/2013, 2015/2016).
  - Tutor for “Physical Cosmology” (Winter Semester 2013/2014).
  - Tutor for “Observational Methods for Astronomy” (Winter Semester 2014/2015, Summer Semester 2015/2016).
  - Supervisor for Bachelor Physics Laboratories (Winter Semester 2013/2014, and Summer Semester 2013/2014,2014/2015).
  - Supervisor for “Students Seminars” (Winter Semester 2013/2014).
  - Co-organizer of the “Cluster seminars”, “Group meeting of the Large Scale Structure Group”,”Journal Club of the Large Scale Structure Group”.

- Teaching requirement March 2019 - September 2021: 350 hours per year (at least 60 hours of lectures), including:
  Bachelor Level:
  - Environmental Physics (since Winter Semester 2019/2020)
  - Informatics skills (since Summer Semester 2019/2020)
  Master Level:
  - Radiative Processes (since Summer Semester 2019/2020)
  PhD Level:
  - Observational Cosmology and Statistics (since Summer Semester 2019/2020)

- Teaching requirement as of October 2021: 350 hours per year (at least 120 hours of lectures), including:
  Bachelor Level:
  - Environmental Physics (since Winter Semester 2019/2020)
  - Informatics skills (since Summer Semester 2019/2020)
  Master Level:
  - Radiative Processes (since Summer Semester 2019/2020)
  - Fundamentals of Astrophysics and Cosmology (since Summer Semester 2020/2021)
  PhD Level:
  - Observational Cosmology and Statistics (2019/2020)

DISSEMINATION

- 117 publications.
- 8,081 citations.
- H-index 49[a].
- I have given approximately **55** presentations among institute seminars, workshops and conferences. I have been invited for **25** seminars including colloquium the Munich MPA/MPE/LMU/ESO Joint Astronomy Colloquium, colloquium at the Physics Department of the University of Arizona (Tucson), Observatory of Milan, and a review talk at the "Galaxy Cluster Formation II: Mergers, Protoclusters, and Star Formation in Overdense Environments" conference
- Organizer of the "Dissecting Cluster Cosmology" Workshop (September 2017), and of the "Dissecting Cluster Cosmology: toward a roadmap for forthcoming cluster surveys" Workshop (July 2023)
- SOC member of the MATERA OSCURA conference (2019)
- LOC member of the Hyrdrosim meeting in Trieste and of Tracing Cosmic Evolution with Clusters of Galaxies conference in Sesto

[a]Publication record as of Friday 17th May, 2024 (source NASA - ADS `http://adsabs.harvard.edu/abstract_service.html`)

OUTREACH

- Oral presentations at Trieste NEXT
- Caffe dei Venerdi
- Interviews at newspapers (Messaggero Veneto, Il Piccolo, Il Gazzettino, Il Corriere della Sera), radio (Rai Radio 1), and TV shows (LaEffe TV)

Le informazioni contenute nel presente "curriculum vitae et studiorum" sono rese sotto la personale responsabilità del sottoscritto, ai sensi degli articoli 46 e 47 del Decreto del Presidente della Repubblica 28 dicembre 2000, numero 445, e successive modifiche ed integrazioni, consapevole della responsabilità penale prevista dall'articolo 76 del medesimo Decreto per le ipotesi di falsità in atti e dichiarazioni mendaci

Trieste, 17/05/24

Rosa Meo -- Curriculum Vitae

Rosa Meo took a Master's Degree in Electronic Engineering and a Ph.D. in Computer Science and Systems Engineering from Politecnico di Torino, Italy.

She is an Full Professor at the Department of Computer Science at the University of Torino. She is active in the scientific research fields of Database, Data Mining and Machine Learning. In recent years, she has applied Machine Learning methods to juridical problems provided by the Italian Authority for AntiCorruption in Public Administrations (ANAC) and in collaboration with Farnesina in prediction of wars.

She also worked on distributed randomized techniques for Privacy-Preserving Data Mining. Another scientific research theme in which she is active is the application of Machine Learning to the social good, in particular in agroforestry, for combacting the climate change and sustaining the developing countries. To this aim she is partecipating, in a cooperation agreement between University of Torino and other Universities, in Latino America, such as in Peru and Bolivia to exchange students, teachers (Erasmus plus plan) and researchers to develop further the smart agriculture.

She is the delegate from Italy at OECD in the working group of Experts on AI (ONE AI) on the design of guidelines for developing trustable, sustainable, and respectful AI systems in Europe.

She published more than 70 papers in the field of Data Mining, Databases and Machine Learning, and was a member of Program Committee or chair of international and national conferences and Associated editor or member of the editorial board of journals, in IEEE, ACM e Springer. She participated in many research projects on applied Data Mining and Machine Learning, funded by European Commission and Piedmont Region.

Rosa Meo ha conseguito la laurea magistrale in Ingegneria Elettronica e il dottorato di ricerca in Informatica e Ingegneria dei Sistemi presso il Politecnico di Torino.

Dal 1999 si è spostata presso il Dipartimento di Informatica dell'Università di Torino e dal 2023 è professoressa ordinaria.

È attiva nei campi di ricerca scientifica delle basi di dati, del Data Mining e del Machine Learning. Negli ultimi anni ha applicato metodi di Machine Learning a problemi giuridici forniti dall'Autorità Nazionale Anticorruzione (ANAC) in collaborazione con il gruppo di ricerca di diritto amministrativo della prof.ssa Racca. Ha inoltre lavorato su tecniche di Data Mining che preservano la privacy e a temi di Machine Learning applicati per il bene sociale (ad esempio, agricoltura intelligente ed ecosostenibile per i paesi in via di sviluppo e in collaborazione con la Farnesina per la prevenzione dei conflitti). Partecipa ad un accordo di collaborazione tra Università di Torino e altre Università in America Latina, come Perù e Bolivia in un progetto Erasmus plus per sviluppare l'agricoltura smart.

È delegata per l'Italia presso l'OCSE nel gruppo di lavoro di esperti sull'IA (ONE AI) per la progettazione di linee guida per lo sviluppo di sistemi di IA affidabili, sostenibili e rispettosi in Europa.

Ha partecipato a numerosi progetti di ricerca sul Data Mining applicato e sul Machine Learning, finanziati dalla Commissione Europea e dalla Regione Piemonte.

Ha pubblicato più di 70 articoli nel campo del Data Mining, Databases e Machine Learning. E' stata membro del Comitato di programma e chair di molte conferenze internazionali e nazionali e Associated editor o membro dell'Editorial Board di riviste scientifiche in IEEE, ACM e Springer. Ha participato a molti progetti di ricerca in Data Mining e Machine Learning, finanziati dalla Commissione Europea e dalla Regione Piemonte.

Si autorizza il trattamento dei dati personali.

Rosa Meo

MATTEO VIEL

Date of birth: September 5, 1975 **Place of birth:** Udine (Italy)
Nationality: Italian

Contact details:

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via Bonomea 265
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tel. +39-040-3787517
fax. +39-040-3787249
e-mail: viel@sissa.it - matteoviel@gmail.com
web-page: http://www.sissa.it/∼viel
ORCID identifier: 0000-0002-2642-5707

Curriculum vitae

- **7/1999**: **Degree in Physics**, Università di Padova (Italy), Thesis: "A merger tree for the formation of cosmic structures" Thesis supervisors: Prof. Sabino Matarrese, Prof. Giuseppe Tormen (grade: full mark 110/110 cum laude)

- **9/1999 - 3/2000**: Pre-doctoral Fellowship from Università di Padova for a period of six months at Max-Planck-Institut for Astrophysics (Garching, Germany)

- **11/1999 - 11/2002**: PhD position at the Physics Department of Università di Padova (Italy)

- **02/2001 - 04/2001**: Visiting period at Max-Planck-Institut fü r Astrophysik (Garching, Germany)

- **04/2001 - 10/2001**: EARA-Marie Curie Fellowship at Max-Planck-Institut fü r Astrophysik (Garching, Germany)

- **02/2002 - 07/2002**: EARA-Marie Curie Fellowship at Institute of Astronomy (Cambridge, UK)

- **11/2002 - 10/2003**: **Research Associate** - Institute of Astronomy (Cambridge, UK)

- **02/2003**: **PhD in Physics**, Università di Padova (Italy), Thesis "Numerical Models of the Intergalactic Medium" - Thesis supervisor: Prof. Sabino Matarrese

- **10/2003 - 10/2006**: **Research Associate** - PPARC (Particle Physics Astronomy Research Council) fellowship, Institute of Astronomy (Cambridge, UK)

- **11/2004 - 12/2004**: Visiting period at KAVLI institute (Santa Barbara) for the program Galaxies-Intergalactic Medium interaction

- **10/2004 - 10/2006**: Research Fellow Clare Hall College (Cambridge, UK)

- **01/2006 - 10/2016**: **Researcher staff position at Trieste Observatory** (INAF-OATS)

- **10/2006 - present**: Affiliated to **INFN** (Italian National Institute of Nuclear Physics)

- **01/2011 - present**: Scientific local coordinator of INFN CSN4 Specific Initiative PD51-INDARK: Fisica Astro-Particellare: Inflazione, materia oscura e struttura su grande scala dell 'Universo

- **07/2009**: visiting scientist at the IoA, Cambridge (UK)

- **12/2010 - 12/2016**: **Winner of the European Research Council - Starting (Consolidator) Grant (ERC-StG) cosmoIGM - The Intergalactic Medium as a Cosmological Tool**

- **08/2010 - 11/2016**: Member of Collegio Docenti and Affiliated Staff of the Astroparticle Group at SISSA

- **2011-2014**: elected member of INAF Comitato di Macroarea-1: Galassie e Cosmologia

- **10/2012 - 10/2014**: elected as a member of the Time Allocation Committee (TAC) for the Italian telescopes TNG/LBT/REM

- **07/2017**: Abilitazione prima fascia **02/C1** – Astronomia, Astrofisica, Fisica della Terra e dei Pianeti

- **12/2016 - 10/2021**: **Associate Professor** in the Astroparticle Physics Group at SISSA University

- **12/2016 - present**: Affiliated to INAF with research assignment to administrate funds

- **03/2018**: Abilitazione prima fascia **02/A2** – Fisica Teorica delle Interazioni Fondamentali

- **05/2018 - 11/2022**: **Coordinator** of Astroparticle Research Group and Astroparticle Phd Curriculum at SISSA

- **11/2021 - present**: **Full Professor** in the Astroparticle Physics Group at SISSA University

- **09/2022 - present**: Local SISSA coordinator of the Spoke 3 of the High Performance Computing National Center (CN - HPC)

Research Interests

My research focusses on the use of the **large scale structure as a cosmological probe**. In particular, I have investigated the so-called mildly non-linear scales, especially in the **high redshift universe**, as probed by different observables. These scales allow to constrain the cosmological model and put constraints of fundamental properties such as **neutrino masses** and the **coldness of cold dark matter**. I have also made a comprehensive analysis of baryons from high to low redshift addressing the **galaxy-intergalactic medium interplay**. Here below I summarize in more details my main research interests.

- **The Intergalactic Medium/IGM** - Investigation of the Lyman$-\alpha$ forest, which is the main manifestation of the intergalactic medium, as a cosmological tool to probe the: 1) growth of cosmic structure; 2) fundamental physics; 3) the galaxy-IGM interplay. Constraints on the thermal history and metal enrichment of the Intergalactic Medium. Thermal, dynamical and chemical properties of the IGM. Reionization of the universe and evolution and nature of the Ionizing Background. Impact of galactic winds on the IGM. Low redshift IGM. Reionization. Impact of galactic winds and black hole feedback on galaxy evolution and on the IGM. Metal enrichment mechanisms in the high redshift universe. Absorption lines properties using high (UVES), medium (X-Shooter) and low (BOSS) resolution spectrographs.

- **Intensity mapping as a cosmological observable in the post-reionization era** - Intensity Mapping at 21cm as a tracer of the Universe LSS to trace the structure formation processes. Charahterization of HI distribution throughout cosmic times, inside and outside haloes; HOD and SAM models to produce mock 21cm maps; hydrodynamical simulations for intensity mapping; other intensity mapping lines (e.g. [CII], CO); cross-correlation of intensity mapping with galaxies and other tracers; testing beyond LCDM physics with intensity mapping; non-linearities of the HI bias: what can be learnt in terms of astrophysics and cosmology.

- **Fundamental physics** - Nature of dark matter and its impact on the large, medium and small scale structure of the Universe. Constraints on the coldness of cold dark matter and warm dark matter models. Full characterization of cosmological massive neutrinos in the linear and non-linear regime. Constraints on sterile neutrino particles using the Lyman-α forest. Measuring the cosmic expansion using the Lyman-α forest with the ESO-ELT (Extremely Large Telescope). Constraints on inflationary models and primordial non gaussianity using the IGM.

- **Cosmological parameters** - Recovery of cosmological parameters and properties of the dark matter density field in standard and non-standard cosmological models. Quantitative measurements of dark energy, warm dark matter, neutrinos properties. Early dark energy models. Cross-correlation of large scale structure data (SDSS galaxies and quasars, Fermi sources and diffuse signal, NVSS, 2MASS, etc.) and cosmic microwave background (Planck, WMAP, BOSS, eBOSS) data. Multi dimensional likelihood estimation of cosmological parameters using Monte Carlo Markov Chains. Cosmic degeneracies (e.g. neutrinos and modified gravity). Tensions in the standard cosmological model.

- **Structure formation using High Performance Computing Facilties** - Hydrodynamic and N-body codes. Evolution of cosmic structures in the high redshift universe. Density profiles of dark matter halos. Comparison of SPH and Eulerian codes for the physics of the IGM and the large scale structure. Use of international parallel super computer (COSMOS, HPCS in Cambridge (UK) and CINECA (Italy) in particular) to simulate the Universe at different scales. Coupled and early dark energy, modified gravity models and the impact on the Medium Scale Structure and IGM. Neutrino and warm dark matter simulations.

- **Atomic hydrogen as an astrophysical tracer of galactic processes** - Filaments in the cosmic web as gas reservoir for star formation and as an environment to test galactic thermal and kinetic feedback; cosmic cycle of baryons from high to low redshift, including missing baryons at z$\sim$ 0; Inflows and outflows characterization from QSO spectra and simulations; Warm Hot Intergalactic Medium; physical properties of the circumgalactic medium; accretion at cosmological scale as a driver of star formation; IGM and CGM metallicities: scientific cases for ANDES@E-ELT and high resolution spectroscopy; cross-correlation with galaxy populations.

Teaching

- Supervisor, Part III Physics Gravitational Astrophysics and Cosmology - a course held by Professors Lasenby, Fabian, Rees and Hobson (Physics Department - University of Cambridge) (years 2003-04)
- Supervisor, Part III Maths Physical Cosmology - a course held by Prof. Pettini and Dr. Weller (DAMTP - University of Cambridge) (years 2005-06)
- Lectures at Beijing Normal University (China) on the Physics of the Intergalactic Medium , 10 hrs course (October 2006)
- Lecturer at Università La Sapienza, Cosmology course for PhD students Intergalactic Medium Cosmology , 2007, 12 hrs course
- Lecturer at SISSA (Trieste) Structure formation for PhD students, during years 2009, 2010, 2011 - 12 hrs course
- 2011: 20hrs lecturing at Università degli Studi di Trieste for the Cosmology course of Prof. Borgani
- 2011: 6hrs lecturing at Università degli Studi di Bologna for the PhD curriculum in Astronomy
- 2011: Lecturer at the PhD school on neutrinos organized by INFN in Padova
- 2012: 20hrs lecturing at University of Trieste (Cosmology course)
- **2012 - now**: Structure Formation course: 24hrs lectures at SISSA for APC/APP Curricula
- **2015 - now**: Foundation of Physical Cosmology course: 16hrs lectures at SISSA for APP Curriculum
- 2017: Joint cosmology course between Trento and SISSA Universities “Cosmology from large to small scales” - 12 hrs
- 11/2022: Teacher at the Cosmology Canary Islands Winter School ”Fundamental physics with the LSS” - 8 hrs

Administrative Duties

- Coordinator PhD Curriculum Astroparticle Physics May 2018 - Nov 2022
- Commissione SISSA interventi assistenziali since Feb 2018 - June 2022
- Committee member (RTD-A, RTD-B, PO, PA)

- Member of the PhD Board of teachers of the Astrophysics and Cosmology Group at SISSA (2014-2022)
- Member of the PhD Board of Teachers of the Data Science Group at SISSA (2022-present)
- Elected member of SISSA Academic Senate (2022-2024)

Conferences/Workshops/Schools Organized

- July 2004, Cambridge(UK) Institute of Astronomy, workshop Cosmology with Lyman-α
- NOVICOSMO 2008, Trieste October 2008, International conference: The impact of Simulations in Cosmology and Galaxy Formation
- ICTP (Trieste, Italy) Cosmology school 2010: http://cdsagenda5.ictp.trieste.it/full_display.php?ida=a07163
- COSMOCOMP meeting in Trieste - LOC member http://adlibitum.oats.inaf.it/meetings/COSMOCOMPTS/
- ICTP (Trieste, Italy) Cosmology school 2014: http://cdsagenda5.ictp.it/full_display.php?email=0&ida=a13212
- ICTP (Trieste, Italy) Conference on Cosmology from baryons at high redshift http://cdsagenda5.ictp.it/full_display.php?email=0&ida=a13215
- Sexten Center for Astrophysics - July 2015 "Galaxy Clustering within Euclid OULE3" http://www.sexten-cfa.eu/en/conferences/2015/details/57-galaxy-clustering-within-euclid-oule3.html
- Sexten Center for Astrophysics - February 2016 "Astrophysics of Dark Matter" http://www.sexten-cfa.eu/en/conferences/2016/details/67-astrophysics-of-dark-matter.html
- "F. Lucchin" Cosmology School for Italian PhD Students - May 2016 - Naples Astronomical Observatory http://eventi.na.astro.it/en/scuola-lucchin/
- Sexten Center for Astrophysics - July 2017 "Getting ready for science. Euclid Galaxy Clustering under Science Performance Review" http://www.sexten-cfa.eu/en/conferences/2017/details/81-getting-ready-for-science-euclid-galaxy-clustering-under-science-performance-review.html

- Organizer of the ASTRO-TS meeting at SISSA (Trieste) - 25-26/09/2017

- member of the international advisor committee of the UCLA DM 2018 conference

- SOC member of the conference "From Dark Energy to Bright Synergies" (sexten, July 2018)

- SOC member of the workshop "General Relativity Effects in the Large Scale Structure" (Sexten, July 2018)

- Scientific organizer of the Euclid theory Group Annual meeting - 8-10 June 2020 - zoom online event (110 participants)

Outreach

- Physorg: http://www.physorg.com/news76328087.html
- ESI-TOPICS: Emerging Research Fronts Comments http://www.esi-topics.com/erf/2006/october06-MatteoViel.html
- FEST (Festival Editoria Scientifica Triestina) 2007 Trieste - Talk
- SPACE ART at immaginario scientifico Trieste - October 2008
- Telecom ItaliaX10: http://italiax10.telecomitalia.com/news/intervista-a-matteo-viel/
- Intervista a Radio 24: http://www.radio24.ilsole24ore.com/programma/altra-europa/2013-09-28/partecipazione-democratica-europa-101933.php?idpuntata=gSLA5RO9V&date=2013-09-28
- On average 5/6 public talks per year

Main Collaborations

- **Since 2014 - Euclid Deputy Lead** of theory Working Group, member Simulation Working Group; **Since 2014 - Manager** of the OU-LE3 Organisational Units-Level 3 of Validation for Galaxy Clustering.
- Member of the **SKA Cosmology Group** (since June 2014)
- Computational projects on european parallel supercomputers: COSMOS, HPCS-Darwin (Cambridge, UK); CINECA (Italy); Marenostrum (Barcelona, Spain). PRACE.

- Cambridge - UK (Institute of Astronomy); Garching - Germany (MPA, ESO), CERN (Switzerland), Padua University (Italy)

- X-Shooter instrument (medium resolution spectrograph) and WEAVE spectrograph.

- member of the **BOSS/SDSS-III** collaboration (April 2011 - June 2014).

- member of the light core team of Planck for a project to compute cross-correlation between CMB maps and the large-scale structure (since June 2011) ISW effect and constraints on non-gaussianities by using cross-correlation of LSS tracers and evolution of the Dark Energy and modified gravity.

- 2008-2013 ESPRESSO and high res. spectrograph instruments: high resolution spectrographs on the E-ELT (ESO - Extremely Large Telescope)

- since 2015: International Astronomical Union (IAU) Member of Division J Galaxies and Cosmology and Member of Inter-Division B-H-J Commission Intergalactic Medium

- since 2022: member of the international scientific committee of ANDES@E-ELT.

Bibliometry

313 total publications, 232 refereed
26000 citations
3100 citations for papers as a first author
h-index = 72
first author h-index = 22
i-10 index = 213; i-100 index = 54 (Nov 2022: from NASA/ADS and INSPIRE/HEP)

Google scholar metric: h-index = 83, Citations = 30240, i10-index = 210 (Nov. 2022)
Google scholar metric (since 2017): h-index = 61, Citations = 18300, i10-index = 182 (Nov. 2022)

Scopus h-index: 66
total documents: 253, total cites: 21900 (Scopus - Nov. 2022)

Other Activities

Referee for Astronomy and Astrophysics, MNRAS, MNRAS Letters, Physical Review D, JCAP, Astrophysical Journal, Physical Review Letters. Referee for the NWO: Netherlands Organisation for Scientific Research. Swiss NSF and Israeli National Agencies for Research. Referee for ANVUR.

Referee for ERC (Starting, Consolidator, Advanced Grants and Sinergy Funding Schemes).
Referee for ISCRA and PRACE.
GEV FIS/02 member for ANVUR VQR 2015-19.
Referee for Marie Curie MSCA and Rita Levi Montalcini Grants.

Member of PhD evaluation committee: J. Brandbyge (Aarhus Univ.); M. Savalainen (Helsinki Univ.); C. Schultz (Aarhus Univ.); A. Arino (Barcelona Univ.), B. Audren (Lausanne Univ.), F. Villaescusa-Navarro (Valencia Univ.), J. Schewtschenko (Durham Univ.), A. Pezzotta (Milano Univ.), L. Keating (Cambridge Univ.), S. Bosak (Durham Univ.), Matteo Zennaro (Milano Univ.), Simone Peirone (Leiden Univ.), Simone Ammazzalorso (Torino Univ.), Marco Bonici (Genova Univ.), Rafael Yunis ("La Sapienza" Univ., Roma), David Valcin (Univ. Barcelona, Spain), Sofia Contarini (UniBo), Alex Lague (Toronto University)

Students and Postdocs

- University Master Degree Students: Matteo Costanzi (2011, Università di Trieste, co-superv. with Prof. Borgani); Alex Zucca (2014, Università di Trieste, co-supervision with Dr. Ansoldi e Silvestri); Simone Peirone (2016, Università di Trieste, co-supervision with Dr. Ansoldi and Prof. Borgani); Maria Berti (2019, Università di Trieste, co-supervision with Dr. Ansoldi and Dr. F. Lepori); Matteo Esposito (2021, Universià di Trieste, co-supervision with Prof. Borgani).

- PhD-Students supervised: 1) Edoardo Tescari (April 2007 - April 2010 - now postdoc in Swinburne Univ.) "Chemical and Physical Properties of the Intergalactic Medium "; 2) Chiara Mongardi (Dec 2013 - Dec 2016) "The galaxy/IGM interplay", co-supervision with Dr. D'Odorico; 3) Elena Massara (SISSA/ICTP, Oct 2012 - Oct 2016 - now postdoc at Waterloo Univ.) "Neutrinos and voids in modern cosmology" , co-supervision with Prof. Sheth; 4) Antonella Garzilli (SISSA, Oct 2008 - Oct 2012, now postdoc in Leiden) "A measurement of the thermal history of the intergalactic medium, and constraints on primordial black holes in the Galaxy", co-supervision with Dr. S. Leach; 5) Matteo Costanzi (UniTS, 2011-2014, postdoc at LMU) "Neutrino constraints from Clusters of Galaxies and other probes", co-supervision with Prof. Borgani; 6) Isabella Carucci (SISSA, Oct 2013 - Oct 2017 - now postdoc at CEA Saclay) "Cosmic neutral hydrogen as tracer of the large scale structure of the Universe", co-supervision with Prof. Lapi); 7) Andrej Obuljen (SISSA, 2014-18 - now postdoc at Waterloo Univ.) "Large-Scale Structure with 21cm Intensity Mapping"; 8) Francesca Lepori (SISSA, 2014-2018 - now postdoc at Geneve Univ.) "Relativistic Cosmology from the Linear to the Non-Linear Regime"; 9) Riccardo Murgia (SISSA, 2015-2019 - now postdoc in Montpellier University) "Constraining Dark Matter properties with the Inter-Galactic Medium and other probes"; 10) Gabriele Parimbelli (SISSA, 2016-2020, - now postdoc at INAF) "The impact of cosmological neutrinos on large-scale structure observables"; 11) Dimitar Ivanov (SISSA, 2016-2020 2020 - co-supervision with Prof. Liberati) "Testing deviations from LCDM model with electromagnetic and gravitational waves"; 12) Tommaso Ronconi (SISSA, 2016-2020 - co-supervision with Prof. Lapi, now postdoc at SISSA) "From Cosmic Voids to Collapsed Structures: HPC Methods for Astrophysics and Cosmology" ;

13) Hasti Khoraminezhad (SISSA "New avenues for investigating the Large-Scale Structure of our Universe" co-supervision with Prof. Baccigalupi, now postdoc at Missouri Univ.); 14) Giulio Scelfo (SISSA, to finish in Oct 2022 - co-supervision with Prof. Lapi); 15) Maria Berti (SISSA, to finish in Oct 2023); 16) Valentina Danieli (SISSA, to finish in Oct 2024).

Postdocs directly funded from grant money of which I was PI: Dr. Paramita Barai (cosmoIGM postdoc 2011-2014); Dr. Francisco Villaescusa-Navarro (cosmoIGM postdoc 2012-2016); Dr. Tae-Sun Kim (cosmoIGM postdoc 2013-2016); Dr. Enea Di Dio (cosmoIGM postdoc 2014-2017) - INFN grant; Dr. Paul Sutter (INFN/INDARK in Trieste - postdoc 2014-2016); Dr. Marta Spinelli (INAF - postdoc 2018-2021); Dr. Gabriele Parimbelli (INAF - ASI-INAF funding - postdoc 2020-2022).

Grants and funding

- **Member** of research unit of PRIN-MIUR 2007 "The cosmic cycle of baryons " P.I. Prof. S. Borgani (140 kE total grant)

- PRIN-INAF 2009 "Towards an italian network of computational cosmology " 110 kE (4 research units, role **national P.I.** of the research project)

- ASI/AAE Grant 2006-2009 (Theory: High Energy Astrophysics) 60 kE for 3 yrs (role: **P.I. of the local research unit** at INAF-OATS (national P.I. Prof. Moscardini)

- **Member** of research unit of ITN (European Network) Computational Cosmology - COSMO-COMP: P.I. Prof. Baugh (Durham), local coordinator Prof. Borgani (Università di Trieste) - Trieste node 540 kE + 90 kE (da progetto LACEGAL) for students and researchers

- **Winner of ERC-StG (European Research Council - Starting Grants) with the 6yrs project "cosmoIGM: the intergalactic medium as a cosmological tool " (role: P.I.; amount: 891,500 Euros to cover the joining of the Sloan Digital Sky Survey-III/BOSS survey for the acoustic baryonic oscillations + 4 postdoctoral fellows + 50% of my salary)** ERC old group web-page: http://www.sissa.it/∼viel/cosmoIGM/

- PRIN INAF 2011 "A complete view of the first years of galaxy formation" (National P.I. A. Fontana), **local P.I. of research unit** 10 kE.

- PRIN MIUR 2012 "Evoluzione dei barioni cosmici: effetti astrofisici e crescita delle strutture cosmiche" (national P.I. Prof. Borgani) - 270 kE total, **member of research unit**

- **Scientific local coordinator** of research specific initiative **INFN-PD51 INDARK** (funding about 10kE/yr + one 40kE two-year postdoctoral fellowship in 2014)

- **PRIN INAF - SKA** project FORECast (national P.I. Dr. I. Prandoni) member of local research unit with 2 yrs postdoc funding (total 70 kE) for the project "mocking SKA" (jointly with Dr. De Lucia).

- Fondi **FFABR** 3kE.

- National Center of High Performance Computing (CN HPC), Principal Investigator of the Spoke 3 @ SISSA (Astroparticle Physics, Data Science and Astrophysics and Cosmology Groups): total funding: 505 kE

Funds directly administrated as a Principal Investigator: 891.5 kE (ERC-StG)+ 60 kE (ASI/AAE) + 110 kE (PRIN-INAF) + 10 kE (PRIN INAF) + 60 kE (INFN) + 70 kE (PRIN INAF SKA) + 505 kE (CN HPC) = 1.7 ME

Seminars

- 03/2001: Institute Seminar at MPA
- 03/2001: Cosmology Seminar at MPA
- 11/2001: Institute Seminar at Dipartimento di Astronomia di Padova (Italy)
- 11/2001: Cosmology Seminar at Osservatorio Astrofisico di Arcetri (Florence, Italy)
- 11/2001: Institute Seminar at Osservatorio Astronomico di Trieste (Italy)
- 11/2002: Institute Seminar at Institute of Astronomy Cambridge (UK)
- 09/2003: Institute Seminar at Osservatorio Astronomico di Trieste (Trieste, Italy)
- 10/2003: Institute Seminar at SISSA (Trieste, Italy)
- 10/2003: Institute Seminar at Dipartimento di Astronomia di Bologna (Bologna, Italy)
- 10/2003: Institute Seminar at Osservatorio Astronomico di Padova (Bologna, Italy)
- 03/2004: Institute Seminar at Department of Astronomy, University of Sussex (Brighton, UK)
- 11/2004: Cosmology Seminar at Department of Astronomy, University of Oxford (Oxford, UK)
- 11/2004: Lyman-α forest seminar, University of Berkeley (US)
- 12/2004: Astrophysics Colloquium, Fermilab (US)
- 12/2004: Seminar at the Astronomy Department, Princeton (US)
- 07/2005: Institute Seminar at Institute of Astronomy Cambridge (UK)
- 02/2006: Institute Seminar at Durham (UK)
- 10/2006: Institute Seminar at Trieste Observatory (Italy)
- 10/2006: Institute Seminar at High Energy Physics Institute of Beijing (China)
- 11/2006: Institute Seminar at Scuola Normale Superiore di Pisa (Italy)
- 03/2007: Institute Seminar at ICTP (Institute Cosmology and Theoretical Physics (Trieste, Italy)
- 05/2007: Seminar at IASF/BO. Institute for astrophysics (Bologna, Italy)
- 05/2008: Institute Seminar in Marseille (France)
- 07/2009: Seminar at osservatorio Astronomico di Palermo (Italy)

- 12/2010: Joint Astronomical Colloquium Heidelberg (Germany)
- 10/2011: Institute seminar at INAF/BRERA (Milan, Italy)
- 10/2012: Seminar at Lubjana University (Slovenia)
- 09/2013: Institute seminar at Barcelona University (Spain)
- 04/2014: Institute seminar at Royal Observatory of Edinburgh
- 11/2014: Institute seminar Università di Torino/Dipartimento di Fisica
- 01/2015: Invisibles webinar
- 05/2016: Gentner colloquium at MPIK (Heidelberg, Germany)
- 09/2016: Institute seminar at Helsinki University (Finland)
- 11/2016: Institute seminar at Aachen University (Germany)
- 04/2017: Invited seminar at LAM Marseille (France)
- 11/2017: Elusives webinar
- 04/2018: Invited Colloquium at ETH Zurich (Switzerland)
- 05/2018: Invited seminar at Montpellier LUPM (France)
- 11/2018: Invited talk at CERN Theory Division (Switzerland)
- 03/2019: Bologna joint astrophysical colloquium (Bologna, Italy)
- 05/2019: Invited seminar at GSSI (L'Aquila, Italy)
- 06/2019: Invited seminar at TUM (Munich, Germany)
- 11/2019: Colloquium at OKC Stockholm (Sweden)
- 02/2020: CCA Simons foundation center for computational astrophysics (New York, US). Colloquium.
- 05/2020: Invited colloquium speaker at Geneve University (Switzerland) - postponed
- 06/2020: Colloquium. Aachen University (Germany) - postponed
- 06/2020: Institute Seminar at Naples Observatory (zoom)
- 11/2020: Institute Seminar at ICG Portsmouth (UK)
- 11/2020: Institute Seminar at Indian Institute of Technology Indore (India)
- 06/2021: Institute Seminar at Physics Department of Sharif University (Iran)

- 07/2021: Institute seminar at Fermilab - CPC series (USA)
- 11/2021: DAMTP Seminar - University of Cambridge (UK)
- 11/2021: Invited seminar ECU (EPFL, Cern, Geneva Univ.) Series at Geneva University (Switzerland)
- 3/2022: Invited colloquium at TATA institute TIFR (Mumbai, India)
- 2/2023: Invited colloquium at SNS (Pisa, Italy)

Conferences

- 9/2000: Joint 2000 annual meeting: European TMR network "The Formation and Evolution of galaxies and European RTN network The Physics of the Intergalactic Medium ", Durham (UK) - Oral presentation
- 9/2000: National School of Cosmology and Astrophysics, Asiago (Italy) - Oral presentation
- 04/2001: RTN workshop Computational Investigations of the Intergalactic Medium , Garching (Germany) - Oral presentation
- 06/2001: IAP colloquium: Gaseous Matter in Galaxies and in the Intergalactic Space ¢, Paris (France) - Poster presentation
- 06/2001: RTN workshop The First Stars and the Reionization of the Universe , Florence (Italy) - Talk
- 08/2001: Lighthouses of the Universe , Garching (Germany)
- 10/2001: National School of Astrophysics, Trieste (Italy) - Oral presentation
- 10/2001: RTN network The Physics of the Intergalactic Medium , Eibsee (Germany) - Oral presentation
- 02/2002: Lyman-α emission at high redshift , Institute of Astronomy, Cambridge (UK)
- 06/2002: Elba (Italy) 2002 conference. Early cosmic structures and the end of the dark ages - Oral presentation
- 07/2002: Cambridge, UK. Making light of gravity - Poster presentation.
- 09/2002: Gargonza (Italy) RTN annual meeting The Physics of the IGM - Oral presentation
- 11/2002: Roma (Italy). Convegno nazionale di Cosmologia - Oral presentation
- 06/2003: Blois (France). XVth Rencontres de Blois Physical Cosmology - Oral presentation
- 09/2003: Ile dÓleron (France). RTN annual meeting The Physics of the IGM - Oral presentation
- 10/2003: Vulcano (Italy). International workshop on Modelling the intergalactic and intracluster media - Oral presentation
- 04/2004: La Thuile (Italy). XXXIXth Rencontres de Moriond on Exploring the Universe - Oral presentation
- 05/2004: Haifa (Israel). Meeting Mass and Light in the Universe - Oral presentation
- 09/2004: Leiden (Holland). RTN annual meeting The Physics of the IGM - Oral presentation
- 10/2004: Novigrad (Croatia). Conference Baryons in dark matter halos - Oral presentation

- 11/2004: Santa Barbara (US). Workshop Galaxies-Intergalactic Medium Interactions - Oral presentation

- 03/2005: Shanghai (China). IAU 1999 Colloquium Probing galaxies through quasar absorption lines - Oral presentation

- 04/2005: Granada (Spain). Cosmology Workshop - Oral presentation

- 06/2005: Trieste (Italy). Conference on Computational Cosmology - Oral presentation

- 08/2005: Chiemsee (Germany). IGM Workshop. Oral Presentation

- 10/2005: Austin (Texas, US). The Lyman-α forest as a cosmological probe at the Frank N. Bash 2005 symposium - Invited review

- 06/2006: Valencia (Spain). Bernard's cosmic stories conference - Oral presentation

- 09/2006: Conca Specchiulla (Lecce, Italy). Constraints on neutrinos from Lyman-α - Invited

- 01/2007: Virgo Meeting (Leiden, Holland) oral presentation: The high redshift Lyman-α forest and the nature of dark matter

- 04/2007: IFAE conference (Naples, Italy) Fundamental Physics with the Intergalactic Medium - Invited

- 07/2007: Conference HI survival trough cosmic time - Oral presentation

- 02/2008: Entapp (DESY, Hamburg) - Invited chair of DM session and oral presentation

- 02/2008: Conference at APC (Paris) Dark matter at small scales - Oral presentation

- 04/2008: IFAE 2008 Bologna - Oral presentation

- 06/2008: IAP colloquium 2008 (Paris) The universe above z=3 - Oral presentation

- 02/2009: Galilei Institute Florence (Italy). Dark Matter' - Oral presentation

- 06/2009: COSMO 09 Conference CERN (Switzerland) - Invited plenary

- 02/2010: La Thuile (Italy) Rencontres de Moriond on Cosmolgy - Oral presentation

- 06/2010: ESF workshop The almost Gaussian Universe = Non-Gaussianity with high redshift large scale structure probes - Saclay, France - Oral presentation

- 09/2010: Workshop -Metal presso El Escorial Madrid - Chairman/organizer of a parallel session

- 07/2010: International Conference Darkness Visible (Cambridge, UK) - Oral presentation

- 05/2011: CosmoFirstObjects conference in Marseille, France - Oral presentation

- 06/2011: PPC workshop at CERN (Geneva, Switzerland): Vth international workshop on the interconnection between particle physics and cosmology - Oral presentation

- 07/2011: Cosmology School in Santa Fe (New Mexico, US) - Oral presentation

- 04/2012: 2012 MPA-IfT Spring Workshop on LSS (La Cristalera, Madrid) - Oral presentation

- 05/2012: Euclid consortium meeting (Leiden, France) - Oral presentation

- 05/2013: Euclid consortium meeting (Marseille, France) - Oral presentation

- 05/2013: SAIT 2013 (Società Italiana di Astronomia, Bologna Italy) - Invited

- 06/2013: Intergalactic Interaction Workshop (Edinburgh, UK) - Invited

- 07/2013: Ripples in the cosmos conference (Durham, UK) - Oral presentation

- 07/2013: Tracing the cosmic-structure with galaxy clusters at Sexten (Italy) - Oral presentation

- 09/2013: SIF (Societa Italiana di Fisica) Trieste, Italy - Invited

- 09/2013: Cosmological constraints on massive neutrinos at ICTP Workshop on the Origin of Neutrino Mass - From Majorana to LHC - Invited

- 12/2013: Euclid OULE3 meeting (Nice, France) - Oral presentation

- 02/2014: Munich (Germany), Interdisciplinary Cluster Workshop on Dark Matter - Invited

- 05/2014: SAIT 2014, Milano (Italy) - Invited

- 06/2014: APP14 TeVPA/IDM (Amsterdam, Netherlands) - Invited plenary speaker

- 07/2014: EWASS 2014 (Geneve, Switzerland) - Invited parallel

- 08/2014: Conference high redshift baryons (ICTP, Trieste) - Oral presentation

- 09/2015: COSMO-15 Conference in Warsaw (Poland) - Invited plenary speaker

- 06/2016: Neutrino 2016 conference in London (UK) - Invited plenary speaker

- 01/2017: Berkeley conference on Intensity Mapping (US) - Invited speaker

- 04/2017: PONT 2017 Avignone (France) Progress on old and new themes in Cosmology - Invited speaker

- 07/2017: "Whereabouts and Physics of the Roaming Baryons in the Universe" Conference, Sexten, Italy - Invited review talk

- 09/2017: Lecturer at cosmology and ELT science school at Terceira (Azores, Portugal) school organizer: C. Martins.

- 09/2017: Invited talk at SIF (Trento)

- 10/2017: Plenary speaker at Dark Universe Conference, Munich (Germany)

- 06/2018: Invited talk at Cosmology conference on LSS/CMB at Ferrara University (Italy)

- 06/2018: Invited talk at Haifa Technion at the workshop on the LSS organized by Dr. Desjacques (Israel)

- 09/2018: Invited at KAVLI IPMU conference on the Intergalactic Medium - Tokyo (Japan)

- 11/2018: Conference computational methods in astrophysics at Henri Poincare Institute (Paris). Invited.

- 06/2019: Talks at Euclid Consortium meeting (parallel session on cosmological simulations and LSS corr. funct.)

- 09/2019: Invited talk at Kavli 10yr conference in Cambridge (UK)

- 09/2019: Invited Plenary speaker at COSMO-19, Aachen (Germany)

- 12/2019: Convener of Cosmology LSS session at Texas symposium (Portsmouth, UK)

- 01/2020: Invited lecturer at multi-messenger astrophysics school in Asiago, Italy

- 01/2020: Invited speaker at Next Generation Radio Telescopes and Cosmology (Sexten, Italy)

- 02/2020: Invited speaker at Axion Cosmology and Laboratory day at Padova University (Italy)

- 07/2020: Convener at PASCOS 2020 (Heidelberg, Germany) - postponed to 07/2022

- 09/2021: Plenary review talk at TAUP 2021 (Valencia, Spain)

- 09/2021: Invited talk at Portorose Physics of the Flavourful Universe Conference (Slovenia), international conference

- 10/2021: Invited talk at SKAO national italian meeting (online)

- 06/2022: Invited talk at HACK100, international conference (Trieste, Italy)

- 07/2022: Invited talk at ICRANET conference/school "The 6th Bego Rencontre Summer School", Nice (France)

- 07/2022: Invited talk at "Hot Topics in Astrophysics" international conference, Sexten (Italy)

- 07/2022: Invited talk at "Intriguing Inconsistencies through cosmic times", international conference, Sexten (Italy)

- 09/2022: Invited talk at Hydrosim meeting (Trieste, Italy)

- 11/2022: Invited plenary talk at Fundamental Cosmology Meeting, Granada (Spain)

Trieste, 30^{th} October 2022
Matteo Viel

Publications

313 total publications
232 refereed publications: **nr. [1-232]**
80 non-refereed publications **nr. [233-313]**
Collaborations: 20 Euclid publications; 5 SDSS publications; 5 ESPRESSO publications; 5 Planck; 5 other collaborations (ANDES/HIRES, ORIGIN, EDGE, SKA)
(from https://ui.adsabs.harvard.edu/classic-form/)

6 Selected first author publications on structure formation and fundamental physics with ∼2000 total citations on NASA/ADS: [1–6]

List of Publications

[1] Matteo **Viel**, Julien Lesgourgues, Martin G. Haehnelt, Sabino Matarrese, and Antonio Riotto. Constraining warm dark matter candidates including sterile neutrinos and light gravitinos with WMAP and the Lyman-α forest. *PhRvD*, 71(6):063534, March 2005.

[2] Matteo **Viel**, Julien Lesgourgues, Martin G. Haehnelt, Sabino Matarrese, and Antonio Riotto. Can Sterile Neutrinos Be Ruled Out as Warm Dark Matter Candidates? *Physical Review Letters*, 97(7):071301, August 2006.

[3] Matteo **Viel**, George D. Becker, James S. Bolton, Martin G. Haehnelt, Michael Rauch, and Wallace L. W. Sargent. How Cold Is Cold Dark Matter? Small-Scales Constraints from the Flux Power Spectrum of the High-Redshift Lyman-α Forest. *Physical Review Letters*, 100(4):041304, February 2008.

[4] Matteo **Viel**, Martin G. Haehnelt, and Volker Springel. The effect of neutrinos on the matter distribution as probed by the intergalactic medium. *JCAP*, 2010(6):015, June 2010.

[5] Matteo **Viel**, George D. Becker, James S. Bolton, and Martin G. Haehnelt. Warm dark matter as a solution to the small scale crisis: New constraints from high redshift Lyman-α forest data. *PhRvD*, 88(4):043502, August 2013.

[6] Matteo **Viel** and Martin G. Haehnelt. Cosmological and astrophysical parameters from the Sloan Digital Sky Survey flux power spectrum and hydrodynamical simulations of the Lyman α forest. *MNRAS*, 365(1):231–244, January 2006.

[7] Deanna C. Hooper, Nils Schöneberg, Riccardo Murgia, Maria Archidiacono, Julien Lesgourgues, and Matteo **Viel**. One likelihood to bind them all: Lyman-α constraints on non-standard dark matter. *JCAP*, 2022(10):032, October 2022.

[8] S. E. van Mierlo, K. I. Caputi, M. Ashby, H. Atek, M. Bolzonella, R. A. A. Bowler, G. Brammer, C. J. Conselice, J. Cuby, P. Dayal, A. Díaz-Sánchez, S. L. Finkelstein, H. Hoekstra, A. Humphrey, O. Ilbert, H. J. McCracken, B. Milvang-Jensen, P. A. Oesch, R. Pello, G. Rodighiero, M. Schirmer, S. Toft, J. R. Weaver, S. M. Wilkins, C. J. Willott, G. Zamorani, A. Amara, N. Auricchio, M. Baldi, R. Bender, C. Bodendorf, D. Bonino, E. Branchini,

M. Brescia, J. Brinchmann, S. Camera, V. Capobianco, C. Carbone, J. Carretero, M. Castellano, S. Cavuoti, A. Cimatti, R. Cledassou, G. Congedo, L. Conversi, Y. Copin, L. Corcione, F. Courbin, A. Da Silva, H. Degaudenzi, M. Douspis, F. Dubath, X. Dupac, S. Dusini, S. Farrens, S. Ferriol, M. Frailis, E. Franceschi, P. Franzetti, M. Fumana, S. Galeotta, B. Garilli, W. Gillard, B. Gillis, C. Giocoli, A. Grazian, F. Grupp, S. V. H. Haugan, W. Holmes, F. Hormuth, A. Hornstrup, K. Jahnke, M. Kümmel, A. Kiessling, M. Kilbinger, T. Kitching, R. Kohley, M. Kunz, H. Kurki-Suonio, R. Laureijs, S. Ligori, P. B. Lilje, I. Lloro, E. Maiorano, O. Mansutti, O. Marggraf, K. Markovic, F. Marulli, R. Massey, S. Maurogordato, E. Medinaceli, M. Meneghetti, E. Merlin, G. Meylan, M. Moresco, L. Moscardini, E. Munari, S. M. Niemi, C. Padilla, S. Paltani, F. Pasian, K. Pedersen, V. Pettorino, S. Pires, M. Poncet, L. Popa, L. Pozzetti, F. Raison, A. Renzi, J. Rhodes, G. Riccio, E. Romelli, E. Rossetti, R. Saglia, D. Sapone, B. Sartoris, P. Schneider, A. Secroun, C. Sirignano, G. Sirri, L. Stanco, J. L. Starck, C. Surace, P. Tallada-Crespí, A. N. Taylor, I. Tereno, R. Toledo-Moreo, F. Torradeflot, I. Tutusaus, E. A. Valentijn, L. Valenziano, T. Vassallo, Y. Wang, A. Zacchei, J. Zoubian, S. Andreon, S. Bardelli, A. Boucaud, J. Graciá-Carpio, D. Maino, N. Mauri, S. Mei, F. Sureau, E. Zucca, H. Aussel, C. Baccigalupi, A. Balaguera-Antolínez, A. Biviano, A. Blanchard, S. Borgani, E. Bozzo, C. Burigana, R. Cabanac, F. Calura, A. Cappi, C. S. Carvalho, S. Casas, G. Castignani, C. Colodro-Conde, A. R. Cooray, J. Coupon, H. M. Courtois, M. Crocce, O. Cucciati, S. Davini, H. Dole, J. A. Escartin, S. Escoffier, M. Fabricius, M. Farina, K. Ganga, J. García-Bellido, K. George, F. Giacomini, G. Gozaliasl, S. Gwyn, I. Hook, M. Huertas-Company, V. Kansal, A. Kashlinsky, E. Keihanen, C. C. Kirkpatrick, V. Lindholm, R. Maoli, M. Martinelli, N. Martinet, M. Maturi, R. B. Metcalf, P. Monaco, G. Morgante, A. A. Nucita, L. Patrizii, A. Peel, J. Pollack, V. Popa, C. Porciani, D. Potter, P. Reimberg, A. G. Sánchez, V. Scottez, E. Sefusatti, J. Stadel, R. Teyssier, J. Valiviita, and M. **Viel**. Euclid preparation. XXI. Intermediate-redshift contaminants in the search for z > 6 galaxies within the Euclid Deep Survey. *A&A*, 666:A200, October 2022.

[9] Euclid Collaboration, M. Knabenhans, J. Stadel, D. Potter, J. Dakin, S. Hannestad, T. Tram, S. Marelli, A. Schneider, R. Teyssier, P. Fosalba, S. Andreon, N. Auricchio, C. Baccigalupi, A. Balaguera-Antolínez, M. Baldi, S. Bardelli, P. Battaglia, R. Bender, A. Biviano, C. Bodendorf, E. Bozzo, E. Branchini, M. Brescia, C. Burigana, R. Cabanac, S. Camera, V. Capobianco, A. Cappi, C. Carbone, J. Carretero, C. S. Carvalho, R. Casas, S. Casas, M. Castellano, G. Castignani, S. Cavuoti, R. Cledassou, C. Colodro-Conde, G. Congedo, C. J. Conselice, L. Conversi, Y. Copin, L. Corcione, J. Coupon, H. M. Courtois, A. Da Silva, S. de la Torre, D. Di Ferdinando, C. A. J. Duncan, X. Dupac, G. Fabbian, S. Farrens, P. G. Ferreira, F. Finelli, M. Frailis, E. Franceschi, S. Galeotta, B. Garilli, C. Giocoli, G. Gozaliasl, J. Graciá-Carpio, F. Grupp, L. Guzzo, W. Holmes, F. Hormuth, H. Israel, K. Jahnke, E. Keihanen, S. Kermiche, C. C. Kirkpatrick, B. Kubik, M. Kunz, H. Kurki-Suonio, S. Ligori, P. B. Lilje, I. Lloro, D. Maino, O. Marggraf, K. Markovic, N. Martinet, F. Marulli, R. Massey, N. Mauri, S. Maurogordato, E. Medinaceli, M. Meneghetti, B. Metcalf, G. Meylan, M. Moresco, B. Morin, L. Moscardini, E. Munari, C. Neissner, S. M. Niemi, C. Padilla, S. Paltani, F. Pasian, L. Patrizii, V. Pettorino, S. Pires, G. Polenta, M. Poncet, F. Raison, A. Renzi, J. Rhodes, G. Riccio, E. Romelli, M. Roncarelli, R. Saglia, A. G. Sánchez, D. Sapone, P. Schneider, V. Scottez, A. Secroun, S. Serrano, C. Sirignano, G. Sirri, L. Stanco, F. Sureau, P. Tallada Crespí, A. N. Taylor, M. Tenti, I. Tereno, R. Toledo-Moreo,

F. Torradeflot, L. Valenziano, J. Valiviita, T. Vassallo, M. **Viel**, Y. Wang, N. Welikala, L. Whittaker, A. Zacchei, and E. Zucca. Euclid preparation: IX. EuclidEmulator2 - power spectrum emulation with massive neutrinos and self-consistent dark energy perturbations. *MNRAS*, 505(2):2840–2869, August 2021.

[10] Matteo Esposito, Vid Iršič, Matteo Costanzi, Stefano Borgani, Alexandro Saro, and Matteo **Viel**. Weighing cosmic structures with clusters of galaxies and the intergalactic medium. *MNRAS*, 515(1):857–870, September 2022.

[11] James S. Bolton, Prakash Gaikwad, Martin G. Haehnelt, Tae-Sun Kim, Fahad Nasir, Ewald Puchwein, Matteo **Viel**, and Bart P. Wakker. Limits on non-canonical heating and turbulence in the intergalactic medium from the low redshift Lyman α forest. *MNRAS*, 513(1):864–885, June 2022.

[12] Euclid Collaboration, R. Scaramella, J. Amiaux, Y. Mellier, C. Burigana, C. S. Carvalho, J. C. Cuillandre, A. Da Silva, A. Derosa, J. Dinis, E. Maiorano, M. Maris, I. Tereno, R. Laureijs, T. Boenke, G. Buenadicha, X. Dupac, L. M. Gaspar Venancio, P. Gómez-Álvarez, J. Hoar, J. Lorenzo Alvarez, G. D. Racca, G. Saavedra-Criado, J. Schwartz, R. Vavrek, M. Schirmer, H. Aussel, R. Azzollini, V. F. Cardone, M. Cropper, A. Ealet, B. Garilli, W. Gillard, B. R. Granett, L. Guzzo, H. Hoekstra, K. Jahnke, T. Kitching, T. Maciaszek, M. Meneghetti, L. Miller, R. Nakajima, S. M. Niemi, F. Pasian, W. J. Percival, S. Pottinger, M. Sauvage, M. Scodeggio, S. Wachter, A. Zacchei, N. Aghanim, A. Amara, T. Auphan, N. Auricchio, S. Awan, A. Balestra, R. Bender, C. Bodendorf, D. Bonino, E. Branchini, S. Brau-Nogue, M. Brescia, G. P. Candini, V. Capobianco, C. Carbone, R. G. Carlberg, J. Carretero, R. Casas, F. J. Castander, M. Castellano, S. Cavuoti, A. Cimatti, R. Cledassou, G. Congedo, C. J. Conselice, L. Conversi, Y. Copin, L. Corcione, A. Costille, F. Courbin, H. Degaudenzi, M. Douspis, F. Dubath, C. A. J. Duncan, S. Dusini, S. Farrens, S. Ferriol, P. Fosalba, N. Fourmanoit, M. Frailis, E. Franceschi, P. Franzetti, M. Fumana, B. Gillis, C. Giocoli, A. Grazian, F. Grupp, S. V. H. Haugan, W. Holmes, F. Hormuth, P. Hudelot, S. Kermiche, A. Kiessling, M. Kilbinger, R. Kohley, B. Kubik, M. Kümmel, M. Kunz, H. Kurki-Suonio, O. Lahav, S. Ligori, P. B. Lilje, I. Lloro, O. Mansutti, O. Marggraf, K. Markovic, F. Marulli, R. Massey, S. Maurogordato, M. Melchior, E. Merlin, G. Meylan, J. J. Mohr, M. Moresco, B. Morin, L. Moscardini, E. Munari, R. C. Nichol, C. Padilla, S. Paltani, J. Peacock, K. Pedersen, V. Pettorino, S. Pires, M. Poncet, L. Popa, L. Pozzetti, F. Raison, R. Rebolo, J. Rhodes, H. W. Rix, M. Roncarelli, E. Rossetti, R. Saglia, P. Schneider, T. Schrabback, A. Secroun, G. Seidel, S. Serrano, C. Sirignano, G. Sirri, J. Skottfelt, L. Stanco, J. L. Starck, P. Tallada-Crespí, D. Tavagnacco, A. N. Taylor, H. I. Teplitz, R. Toledo-Moreo, F. Torradeflot, M. Trifoglio, E. A. Valentijn, L. Valenziano, G. A. Verdoes Kleijn, Y. Wang, N. Welikala, J. Weller, M. Wetzstein, G. Zamorani, J. Zoubian, S. Andreon, M. Baldi, S. Bardelli, A. Boucaud, S. Camera, D. Di Ferdinando, G. Fabbian, R. Farinelli, S. Galeotta, J. Graciá-Carpio, D. Maino, E. Medinaceli, S. Mei, C. Neissner, G. Polenta, A. Renzi, E. Romelli, C. Rosset, F. Sureau, M. Tenti, T. Vassallo, E. Zucca, C. Baccigalupi, A. Balaguera-Antolínez, P. Battaglia, A. Biviano, S. Borgani, E. Bozzo, R. Cabanac, A. Cappi, S. Casas, G. Castignani, C. Colodro-Conde, J. Coupon, H. M. Courtois, J. Cuby, S. de la Torre, S. Desai, H. Dole, M. Fabricius, M. Farina, P. G. Ferreira, F. Finelli, P. Flose-Reimberg, S. Fotopoulou, K. Ganga, G. Gozaliasl, I. M. Hook, E. Keiha-

nen, C. C. Kirkpatrick, P. Liebing, V. Lindholm, G. Mainetti, M. Martinelli, N. Martinet, M. Maturi, H. J. McCracken, R. B. Metcalf, G. Morgante, J. Nightingale, A. Nucita, L. Patrizii, D. Potter, G. Riccio, A. G. Sánchez, D. Sapone, J. A. Schewtschenko, M. Schultheis, V. Scottez, R. Teyssier, I. Tutusaus, J. Valiviita, M. **Viel**, W. Vriend, and L. Whittaker. Euclid preparation. I. The Euclid Wide Survey. *A&A*, 662:A112, June 2022.

[13] Euclid Collaboration, F. Lepori, I. Tutusaus, C. Viglione, C. Bonvin, S. Camera, F. J. Castander, R. Durrer, P. Fosalba, G. Jelic-Cizmek, M. Kunz, J. Adamek, S. Casas, M. Martinelli, Z. Sakr, D. Sapone, A. Amara, N. Auricchio, C. Bodendorf, D. Bonino, E. Branchini, M. Brescia, J. Brinchmann, V. Capobianco, C. Carbone, J. Carretero, M. Castellano, S. Cavuoti, A. Cimatti, R. Cledassou, G. Congedo, C. J. Conselice, L. Conversi, Y. Copin, L. Corcione, F. Courbin, A. Da Silva, H. Degaudenzi, M. Douspis, F. Dubath, X. Dupac, S. Dusini, A. Ealet, S. Farrens, S. Ferriol, E. Franceschi, M. Fumana, B. Garilli, W. Gillard, B. Gillis, C. Giocoli, A. Grazian, F. Grupp, L. Guzzo, S. V. H. Haugan, W. Holmes, F. Hormuth, P. Hudelot, K. Jahnke, S. Kermiche, A. Kiessling, M. Kilbinger, T. Kitching, M. Kümmel, H. Kurki-Suonio, S. Ligori, P. B. Lilje, I. Lloro, O. Mansutti, O. Marggraf, K. Markovic, F. Marulli, R. Massey, S. Maurogordato, M. Melchior, M. Meneghetti, E. Merlin, G. Meylan, M. Moresco, L. Moscardini, E. Munari, R. Nakajima, S. M. Niemi, C. Padilla, S. Paltani, F. Pasian, K. Pedersen, W. J. Percival, V. Pettorino, S. Pires, M. Poncet, L. Popa, L. Pozzetti, F. Raison, J. Rhodes, M. Roncarelli, E. Rossetti, R. Saglia, P. Schneider, A. Secroun, G. Seidel, S. Serrano, C. Sirignano, G. Sirri, L. Stanco, J. L. Starck, P. Tallada-Crespí, A. N. Taylor, I. Tereno, R. Toledo-Moreo, F. Torradeflot, E. A. Valentijn, L. Valenziano, Y. Wang, J. Weller, G. Zamorani, J. Zoubian, S. Andreon, S. Bardelli, G. Fabbian, J. Graciá-Carpio, D. Maino, E. Medinaceli, S. Mei, A. Renzi, E. Romelli, F. Sureau, T. Vassallo, A. Zacchei, E. Zucca, C. Baccigalupi, A. Balaguera-Antolínez, F. Bernardeau, A. Biviano, A. Blanchard, M. Bolzonella, S. Borgani, E. Bozzo, C. Burigana, R. Cabanac, A. Cappi, C. S. Carvalho, G. Castignani, C. Colodro-Conde, J. Coupon, H. M. Courtois, J. G. Cuby, S. Davini, S. de la Torre, D. Di Ferdinando, M. Farina, P. G. Ferreira, F. Finelli, S. Galeotta, K. Ganga, J. Garcia-Bellido, E. Gaztanaga, G. Gozaliasl, I. M. Hook, S. Ilić, B. Joachimi, V. Kansal, E. Keihanen, C. C. Kirkpatrick, V. Lindholm, G. Mainetti, R. Maoli, N. Martinet, M. Maturi, R. B. Metcalf, P. Monaco, G. Morgante, J. Nightingale, A. Nucita, L. Patrizii, V. Popa, D. Potter, G. Riccio, A. G. Sánchez, M. Schirmer, M. Schultheis, V. Scottez, E. Sefusatti, A. Tramacere, J. Valiviita, M. **Viel**, and H. Hildebrandt. Euclid preparation. XIX. Impact of magnification on photometric galaxy clustering. *A&A*, 662:A93, June 2022.

[14] Euclid Collaboration, M. Schirmer, K. Jahnke, G. Seidel, H. Aussel, C. Bodendorf, F. Grupp, F. Hormuth, S. Wachter, P. N. Appleton, R. Barbier, J. Brinchmann, J. M. Carrasco, F. J. Castander, J. Coupon, F. De Paolis, A. Franco, K. Ganga, P. Hudelot, E. Jullo, A. Lançon, A. A. Nucita, S. Paltani, G. Smadja, F. Strafella, L. M. G. Venancio, M. Weiler, A. Amara, T. Auphan, N. Auricchio, A. Balestra, R. Bender, D. Bonino, E. Branchini, M. Brescia, V. Capobianco, C. Carbone, J. Carretero, R. Casas, M. Castellano, S. Cavuoti, A. Cimatti, R. Cledassou, G. Congedo, C. J. Conselice, L. Conversi, Y. Copin, L. Corcione, A. Costille, F. Courbin, A. Da Silva, H. Degaudenzi, M. Douspis, F. Dubath, X. Dupac, S. Dusini, A. Ealet, S. Farrens, S. Ferriol, P. Fosalba, M. Frailis, E. Franceschi, P. Franzetti, M. Fumana, B. Garilli, W. Gillard, B. Gillis, C. Giocoli, A. Grazian, L. Guzzo, S. V. H. Haugan, H. Hoekstra, W. Holmes, A. Hornstrup, M. Kümmel, S. Kermiche, A. Kiessling, M. Kil-

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[15] Hasti Khoraminezhad, Pauline Vielzeuf, Titouan Lazeyras, Carlo Baccigalupi, and Matteo **Viel**. Cosmic Voids and BAO with relative baryon-CDM perturbations. *MNRAS*, 511(3):4333–4349, April 2022.

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