



Professional Curriculum of Massimo Brescia

Current position

Astronomer Researcher, permanent staff since 2000, at the Italian National Institute of Astrophysics (INAF) – Astronomical Observatory of Capodimonte, Napoli

National Scientific Qualification (ASN D.D. 1532/2016, art. 16, comma 1, Legge 240/10) as Associate Professor (Senior Lecturer) for the disciplinary sector 02/C1 (Astronomy, Astrophysics, Physics of Earth and planets), from 29/03/2018 to 29/03/2024

Qualification

Astronomer specialized in Astrodynamics, data science and astronomical technologies. After the M.Sc. in Informatics, with a specialization in Artificial Intelligence, between 1994 and 2008 he has been appointed as AIV Manager for the project ESO VST (VLT Survey Telescope) in situ (Cerro Paranal, Chile), adjunct and contract professor of Computer Architecture and Astronomical Technologies at the Departments of, respectively, Informatics and Physics of the University Federico II of Napoli, and as member of international projects for astrophysical instrumentation: ESO (VIMOS, Visible Infrared Multi Object Spectrograph), INAF (TNG, Telescopio Nazionale Galileo), INFN (NEMO, NEutrino Mediterranean Observatory).

Since 2009 he covered several scientific roles and appointments within international astrophysical projects (DAME, CLASH-VLT, ESA-Euclid, ESO-ALMA, VRST, SKA, VST-KiDS); financed projects by national Institutes (PRIN-MIUR, INAF and MIUR-Rewarding); international astrophysical facilities (ESO VISTA and VST surveys); financed projects by European Commission (FP7 Vialactea, EU COST Action TD-1403 Big-Sky-Earth data, H2020 ITN SUNDIAL, H2020 SYNERGY EcoGal); academic teaching assignments in various national Universities.

Main research interests include photometric redshifts, detection and classification of variable and lensed objects, galaxies, quasars, active galactic nuclei, evolution of star formation, metallicity, globular clusters, clusters of galaxies, R&D in data mining and machine learning, Big Data, distributed data processing environments, instrument control systems, analytics and control of scientific data quality.

He is author of more than two hundreds of scientific works, including monographies, contributions to academic volumes, specialized journal articles, conference proceedings and technical reports.

Research and Management activities within national/international Collaborations:

Active

from 2010 Project Manager of the international Collaboration DAME (Data Mining & Exploration), research project dedicated to multi-disciplinary applications of data mining and machine learning, in collaboration among INAF-OACN, University of Napoli Federico II and California Institute of Technology (CALTECH), <http://dame.dsf.unina.it>

from 2011 Project ESA Euclid Mission (<http://sci.esa.int/euclid/>): **Head of Science Team** DQCT (Data Quality Common Tools), member of the Instrument Operation Team (IOT), Legacy Science Working Group for the Supernovae and transient objects, organization units for photometric redshifts (OU-PHZ) and data Level-3 (OU-LE3). **Member of Italian Scientific contractors** of the ASI/INAF agreements for the Science Ground Segment within the ESA Euclid space mission.

from 2013 Member of the Data Management System within the Science Team of the project CLASH-VLT (a panoramic spectroscopic survey with VIMOS on VLT of 12 massive CLASH clusters at $z=0.2-0.6$, P.I. P. Rosati). Participation to the study on stellar populations (i.e. star formation rates, luminosity function from multi-wavelength observations), cluster membership and estimation of photometric redshifts (<https://kyle.na.astro.it/CLASH-VLT/Public/index.html>)

from 2014 Member of the Science Team of the survey project KiDS (*Kilo-Degree Survey*, P.I. K. Kuijken). **Manager** of internal projects “Photometric Redshifts” and “Anomaly Detection with Machine Learning”; participation to the activity of classification of compact sources and galaxy evolution (<http://kids.strw.leidenuniv.nl/>)

from 2015 Responsible of the activities of object classification and multi-band catalogues database management system within the Science Team of the project VISTA Public Survey GCAV (Galaxy Clusters at Vircam, P.I. M. Nonino).
<http://www.eso.org/sci/observing/PublicSurveys/sciencePublicSurveys.html>

from 2015 Member of the Science Team of the survey project VST-GTO: *Galaxy Assembly as a function of Mass and Environment with VST* (VST-GAME). Participation to R&D activities on high redshift objects (QSOs and AGNs) and calculation of photometric redshifts

from 2015 Member of the Science Team of the survey project VST-GTO: *KiDS-ATLAS Bridging Survey* (VST-KABS). Participation to R&D activities on AGNs and calculation of photometric redshifts

from 2016 Member of the international Collaboration *Astrominer Task Force*, within the Data Mining Technical Committee of the IEEE Computer Intelligence Society (CIS DMTC), for the R&D on Astrophysical Big Data analytics. (<https://asaip.psu.edu/organizations/ieee-astrominer-task-force/members>)

from 2017 Co.I. of the INAF-OACN research unit for the project financed by PRIN-SKA INAF 2016 “*Empowering SKA as a probe of galaxy evolution with Hi*”, (national P.I. drs. L. Hunt)

from 2019 Co-proponent of the financed project *Deep And Wide View Of Galaxy Clusters*, enclosing a set of observing programs with VST, VISTA and HST, within the INAF-Main Streams Call (P.I. M. Nonino)

from 2019 Co-proponent of the CSI (Coordination Spectroscopy INAF), group proposed to coordinate and support INAF activities related to spectroscopy research

from 2020 Member of the financed H2020 ERC Synergy Grant ECOGAL “*Understanding our Galactic ecosystem: From the disk of the Milky Way to the formation sites of stars and planets*”
<https://erc.europa.eu/sites/default/files/document/file/erc-2019-syg-results.pdf>

from 2019 Advisory Council Member of the International AstroInformatics Association (IAIA)
<http://astroinformatics.info/>

from 2019 Co-proponent of the approved international research program *Bayesian Adaptive Interferometric Image Reconstruction Methods*, ESO ALMA Support Centre.

From 2021 **National Manager** of the INAF participation to the project Rubin-LSST

Completed

1995-06 Scientific consulting contract at INAF-OACN for the R&D in Artificial Intelligence for international astronomical projects

1996-98 Scientific consulting contract at INAF-OACN for the analysis and development of diagnostic and control software systems for the project ESO VIMOS

1999-2000 Winner of the public contest, MIUR D.D. N. 52/98, 08/10/98, with score 90/100, for the qualification as astronomer research fellow in “Large telescope control systems”, INAF-OACN

2000-2007 Member of the working group responsible of the design, development and test of the control system for the project VST (VLT Survey Telescope), INAF-OACN

2006-07 Scientific Association to INFN (Istituto Nazionale of Fisica Nucleare), for the R&D in the project NEMO (off-shore Neutrino telescope) (from 01/01/2006 to 31/12/2007)

2007-08 Responsible of the Assembly, Integration and Verification (**AIV Manager**) “in situ” of the telescope VST (VLT Survey Telescope), Observatorio ESO Cerro Paranal, Chile

2008 Scientific Association to the activities of the Department of Physics of the University of Napoli Federico II

2009-11 Co-I. of the INAF-OACN research unit for the financed project PRIN MIUR 2009: *Gamma-Ray Burst: their luminous and obscured progenitors* (national P.I. F. Frontera)

2010 Scientific Association to the activities of the Department of Physics of the University of Napoli Federico II

2011-14 P.I. of the INAF-OACN research unit for the financed project PRIN INAF 2010: *Architecture and Tomography of Galaxy Clusters* (national P.I. M. Nonino)

2011-18 Member of the KDD-IG (Interest Group on Knowledge Discovery in Databases) within the IVOA (International Virtual Observatory Alliance), international research group for the definition of data analytics methods (<http://wiki.ivoa.net/twiki/bin/view/IVOA/IvoaKDD>)

2013-16 P.I. of the INAF-OACN research unit for the project “*VIALACTEA - The Milky Way as a Star Formation Engine*”, financed by the Programme “European Commission 7th Framework Programme for Research”, Call FP7-SPACE-2013-1

2014-18 Management Committee member of the project COST (European Cooperation in Science & Technology) Action TD1403 *Big Data Era In Sky And Earth Observation* (BIG-SKY-EARTH), for the R&D in Big Data analytics (http://www.cost.eu/COST_Actions/tdp/TD1403?management)

2015-2017 P.I. of the INAF-OACN research unit for the project financed by PRIN INAF 2014: *Glittering Kaleidoscopes in the sky, the multifaceted nature and role of galaxy clusters* (national P.I. M. Nonino)

2016-2019 Co.I. of the INAF research unit for the project financed by PRIN–MIUR 2015 “*Cosmology and Fundamental Physics: illuminating the Dark Universe with Euclid*”, (national P.I. prof. A. Cimatti)

2016-19 Co.I. of the INAF-OACN research unit for the financed project H2020 ITN SUNDIAL “*Survey Network for Deep Imaging Analysis and Learning*”, H2020-MSCA-ITN-2016

2017-19 Coordinator of the Work Package 1.4 “Technological transfer of data mining methods for Astrophysics and other contexts” for the project financed by MIUR “*MITiC, Mining The Cosmos, Big Data and Innovative Italian Technology for Frontier Astrophysics and Cosmology*”, within the MIUR reward projects of the 2015

2017-20 Co-PI of the project "Supernovae demography and rates based on machine learning classification", within the Italian participation to the international project **VRST** (Vera Rubin Survey Telescope, ex LSST). **Member of the INAF core team** for the study and design of an Italian data broker system for the processing and distribution of data to the community

Appointments of responsibilities in scientific research studies:

Scientific Research

Active

from 2020 Scientific responsible of the Research Grant “*Design and development of analysis and monitoring methods for the instrumental and scientific data of the Science Ground Segment of the Euclid Mission*”, INAF, 24 months

Completed

1995-06 Scientific consulting contract at INAF-OACN for the R&D in Artificial Intelligence for international astronomical projects

1996-98 Scientific consulting contract at INAF-OACN for the analysis and development of diagnostic and control software systems for the project ESO VIMOS

1999-2000 Winner of the public contest, MIUR D.D. N. 52/98, 08/10/98, with score 90/100, for the qualification as astronomer research fellow in “*Large telescope control systems*”, INAF-OACN

2000-2007 Member of the working group responsible of the design, development and test of the control system for the project VST (VLT Survey Telescope), INAF-OACN

2007-08 Responsible of the Assembly, Integration and Verification (**AIV Manager**) “in situ” of the telescope VST (VLT Survey Telescope), Observatorio ESO Cerro Paranal, Chile

2011-12 Scientific responsible of the Research Grant “*Galaxy evolution in clusters and their surroundings*”, INAF-OACN, 14 months

2013 Scientific responsible of the Research Fellowship “*Assistance to the raw data reduction from a subsample of clusters CLASH and measure of redshifts*”. INAF-OACN, 3 months

2013-15 Scientific responsible of the Research Grant “*Study and development of automatic instruments for the data quality analysis in the Euclid project*”. INAF-OACN, 24 months

2014-16 Scientific responsible of the Research Grant “*Data Mining systems for the analysis of Star Forming Regions for the project EU-FP7 ViaLactea*”. INAF-OACN, 26 months

2016-17 Scientific responsible of the Research Fellowship “*Data mining methods for the analysis of astrophysical data for the project ViaLactea*”. INAF-OACN, 6 months

2018-19 Scientific responsible of the Research Fellowship “*Study and development of data mining and machine learning methods for the scientific analysis within data-drive contexts*”, INAF, 12 months

2017-2019 Scientific responsible of the Research Grant “*Study and development of a standardized system for the scientific data quality evaluation for the ESA Euclid Mission*”, INAF, 24 months

Academic studies and tutoring

PhD

2014-17 Tutor of the PhD in Physics “*Astroinformatics based Probability Density Functions of photometric redshifts and their application to cosmology in the era of dark Universe exploration*”, candidate V. Amaro, A.A. 2016/17, Cycle XXX, University Federico II of Napoli

2010-13 Tutor of the PhD in Physics “*Data-rich astronomy: mining synoptic sky surveys*”, candidate S. Cavuoti, A.A. 2012/13, Cycle XXV, University Federico II of Napoli

Master of Science

2020 Tutor of the Bachelor experimental thesis “A new perspective of analysis and classification of drainage networks based on deep learning”, candidate A. Riccardo, A.A. 2019/20, Course of Science and technology for Nature and environment, Scuola Politecnica e delle Scienze di base, Dip. di Biologia, Università Federico II di Napoli, supervisors prof. C. Donadio, dr. M. Brescia

2020 Tutor of the M.Sc. in Physics “*Machine learning based classification of transients in astronomical synoptic surveys*”, candidate M. Vicedomini, A.A. 2018/19, University Federico II of Napoli

2018 Tutor of the M.Sc. in Physics “*Star Formation Rates Estimation via Machine Learning Methods*”, candidate M. Delli Veneri, A.A. 2017/18, University Federico II of Napoli

2018 Tutor of the M.Sc. in Physics “*Astroinformatics based discovery of globular clusters in the Fornax region*”, candidate G. Angora, A.A. 2017/18, University Federico II of Napoli

2016 Tutor of the Bachelor in Physics “*Ricostruzione di mappe d'estinzione interstellare basata su machine learning non supervisionato*”, candidate G. Angora, A.A. 2015/16, University Federico II of Napoli

2016 Tutor of the M.Sc. in Physics “*Characterization of Outliers in the Quasar Photometric Redshift Space*”, candidate M. Delli Veneri, A.A. 2016/17, University Federico II of Napoli

2015-16 Tutor of the M.Sc. in Informatics “*Metodi di apprendimento non supervisionato per l'analisi di mappe di estinzione in Astrofisica*”, candidate F. Esposito, A.A. 2014/15, University Federico II of Napoli

2014-15 Tutor of the M.Sc. in Physics “*A new photometric method to determine the metallicity of galaxies*”, candidate C. De Masi, A.A. 2014/15, University Federico II of Napoli

2014 Tutor of the M.Sc. in Physics “*Classification of astronomical transients with machine learning methods*”, candidato A. D'Isanto, A.A. 2013/14, University Federico II of Napoli

2014 Tutor of the M.Sc. in Informatics “*Modellazione 3D della Via Lattea in Unity*”, candidate P. D'Andrea, 2014, DIETI, University Federico II of Napoli

2013 Tutor of the M.Sc. in Physics “*PHOTORAPTOR: PHOTometric Research APplication TO Redshifts and application to the SDSS-DR9 galaxies*”, candidate V. De Stefano, A.A. 2012/13, University Federico II of Napoli

2013 Tutor of the M.Sc. in Informatics “*Tecniche di clustering basate sul Machine Learning*”, candidate F. Esposito, A.A. 2012/13, University Federico II of Napoli

2013 Tutor of the M.Sc. in Informatics Engineering “*Analisi di traffico Web con tecniche di data mining e calcolo parallelo basato su GPU*”, candidate L. Of Colandrea, A.A. 2013/14, University Federico II of Napoli

2013 Tutor of the M.Sc. in Informatics “*Sviluppo of strumenti grafici su una web application per il data mining in astrofisica*”, candidate G. Albano, A.A. 2011/12, University Federico II of Napoli

2013 Tutor of the M.Sc. in Informatics “*Calcolo ad alte prestazioni basato su GPU. Un modello ibrido neurale-genetico per data mining in astrofisica*”, candidate A. Solla, A.A. 2011/12, University Federico II of Napoli

2012 Tutor of the M.Sc. in Informatics Engineering “*GPU Computing for Machine Learning Algorithms*”, candidate M. Garofalo, A.A. 2010/11, University Federico II of Napoli

2012 Tutor of the M.Sc. in Informatics “*Automatized integration of software systems based on machine learning within the data mining web application of the project DAME*”, candidate S. Riccardi, A.A. 2010/11, University Federico II of Napoli

2011-12 Tutor of the M.Sc. in Physics “*STraDiWA: a simulation environment for astronomical transient discovery*”, candidate M. Annunziatella, A.A. 2011/12, University Federico II of Napoli

2011 Tutor of the M.Sc. in Informatics “*Un’Interfaccia Utente Grafica per la Web Application VOGCLUSTERS, su ammassi globulari*”, candidate E. Mancini, A.A. 2010/11, University Federico II of Napoli

2011 Tutor of the M.Sc. in Informatics “*Sviluppo dell’applicazione DAMEGRID per il progetto DAME attraverso l’infrastruttura SCOPE-GRID*”, candidate G. Vebber, A.A. 2010/11, University Federico II of Napoli

2010 Tutor of the M.Sc. in Informatics “*Integrazione of tecniche of apprendimento automatico unsupervised nel progetto DAME*”, candidate M. Guglielmo, A.A. 2009/10, University Federico II of Napoli

2010 Tutor of the M.Sc. in Informatics “*DAME-KappA: Integrazione del frame work KNIME nella Suite DAME*”, candidate P. Esposito, A.A. 2009/10, University Federico II of Napoli

2010 Tutor of the M.Sc. in Informatics “*VOGCLUSTERS: Una Web application per il trattamento e l’analisi of ammassi globulari*”, candidate S. Checola, A.A. 2008/09, University of Studi Federico II of Napoli

2009 Tutor of the M.Sc. in Informatics “*Analisi, progettazione, implementazione e testing del sistema of front-end su Web della Suite of data mining per il progetto DAME*”, candidate F. Manna, A.A. 2008/09, University Federico II of Napoli

2009 Tutor of the M.Sc. in Informatics “*Analisi, progettazione, implementazione e testing of un componente software of data mining del progetto DAME*”, candidate M. Fiore, A.A. 2007/08, University of Studi Federico II of Napoli

2009 Tutor of the M.Sc. in Informatics “*Progettazione, implementazione e testing del wrapper JAVA per algoritmi of Intelligenza Artificiale MLP e SVM, nell’ambito del progetto DAME*”, candidate A. Of Guido, A.A. 2008/09, University Federico II of Napoli

2006 Tutor of the M.Sc. in Physics “*Progetto NEMO R&D: Studio of fattibilità e validazione statistica dell’algoritmo of trigger software*”, candidate G. Riccio, A.A. 2006/07, University Federico II of Napoli

2006 Tutor of the M.Sc. in Physics “*Progetto NEMO R&D: Progettazione e implementazione dell’algoritmo of trigger*”, candidate G. d’Angelo, A.A. 2006/07, University Federico II of Napoli

2006 Tutor of the thesis project “*Simulazione of un sistema of ottica attiva applicato al secondario of un telescopio riflettore*”, candidates G. D’Angelo, G. Riccio, Physics Course, University Federico II of Napoli

Academic Masters

2013-14 Tutor of the academic master thesis “*Un web service per il workflow of simulazione e riduzione of immagini astronomiche in ambienti of calcolo distribuito*”, candidate G. Riccio, Master in “Technologies for high performance scientific computing”, A.A. 2012/13, PON-RECAS, University Federico II of Napoli

2013-14 Tutor of the academic master thesis “*Riconoscimento of pacchetti of rete tramite algoritmi genetici su architetture GPU*”, candidate M. Garofalo, Master in “Technologies for high performance scientific computing”, A.A. 2012/13, PON-RECAS, University Federico II of Napoli

2013-14 Tutor of the academic master thesis “*SVM su architettura GPU per la classificazione of ippocampi da MRP*”, candidate D. Guarino, Master in “Technologies for high performance scientific computing”, A.A. 2012/13, PON-RECAS, University Federico II of Napoli

2013 Tutor of the academic master thesis “*Analisi of Farm per la selezione delle feature applicata ad un algoritmo of segmentazione dell’ippocampo*”, candidate A. Tateo, Master in “Development and Management of Data Centers for the high performance scientific computing”, Dept. of Physics, University of Bari “Aldo Moro”

Academic Education Appointments:

Active

from 2017 Professorship of Astroinformatics, Course within the PhD in Physics, Scuola Politecnica e delle Scienze di Base, University of Napoli Federico II

Completed

2002-03 Adjunct Professor of Computer Architectures Laboratory, Informatics Course, Faculty of Sciences, University Federico II of Napoli, A.A. 2002/2003

2003-04 Adjunct Professor of Computer Architectures Laboratory, Informatics Course, Faculty of Sciences, University Federico II of Napoli, A.A. 2003/2004

2004-05 Adjunct Professor of Computer Architectures Laboratory, Informatics Course, Faculty of Sciences, University Federico II of Napoli, A.A. 2004/2005

2005-06 Adjunct Professor of Computer Architectures, Informatics Course, Faculty of Sciences, University Federico II of Napoli, A.A. 2005/2006

2006-07 Adjunct Professor of Computer Architectures, Informatics Course, Faculty of Sciences, University Federico II of Napoli, A.A. 2006/2007

2007-08 Adjunct Professor of Computer Architectures, Informatics Course, Faculty of Sciences, University Federico II of Napoli, A.A. 2007/2008

2009-10 Assistant Professor of Astronomical Technologies, M.Sc. in Astrophysics and Space Sciences, University Federico II of Napoli, A.A. 2009/2010. Parallel publication of the course lessons on the e-learning web platform FEDERICA (<http://www.federica.unina.it/corsi/tecnologie-astronomiche/>)

2010 Tutor of data mining in Astrophysics within the project "*VO-Day...in Tour*", financed by the European project EURO-VO AIDA/VObs.it, INAF

2010-11 Assistant Professor of Astronomical Technologies, M.Sc. in Astrophysics and Space Sciences, University Federico II of Napoli, A.A. 2010/2011

2013 Adjunct Professor of Data Mining, Academic Master in "*Technologies for high performance scientific computing*", A.A. 2012/13, PON RECAS, University of Bari "Aldo Moro"

2014 Adjunct Professor of Data Mining, Master PON04a2_A-"*PRISMA – Interoperable Cloud Platforms for Smart-government*", Dept. of Physics "Michelangelo Merlin", University of Bari "Aldo Moro"

2016/17 Adjunct Professor of "Astroinformatics", M.Sc. in Physics, A.A. 2016/17, Scuola Politecnica e delle Scienze di Base, University of Napoli Federico II

2020 Invited Lecturer of the Course on "Data Science, the baseline for cross-disciplinary research", SSD FIS/01, 15 hours, held remotely in April-May, PhD Course in Computer Science, Mathematics and Physics, University of Udine, Italy. <https://www.dmif.uniud.it/dottorato/offerta-didattica/>

Professional Consulting:

2009-10 Techno-scientific consulting contract for the design and development of an astronomical observation station installed on an equipped pullman (project SpaceCar, financed by Fondazione per il Sud and managed by AUSER Basilicata, in collaboration with University Federico II and INAF-OACN, <http://www.spacecar.unina.it>)

2010 Techno-scientific consulting contract for the study of mathematical models of data mining for the modernization of the historical center of Napoli (Project "*Il centro storico UNESCO of Napoli: indirizzi e metodologie per la redazione del Piano of Gestione*"), commissioned by Unione Industriali of Napoli, UNISERVIZI srl, June-December 2010

Participation to Scientific Editorial Committees:

Active

from 2012 Editorial Board and Review Panel member of the Journal «The SIJ Transactions on Advances in Space Research & Earth Exploration (ASREE)» (<http://www.thesij.com/asree.php>), Print ISSN: 2347-6818 | Online ISSN: 2347-6087

from 2014 Program Committee and Review Panel member of the International Conference on Information Visualization Theory and Applications IVAPP/VISIGRAPP

from 2018 Editorial Advisory Board member of the Journal of Physics Research and Its Application (JPFA), published by Department of Physics, Universitas Negeri Surabaya, Surabaya, Indonesia (<https://journal.unesa.ac.id/index.php/jpfa/about/editorialTeam>)

From March 2020 Review Board member of the scientific peer-reviewed open access journal *Information*, specialized in Information science and technology, data, knowledge, and communication, and is published monthly online by MDPI, ISSN 2078-2489 (https://www.mdpi.com/journal/information/submission_reviewers)

Completed

2010 Program Committee and Review Panel member of Proceedings of the Conference on Intelligent Data Understanding (CIDU 2010). <https://c3.ndc.nasa.gov/dashlink/resources/220/>

2016-17 Editorial Board Head of peer reviewed Proceedings of the IAU Symposium 325 on Astroinformatics, Cambridge University Press

<https://www.cambridge.org/core/journals/proceedings-of-the-international-astronomical-union/issue/E992FC19B0DD8B57AA4FC2F6B58E3FA6>

2019-20 Editorial Committee member of the Book *Intelligent Astrophysics*, published in the Series *Emergence, Complexity and Computation*, Springer, ISSN 2194-7287, Editors: I. Zelinka, M. Brescia, D. Baron

Organization or Participation to international Conferences:

SOC/LOC:

1995 LOC member of the 1st congress “WILF '95 Workshop Italiano sulla Logica Fuzzy”, 21-22 September 1995, INAF-OACN

1996 Program Organizing Committee member of the international congress “CIFT/MEPP '96, New Trends in Fuzzy Systems”, 10-11 October 1996, Faculty of Architecture of Aversa (NA) and INAF-OACN

2010 Member of the Program Organizing Committee of the Conference on Intelligent Data Understanding (CIDU 2010), 5-6 October 2010, Mountain View, California USA.

<https://c3.ndc.nasa.gov/dashlink/resources/220/>

2011 Member of the Program Organising Committee and LOC of the International Virtual Observatory Alliance Interoperability Workshop (IVOA May 2011)

http://dame.dsf.unina.it/ivoa_interop_2011.html

2011 Member of the Scientific Organising Committee and Chair of the LOC of the International Conference on Astroinformatics (Astroinformatics 2011)

<http://dame.dsf.unina.it/astroinformatics2011.html>

2016 Member of the Scientific Organizing Committee and Review Panel of the Conference "The Milky Way as a Star Formation Engine - Towards a predictive Galaxy-scale model of the Star Formation Life-Cycle" (FP7-VIALACTEA 2016), 26-30 September 2016, Roma, Italia

<http://vialactea2016.iaps.inaf.it/vialactea2016/>

2017 Member of the Scientific Organizing Committee and Review Panel of the Symposium "Astroinformatics - From Big Data to understanding the Universe at Large", within the Congress "European Week of Astronomy and Space Science" (EWASS 2017), 29-30 June 2017, Praga, Repubblica Ceca <http://eas.unige.ch/EWASS/session.jsp?year=2017&id=S14>

2018 Member of the Scientific Organizing Committee of the Workshop "LSST TVS 2018 – Transients and Variable Stars workshop", April 9-11 2018, INAF-OACN Napoli

<http://eventi.na.astro.it/en/lsst-tvs-2018/>

2019 Member of the Scientific Organizing Committee of the ESO Workshop "Artificial Intelligence in Astronomy", July 22-26 2019, ESO HQ, Garching, Germany

<http://www.eso.org/sci/meetings/2019/aia2019.html>

2019 Member of the Scientific Organizing Committee of the 10th International Conference "Astroinformatics", June 24-27 2019, Caltech, Pasadena, California USA

2019 Member of the Scientific Organizing Committee of Workshop "Deep Learning @INAF", September 16-19, Pula (CA), Italy (<https://indico.ict.inaf.it/event/815/>)

2019 Member of the Scientific Organizing Committee of Workshop "Untangle the skein with Scarlet: LSST de-blending pipeline application", October 07-09, INAF-OACN (Napoli), Italy

(<https://indico.ict.inaf.it/event/889/>)

Participation as invited speaker:

2009 Invited talk "Mining the knowledge of astrophysical massive datasets", International Conference on Frontiers in Diagnostic Technologies(ICFDT), 24-27 November 2009, Frascati National Laboratories, Italia

2011 Invited Talk "DAME: a web 2.0 technology based infrastructure for data exploration", International Conference on Astroinformatics 2011, 25-29 Maggio, Sorrento, Italia.

<http://dame.dsf.unina.it/astroinformatics/program.html>

2011 Invited talk "Analysis of massive datasets: the next ten years", 2nd International Conference on Frontiers in Diagnostic Technologies (ICFDT), 28-30 November 2011, Frascati National Laboratories, Italia

2017 Invited talk "Astroinformatics in a nutshell" nella sessione "Calcolo e Astroinformatica", splinter meeting "INAF - Macroarea 1 - Galassie e Cosmologia", nell'ambito del LXI Congresso della Società Astronomica Italiana (SAIT 2017), 12-15 Settembre 2017, Padova, Italia.
<http://adlibitum.oats.inaf.it/ma1/meeting2017.html> and
<http://web.oapd.inaf.it/adoni/sait2017/?page=programma>

2017 Invited talk "Astroinformatics in the data-driven Astronomy", Workshop Nazionale ICT 2017, 27 Novembre -1 Dicembre 2017, Bologna, Italia.
<https://indico.ict.inaf.it/event/535/overview>

2018 Invited Lecture "Astroinformatics – data-driven Science", within Cycle of Lectures of the INAF-IASP Institute, 28 March, Roma, Italia

2018 Invited Lecture "Astroinformatics – data-driven Science", within Cycle of Lectures of the Italian Space Agency (ASI), 18 April, Roma, Italia
<https://tools.asdc.asi.it/seminars.jsp>

2019 Invited Talk "LoI for a LSST data broker system at INAF", within the LSST Community Broker Workshop, June 19-21 2019, Seattle, WA, USA
<https://project.lsst.org/meetings/cbw/>

2019 Invited Talk "Astroinformatics and Astrophysics, a virtuous synergy in the Big Data era", within the Workshop "Laboratorio Spettroscopia INAF", June 10-11 2019, INAF Astronomical Observatory of Rome, Monteporzio Catone (Rome), Italy
<https://indico.ict.inaf.it/event/851/overview>

2019 Invited Talk "Astroinformatics based methods for search, classification and photo-z of QSOs and AGN in large surveys", within the Conference "Hot Topics in Astrophysics", July 15-19 2019, Sesto (BZ), Italy
<https://www.sexten-cfa.eu/event/hot-topics-in-astrophysics/>

2019 Invited Talk "The INAF Deep Learning Workshop experience: lessons learned", within the ICT Workshop 2019, October 21-25 2019, Milano, Italy
<https://indico.ict.inaf.it/event/795/>

2019 Invited Lecture "Astroinformatics and Astrophysics, a virtuous synergy in the Big Data era", within the cycle of lectures of INAF-OATS, November 06, 2019, Trieste, Italy
<http://www.oats.inaf.it/index.php/it/205-research/seminars/408-past-seminars-2.html>

2019 Invited Lecture "Leverage data science in modern Astrophysics", within the cycle of lectures of INAF-OAPA, December 19, 2019, Palermo, Italy
http://www.astropa.inaf.it/evento/seminario-massimo-brescia-inaf/?instance_id=760

2020 Invited Lecture "Astroinformatics: synergy between Astrophysics and Data Science", within the cycle of lectures of INAF-OArcetri, April 16, 2019, virtual connection by remote, Italy
https://drive.google.com/file/d/1bkC87WY3V_EQVZcDQwTTeBl7d-wuWPd/view

2021 Invited Lecturer of the Course on “Data Science in Astrophysics”, SSD FIS/05, 6 hours, held remotely in January-February, IFPU – Institute For Fundamental Physics of the Universe, Trieste, Italy.

<https://www.notion.so/bd576c70647b4c4588aa7249992180b0?v=f5d145768b4642a79d244999f568a233>

Participation as speaker:

1994 Lecture “Artificial Intelligence techniques for modern geophysics”, INAF-OACN Napoli, 20/09/1994

1995 Talk "A Neural Network for spectral analysis of stratigraphic records", Neural Nets WIRN-95, IIASS "E.R. Caianiello", Vietri sul Mare, Salerno, Italy, 18-20 Maggio 1995

1995 Talk "A Neural Network for the Detection of Astronomical Periodicities in Geologic Records", International Conference on Artificial Neural Networks, ICANN '95, Parigi, Francia, Ottobre 1995

2000 Talk "The Galileo Telescope Differential Image Motion Monitor", Scientific Dedication of the Telescopio Nazionale Galileo Conference, Santa Cruz de La Palma, Canary Islands, 3-5 Novembre 2000

2001 Talk “Integration of the VIMOS Control System”, ICALEPCS 2001 “8th International Conference on Accelerator and Large Experimental Physics Control Systems”, San Jose, California (USA), November 27-30 2001

2001 Talk “The VST Telescope Control Software in the ESO VLT Environment”, ICALEPCS 2001 “8th International Conference on Accelerator and Large Experimental Physics Control Systems”, San Jose, California (USA), November 27-30 2001

2003 Lecture “Compendium of Artificial Intelligence” within the Cycle of lectures “AstroMeeting”, 18 febbraio 2003 INAF-OAC Napoli

2006 Talk “VST Tracking system: preliminary test results“, 50° National Congress SAIT, 29 Maggio – 01 Giugno 2006, Torino

2007 Talk “Un possibile algoritmo di trigger per km3net e minitorre”, NEMO Collaboration Meeting, LNS INFN, Catania 12-14 Febbraio 2007

2009 Lecture “The VO-Neural/DAME infrastructure: an integrated data mining system for the e-science community”, INAF OACN Napoli, Apr. 2009

2009 Talk "The DAME/VO-Neural infrastructure: an integrated data mining system support for the e-science community", Workshop finale dei Progetti Grid del PON "Ricerca" 2000-2006 - Avviso 1575, 10-12 Febbraio 2009, Catania, Italia. <https://agenda.ct.infn.it/event/87/other-view?view=standard>

2009 Talk "SCOPE and Astrophysical Applications", Conference EGEE'09 (Enabling Grids for E-science) Uniting our strengths to realise a sustainable European grid, 21-25 Settembre 2009.

<https://indico.cern.ch/event/55893/contributions/2042068/>

2010 Talk "Astrophysics with DAME Program: a Distributed Web Based Framework for Knowledge Discovery in Database", 54th Congress of Società Astronomica Italiana (SAIT 2010) "L'astronomia italiana, prospettive per la prossima decade", 4-7 Maggio 2010, Napoli, Italia.
http://www.oacn.inaf.it/sait_10/?v=5.3

2011 Talk "The VO standards for KDD – The DAME Experience", International Virtual Observatory Alliance Interoperability Workshop (IVOA May 2011), 16-20 Maggio, Napoli, Italia.
<http://wiki.ivoa.net/twiki/bin/view/IVOA/InterOpMay2011KDD>

2012 Talk "Genetic Algorithm Modeling with GPU Parallel Computing Technology", 22nd Italian Workshop on Neural Networks (WIRN 2012), 17-19 Maggio, Vietri sul Mare, Salerno, Italia.
<http://www.associazionesiren.org/initiatives/default.asp?sez=wirn12&page=wirn12>

2012 Talk "Euclid Science Ground Segment: The Data Quality Tools Plan", at ESA EUCLID Mission Science Ground Segment Kick Off Meeting, Bologna, March 07, 2012

2012 Lecture "Globular Clusters Classification with GPU-based data mining methods", Astrophysical Colloquium in the series "Astromeeting" at INAF OACN, Naples, March 28, 2012

2014 Talk "The Data Quality Control Tools for the EUCLID Science Ground Segment", technical lecture, INAF-IASF, Milano, July 3, 2014

2018 Talk "LSST Photoz Group", LSST Corporation, Transients and Variable Stars (TVS) Workshop, INAF-OACN Napoli, April 9-11, 2018
<http://eventi.na.astro.it/en/lsst-tvs-2018/program/>

2018 Talk "Long-term monitoring system for the Instrument Operation Team within the EUCLID Science Ground Segment", technical lecture, Euclid Consortium Plenary Meeting, Bonn, June 13, 2018

2019 Talk "Towards a LSST Broker at INAF", Workshop "Untangle the skein with Scarlet: LSST de-blending pipeline application", INAF-OACN, October 07, 2019
<https://indico.ict.inaf.it/event/889/overview>

Affiliation to Academies:

from 2011 Affiliation to the International Astronomical Union, member of four Divisions (Technology and Data Science, Stars and Stellar Physics, Galaxies and Cosmology, Time Domain Astronomy) and three commissions (Computational Astrophysics, Astroinformatics and Astrostatistics, Stellar Evolution).

<https://www.iau.org/administration/membership/individual/11504/>

from 2016 Affiliation to the Astrominer Task Force, Data Mining Technical Committee of IEEE Computer Intelligence Society (CIS DMTC), for research in the field of Big Data in Astrophysics.
<https://asaip.psu.edu/organizations/ieee-astrominer-task-force/members>

from 2019 General Secretary of the Executive Council and past Advisory Council member of the International Astroinformatics Association (IAIA) <http://astroinformatics.info/>

Technological Transfer and spin off initiatives:

2010 Certificate of participation to the Course of Technological Transfer “International Marketing of New Technologies”, organized by Association of University Technology Managers (AUTM), Seconda University of Studi of Napoli, June 17-18, 2010

2011 Promoter and Supervisor of the Spin off for the establishment of a Company for R&D of software applications for analysis and detection of outbreaks of forest fire from optical cameras, in collaboration with the Company Geosystems Group SrL of Benevento, Italy

Study, specializations and certificates:

1994 M.Sc. in Informatics, Faculty of Sciences, University of Salerno. Thesis *Metodologie neurali per l'analisi spettrale of segnali stratigrafici*, supervisors proff. B. D'Argenio, R. Tagliaferri, G. Longo

1995 Participation to the 7th World School of Astronomy "VII Canary Islands Winter School. Instrumentation For Large Telescopes: A Course For Astronomers", Tenerife, Isole Canarie (Spagna), 4 - 15 Dicembre 1995

1998 Participation to the I National School of Astronomical Technologies "Sistemi per osservazioni astronomiche da terra", Napoli, INAF-OACN, 21-26 Settembre 1998

2000 Participation to the II National School of Astronomical Technologies “Tecnologia e uso scientifico della strumentazione astronomica ottica da terra nel visuale e vicino infrarosso”, INAF-OACN, Napoli, 25-30/09/2000

2002 Participation to the III National School of Astronomical Technologies “Strumenti, Tecniche e Metodi per l'Alta Risoluzione Spaziale e Spettrale nell'Astronomia da Terra”, INAF-OACN, Napoli, 23-28 Settembre 2002

Public Outreach and professional training:

1999 Professor of regional training courses in Informatics and Digital Electronics for high school students, Regione Basilicata, Italy

2001 Lecture “Cervello e Cosmo, parallelo fra due universi”, within the Cycle of lectures “L'uomo, l'universo e le frontiere della conoscenza: l'Astronomia”, 13 Febbraio 2001, Museo delle Scienze e della Tecnica, Foggia, Italia

2003 Developer of a WEB application for the measurement and visualization of the body weight on various Solar System planets. Museum and Laboratory of Astrophysics, INAF-OACN, Napoli, Luglio 2003 <http://www.oacn.inaf.it/~brescia/virtual/index.html>

2003 Professor of the training on-line course “Architettura of Elaboratori”, WEB portal “Manuali.Net”, Settembre 2003

2003 Professor of the training on-line course “*Intelligenza Artificiale*”, WEB portal “Manuali.Net”, Aprile 2003

2003 Professor of the training on-line course “*Algoritmi e Programmazione in C*”, WEB portal “Manuali.Net”, March I edition and July II edition 2003

2004 Coordinator of the project “L’Astrofisica va a Scuola”, within the activities of scientific outreach of the INAF-OACN, including a cycle of lectures and the design and development of a newtonian telescope for high schools. Ottobre-Dicembre 2004, OAC Napoli
http://www.oacn.inaf.it/~brescia/TNC/sito_web/index.htm

2007 Lecture “*Technology in Astrophysics*”, within the project “Scuole aperte-ITG Della Porta: dalla scuola al territorio”, organized by the Istituto Tecnico statale *Giambattista Della Porta* in collaboration with INAF-OACN. Marzo 2007, Napoli

2009 Professor of training courses of astronomical technologies for high school teachers, AUSER Basilicata, project SPACECAR, URL: <http://www.spacecar.unina.it>



***Scientific Production
of
Massimo Brescia***

Scientific Articles:

1. Donadio, C., Brescia, M., Riccardo, A., Angora, G., Delli Veneri, M., Riccio, G., (2021). *A novel approach to the classification of terrestrial drainage networks based on deep learning and preliminary results on Solar System bodies*, Scientific Reports (Nature Research), 11, 5875, doi:10.1038/s41598-021-85254-x
2. Euclid Collaboration, Ilbert, O., de la Torre, S., Martinet, N., Wright, A. H., Paltani, S., Laigle, C., Davidzon, I., Jullo, E., Hildebrandt, H., Masters, D. C., Amara, A., Conselice, C. J., Andreon, S., Auricchio, N., Azzollini, R., Baccigalupi, C., Balaguera-Antolínez, A., Baldi, M., Balestra, A., Bardelli, S., Bender, R., Biviano, A., Bodendorf, C., Bonino, D., Borgani, S., Boucaud, A., Bozzo, E., Branchini, E., Brescia, M., et al., (2021). *Euclid preparation. XI. Mean redshift determination from galaxy redshift probabilities for cosmic shear tomography*. A&A, Volume 647, id.A117, 21 pp.
3. Fumagalli, A., Saro, A., Borgani, S., Castro, T., Costanzi, M., Monaco, P., Munari, E., Sefusatti, E., Amara, A., [...], Brescia, M., et al., (2021). *Euclid: Effect of sample covariance on the number counts of galaxy clusters*. eprint arXiv:2102.08914
4. Taylor, P. L., Kitching, T., Cardone, V. F., Ferté, A., Huff, E. M., Bernardeau, F., Rhodes, J., Deshpande, A. C., Tutusaus, I., Pourtsidou, A., Camera, S., Carbone, C., Casas, S., Martinelli, M., Pettorino, V., Sakr, Z., Sapone, D., Yankelevich, V., Auricchio, N., Balestra, A., Bodendorf, C., Bonino, D., Boucaud, A., Branchini, E., Brescia, M., et al. (2020). *Euclid: Forecasts for k-cut 3x2 Point Statistics*. Submitted to the Open Journal of Astrophysics, eprint arXiv:2012.04672
5. Schmidt, S.J., Malz, A.I., Soo, J.Y.H., Almosallam, I.A., Brescia, M. et al. (2020). *Evaluation of probabilistic photometric redshift estimation approaches for The Rubin Observatory Legacy Survey of Space and Time (LSST)*. MNRAS, Volume 499, Issue 2, pp.1587-1606
6. Martinelli, M., Martins, C. J. A. P., Nesseris, S., Sapone, D., Tutusaus, I., Avgoustidis, A., Camera, S., Carbone, C., Casas, S., Ilić, S., Sakr, Z., Yankelevich, V., Auricchio, N., Balestra, A., Bodendorf, C., Bonino, D., Branchini, E., Brescia, M., (2020). *Euclid: Forecast constraints on the cosmic distance duality relation with complementary external probes*. A&A, Volume 644, id.A80, 13 pp.
7. Pöntinen, M., Granvik, M., Nucita, A. A., Conversi, L., Altieri, B., Auricchio, N., Bodendorf, C., Bonino, D., Brescia, M., et al. (2020). *Euclid: Identification of asteroid streaks in simulated images using StreakDet software*. A&A, Volume 644, id.A35, 12 pp.
8. Euclid Collaboration, Desprez, G., Paltani, S., Coupon, J., Almosallam, I., Alvarez-Ayllon, A., Amaro, V., Brescia, M., et al. (2020). *Euclid preparation. X. The Euclid photometric-redshift challenge*. A&A, Volume 644, id.A31, 24 pp.

9. Angora, G., Rosati, P., Brescia, M., Mercurio, A., Grillo, C., Caminha, G., Meneghetti, M., Nonino, M., Vanzella, E., Bergamini, P., Biviano, A., Lombardi, M., (2020). *The search for galaxy cluster members with deep learning of panchromatic HST imaging and extensive spectroscopy*. A&A, Volume 643, id.A177, 25 pp.
10. Tutusaus, I.; Martinelli, M.; Cardone, V. F.; Camera, S.; Yahia-Cherif, S.; Casas, S.; Blanchard, A.; Kilbinger, M.; Lacasa, F.; Sakr, Z.; Ilić, S.; Kunz, M.; Carbone, C.; Castander, F. J.; Dournac, F.; Fosalba, P.; Kitching, T.; Markovic, K.; Mangilli, A.; Pettorino, V. Sapone, D.; Yankelevich, V.; Auricchio, N.; Bender, R.; Bonino, D.; Boucaud, A.; Brescia, M. et al. (2020). *Euclid: The importance of galaxy clustering and weak lensing cross-correlations within the photometric Euclid survey*, A&A, Volume 643, id.A70, 17 pp.
11. Martinelli, M., Tutusaus, I., Archidiacono, M., Camera, S., Cardone, V. F., Clesse, S., Casas, S., Casarini, L., Mota, D. F., Hoekstra, H., Carbone, C., Ilić, S., Kitching, T. D., Pettorino, V., Pourtsidou, A., Sakr, Z., Sapone, D., Auricchio, N., Balestra, A., Boucaud, A. Branchini, E., Brescia, M., et al. (2020). *Euclid: impact of nonlinear prescriptions on cosmological parameter estimation from weak lensing cosmic shear*. Submitted to A&A, eprint arXiv:2010.12382
12. Euclid Collaboration, Knabenhans, M., Stadel, J., Potter, D., Dakin, J., Hannestad, S., Tram, T., Marelli, S., Schneider, A., Teyssier, R., Andreon, S., Auricchio, N., Baccigalupi, C., Balaguera-Antolínez, A., Baldi, M., Bardelli, S., Battaglia, P., Bender, R., Biviano, A., Bodendorf, C. Bozzo, E., Branchini, E., Brescia, M., et al. (2020). *Euclid preparation: IX. EuclidEmulator2 -- Power spectrum emulation with massive neutrinos and self-consistent dark energy perturbations*. Submitted to MNRAS, eprint arXiv:2010.11288
13. Euclid Collaboration; Guglielmo, V., Saglia, R.P., Castander, F.J., Galametz, A., Paltani, S., Bender, R., Bolzonella, M., Capak, P., Ilbert, O., Masters, D., Stern, D., [...], Brescia, M. et al. (2020). *Euclid preparation: VIII. The Complete Calibration of the Colour-Redshift Relation Survey: VLT/KMOS Observations and Data Release*. A&A, Volume 642, id.A192, 19 pp.
14. Euclid Collaboration; Blanchard, A., Camera, S., Carbone, C., Cardone, V. F., Casas, S., Ilić, S., Kilbinger, M., Kitching, T., Kunz, M., Lacasa, F., Linder, E., Majerotto, E., Markovič, K., Martinelli, M., Pettorino, V., Pourtsidou, A., Sakr, Z., Sánchez, A. G., Sapone, D. Tutusaus, I., Yahia-Cherif, S., Yankelevich, V., Andreon, S., Aussel, H., Balaguera-Antolínez, A., Baldi, M., Bardelli, S., Bender, R., Biviano, A., Bonino, D., Boucaud, A., Bozzo, E., Branchini, E., Brau-Nogue, S., Brescia, M. et al. (2019). *Euclid preparation: VII. Forecast validation for Euclid cosmological probes*. A&A, Volume 642, id.A191, 66 pp.
15. Tortora, C.; Napolitano, N. R.; Radovich, M.; Spiniello, C.; Hunt, L.; Roy, N.; Moscardini, L.; Scognamiglio, D.; Spavone, M.; Brescia, M.; Cavuoti, S.; D'Ago, G.; Longo, G.; Bellagamba, F.; Maturi, M.; Roncarelli, M., (2020). *Nature versus nurture: relic nature and environment of the most massive passive galaxies at $z < 0.5$* , A&A, Volume 638, id.L11, 5 pp
16. Scognamiglio, D., Tortora, C., Spavone, M., Spiniello, C., Napolitano, N.R., D'Ago, G., La Barbera, F., Getman, F., Roy, N., Raj, M.A., Radovich, M., Brescia, M., et al. (2020). *Building the largest spectroscopic sample of ultra-compact massive galaxies with the Kilo Degree Survey*. The Astrophysical Journal, Volume 893, Issue 1, id.4
17. Euclid Collaboration; Deshpande, A. C.; Kitching, T. D.; Cardone, V. F.; Taylor, P. L.; Casas, S.; Camera, S.; Carbone, C.; Kilbinger, M.; Pettorino, V.; Sakr, Z.; Sapone, D.; Tutusaus, I.; Auricchio, N.; Bodendorf, C.; Bonino, D.; Brescia, M. et al. (2019). *Euclid: On the reduced shear approximation and magnification bias for Stage IV cosmic shear experiments*. Astronomy & Astrophysics, Volume 636, id.A95, 16 pp.

18. Schisano, E.; Molinari, S.; Elia, D.; Benedettini, M.; Olmi, L.; Pezzuto, S.; Traficante, A.; Brescia, M. et al. (2019). *The Hi-GAL catalogue of dusty filamentary structures in the Galactic Plane*. MNRAS, Volume 492, Issue 4, p.5420-5456
19. Euclid Collaboration; Paykari, P., Kitching, T.D., Hoekstra, H., Azzollini, R., Cardone, V.F., Cropper, M., Duncan, C.A.J., Kannawadi, A., Miller, L., Aussel, H., Conti, I.F., Auricchio, N., Baldi, M., Bardelli, S., Biviano, A., Bonino, D., Borsato, E., Bozzo, E., Branchini, E., Brau-Nogue, S., Brescia, M. et al. (2019). *Euclid preparation: VI. Verifying the Performance of Cosmic Shear Experiments*. Astronomy & Astrophysics, Volume 635, id.A139, 18 pp.
20. Angora, G., Brescia, M., Cavuoti, S., Paolillo, M., Longo, G., Cantiello, M., Capaccioli, M., D'Abrusco, R., D'Ago, G., Hilker, M., Iodice, E., Mieske, S., Napolitano, N., Peletier, R., Pota, V., Puzia, T., Riccio, G., Spavone, M., (2019), *Astroinformatics based search for globular clusters in the Fornax Deep Survey*. MNRAS, 490, 3, 4080-4106
21. Brescia, M.; Salvato, M.; Cavuoti, S.; Ananna, T. T.; Riccio, G.; LaMassa, S. M.; Urry, C. M.; Longo, G., (2019), *Photometric Redshifts for X-ray selected Active Galactic Nuclei in the eROSITA era*. MNRAS, 489, 1, 663-680
22. Euclid Collaboration; Barnett, R.; Warren, S. J.; Mortlock, D. J.; Cuby, J. -G.; Conselice, C.; Hewett, P. C.; Willott, C. J.; Auricchio, N.; Balaguera-Antolínez, A.; Baldi, M.; Bardelli, S.; Bellagamba, F.; Bender, R.; Biviano, A.; Bonino, D.; Bozzo, E.; Branchini, E.; Brescia, M.; et al., (2019). *Euclid preparation: V. Predicted yield of redshift $7 < z < 9$ quasars from the wide survey*. A&A, 631, A85
23. Norris, Ray P.; Salvato, M.; Longo, G.; Brescia, M.; Budavari, T.; Carliles, S.; Cavuoti, S.; Farrah, D.; Geach, J.; Luken, K.; Musaeva, A.; Polsterer, K.; Riccio, G.; Seymour, N.; Smolčić, V.; Vaccari, M.; Zinn, P., (2019). *A Comparison of Photometric Redshift Techniques for Large Radio Surveys*. PASP, 131, 1004, pp. 108004
24. Delli Veneri, M., Cavuoti, S., Brescia, M., Longo, G., Riccio, G., (2019). *Star Formation Rates for photometric samples of galaxies using machine learning methods*. MNRAS, 486, 1, p. 1377-1391
25. Nakoneczny, S., Bilicki, M., Solarz, A., Pollo, A., Maddox, N., Spiniello, C., Brescia, M., Napolitano N.R., (2019). *Catalog of quasars from the Kilo-Degree Survey Data Release 3*. A&A, 624, A13, 15 pp.
26. Amaro, Valeria; Cavuoti, Stefano; Brescia, Massimo; Vellucci, Civita; Longo, Giuseppe; Bilicki, Maciej; de Jong, Jelte T. A.; Tortora, Crescenzo; Radovich, Mario; Napolitano, Nicola R.; Buddelmeijer, Hugo; (2019). *Statistical analysis of probability density functions for photometric redshifts through the KiDS-ESO-DR3 galaxies*. MNRAS, 482 (3), 3116-3134
27. Tortora, C.; Napolitano, N. R.; Spavone, M.; La Barbera, F.; D'Ago, G.; Spiniello, C.; Kuijken, K. H.; Roy, N.; Raj, M. A.; Cavuoti, S.; Brescia, M.; Longo, G.; Pota, V.; Petrillo, C. E.; Radovich, M.; Getman, F.; Koopmans, L. V. E.; Trujillo, I.; Verdoes Kleijn, G.; Capaccioli, M.; Grado, A.; Covone, G.; Scognamiglio, D.; Blake, C.; Glazebrook, K.; Joudaki, S.; Lidman, C.; Wolf, C., (2018). *The first sample of spectroscopically confirmed ultra-compact massive galaxies in the Kilo Degree Survey*. MNRAS, 481 (4), 4728-4752
28. Roy, N.; Napolitano, N. R.; La Barbera, F.; Tortora, C.; Getman, F.; Radovich, M.; Capaccioli, M.; Brescia, M.; Cavuoti, S.; Longo, G.; Raj, M. A.; Puddu, E.; Covone, G.; Amaro, V.; Vellucci, C.; Grado, A.; Kuijken, K.; Verdoes Kleijn, G.; Valentijn, E., (2018). *Evolution of galaxy size--stellar mass relation from the Kilo Degree Survey*. MNRAS, 480, 1, 1057-1080
29. F. Vitello , E. Sciacca, U. Becciani, A. Costa, M. Bandieramonte, M. Benedettini, M. Brescia, R. Butora, S. Cavuoti, A. M. Di Giorgio, D. Elia, S. J. Liu, S. Molinari, M. Molinaro, G. Riccio, E.

- Schisano, and R. Smareglia, (2018). *Vialactea Visual Analytics Tool for Star Formation Studies of the Galactic Plane*. Publications of the Astronomical Society of the Pacific, 130, 990 (12pp), 2018 August, doi.org/10.1088/1538-3873/aac5d2
30. Fu, Liping; Liu, Dezi; Radovich, Mario; Liu, Xiangkun; Pan, Chuzhong; Fan, Zuhui; Covone, Giovanni; Vaccari, Mattia; Amaro, Valeria; Brescia, Massimo; Capaccioli, Massimo; De Cicco, Demetra; Grado, Aniello; Limatola, Luca; Miller, Lance; Napolitano, Nicola R.; Paolillo, Maurizio; Pignata, Giuliano, (2018). *Weak Lensing Study in VOICE Survey I: Shear Measurement*. MNRAS, 479, 3, 3858-3872
 31. Inserra, C.; Nichol, R. C.; Scovacicchi, D.; Amiaux, J.; Brescia, M.; Burigana, C.; Cappellaro, E.; Carvalho, C. S.; Cavuoti, S.; Conforti, V.; Cuillandre, J.-C.; da Silva, A.; De Rosa, A.; Della Valle, M.; Dinis, J.; Franceschi, E.; Hook, I.; Hudelot, P.; Jahnke, K.; Kitching, T.; Kurki-Suonio, H.; Lloro, I.; Longo, G.; Maiorano, E.; Maris, M.; Rhodes, J. D.; Scaramella, R.; Smartt, S. J.; Sullivan, M.; Tao, C.; Toledo-Moreo, R.; Tereno, I.; Trifoglio, M.; Valenziano, L. (2018). *Euclid: Superluminous supernovae in the Deep Survey*. Astronomy & Astrophysics, Volume 609, id.A83. This paper is published on behalf of the Euclid Consortium.
 32. Bilicki, M.; Hoekstra, H.; Amaro, V.; Blake, C.; Brown, M. J. I.; Cavuoti, S.; de Jong, J. T. A.; Hildebrandt, H.; Wolf, C.; Amon, A.; Brescia, M.; Brough, S.; Costa-Duarte, M. V.; Erben, T.; Glazebrook, K.; Grado, A.; Heymans, C.; Jarrett, T.; Joudaki, S.; Kuijken, K.; Longo, G.; Napolitano, N.; Parkinson, D.; Vellucci, C.; Verdoes Kleijn, G. A.; Wang, L. (2018). *Photometric redshifts for the Kilo-Degree Survey. Machine-learning analysis with artificial neural networks*. MNRAS, 616, A69, doi: 10.1051/0004-6361/201731942
 33. Cavuoti S, Amaro V, Brescia M, Vellucci C, Tortora C, Longo G (2017). *METAPHOR: A machine learning based method for the probability density estimation of photometric redshifts*. MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY, vol. 465, p. 1959-1973, ISSN: 0035-8711, doi: 10.1093/mnras/stw2930
 34. Riccio G, Brescia M, Cavuoti S, Mercurio A, of Giorgio A M, Molinari S (2017). *C3, A Command-line Catalog Cross-match Tool for Large Astrophysical Catalogs*. PASP, vol. 129, 972, ISSN: 0004-6280, doi: 10.1088/1538-3873/129/972/024005
 35. De Jong JTA, Verdoes Kleijn G, Erben T, Hildebrandt H, Kuijken K, Sikkema G, Brescia M, Bilicki M, Napolitano NR, Amaro V, Begeman KG, Boxhoorn DR, Buddelmeijer H, Cavuoti S, Getman F, Grado A, Helmic [...] C, Vriend WJ, Amon A (2017). *The third data release of the Kilo-Degree Survey and associated data products*. ASTRONOMY & ASTROPHYSICS, vol. 604, A134, ISSN: 0004-6361, doi: 10.1051/0004-6361/201730747
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