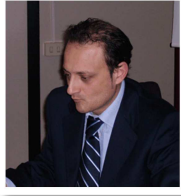


## Massimo Brescia

January 27, 2012

Curriculum Vitae et Studiorum & Scientific Production



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<http://www.oacn.inaf.it/~brescia>



### PERSONAL INFORMATION

Date of Birth : 30/03/1968  
City of Birth : Catanzaro  
Office : INAF-OACN, Via Moiarriello 16, I-80131 Napoli, Italy  
Tel. Office : +39.081.5575.553  
Fax Office : +39.081.456710



### POSITION

- ✓ **Staff Research Astronomer** since November 1, 2000, at INAF (National Institute of Astrophysics), Astronomical Observatory of Capodimonte (OACN), Napoli, Italy;



### CURRENT ASSIGNMENTS

- ✓ **Scientific association** to the research activities of Department of Physics, University Federico II of Napoli;
- ✓ **Project Manager** of project DAME (Data Mining & Exploration, <http://dame.dsf.unina.it>) in collaboration with the Department of Physics of the University Federico II of Napoli, California Institute of Technology and the Grid Infrastructure of the project S.Co.P.E. (<http://www.scope.unina.it/C19/astrophysics-gridcomputing/default.aspx>);
- ✓ **Co-Leader** of EUCLID Mission Science Ground Segment System Team for Common Data Quality Control for ground data and instrument telemetry;
- ✓ **P.I.** of the UdR (Research Unit) INAF-OACN for the project PRIN-INAF 2010 "Architecture and Tomography of Galaxy Clusters", in collaboration with INAF-OATS and University of Trieste (national P.I. prof. M. Nonino);

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- ✓ **Member** of the UdR (Research Unit) INAF of the project PRIN–MIUR 2010 “Gamma Ray Bursts: from observations to physics and cosmology”, (national P.I. prof. F. Frontera);
- ✓ **Member** of the KDD-IG (Interest Group on Knowledge Discovery in Databases) of IVOA (International Virtual Observatory Alliance);
- ✓ **Member** of MICA – Meta Institute for Computational Astrophysics, Caltech, CA USA;



### EDUCATION

Diploma : Classical High School  
M. Sc. Degree : Informatics  
Faculty : Sciences  
University : Salerno, Italy  
Attainment Date : July 20, 1994  
Degree Mark : 105/110



### M. Sc. THESIS

**Title** : “Neural Methodologies in Spectral Analysis of Stratigraphic Signals”

**Supervisor** : Prof. B. D'Argenio, Prof. R. Tagliaferri, Prof. G. Longo.

**Argument** :

The original research has been based on the study and experiments of Neural Network models in the spectral analysis of signals derived from stratigraphic records referred to mountain profiles. The target was the determination of periodicities induced by astronomical phenomena, like equinox precession, obliquity and eccentricity of the Earth polar axis, in the sedimentation process.



### SPECIALIZATIONS

- ✓ **Scientific Collaboration** with the Geophysical Institute "Geomare Sud" of CNR Napoli and with the International Institute of High Scientific Studies (IIASS) of Vietri sul Mare (SA) for the completion of the research project, subject of the Degree thesis, 1994.
- ✓ **Participation** to the seventh edition of world school in Astronomy "VII Canary Islands Winter School. Instrumentation For Large Telescopes: A Course For Astronomers", Tenerife, Canary Islands (Spain), December 4 – 15, 1995.

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- ✓ Participation to the I National School of Astronomical Technologies, "Systems for astronomical ground-based observations", INAF-OAC, Napoli, September 21-26, 1998.
- ✓ Participation to the II National School of Astronomical Technologies "Technology and scientific use of optical ground-based astronomical instrumentation in the visual and near-infrared bands", INAF-OAC, Napoli, September 25-30, 2000.
- ✓ Participation to the III National School of Astronomical Technologies "Instruments, Techniques and Methods for Spatial and Spectral High Resolution in the ground-based Astronomy", INAF-OAC, Napoli, September 23-28 2002.
- ✓ Certificated participation to the International Marketing of New Technologies Course, organized by Association of University Technology Managers (AUTM), Seconda Università degli Studi di Napoli, June 17-18, 2010.



### PROFESSIONAL EXPERIENCES

#### Ground-Based Telescopes (period 1995 – 2008)

##### **Project VLT Survey Telescope (ESO Cerro Paranal, Chile):**

- ✓ INAF Official Assignment as AIV Manager for the Assembling, Integration and functional Verification of the telescope on site (ESO Observatory), June 2007 – June 2008;
- ✓ Member of the group responsible of the design and implementation of the telescope control system (2000-2008);
- ✓ Coordinator of the re-conditioning group for the guiding and field-rotation servo systems of the telescope (June-December 2008);
- ✓ Responsible (from 2005 to 2007) of the department of *public outreach & education* of the VSTceN (VST Center at Napoli);

##### **Project alt-azimuthal telescope (1.5 m) TT1 (Toppo di Castelgrande, Italy):**

- ✓ Collaboration for the design of main axes servo system software;
- ✓ Collaboration to the erection and integration of the telescope on Factory (IRMAC Sistemi);

##### **Project Telescopio Nazionale Galileo (3.5 m) TNG (La Palma, Canary, Spain):**

- ✓ Theoretical study of neural network applications for the tracking noise control;

##### **Project alt-azimuthal Telescope (2.5 m) OASI, Antarctic Island:**

- ✓ Design and implementation of main axes servo system software and diagnostic/telemetry;

##### **Project equatorial Telescope (60 cm) AVBeO, Schwanden, Switzerland:**

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- ✓ Design and implementation of main axes servo system software and diagnostic/telemetry;

### **Project equatorial Telescope (80 cm) of the Astronomical Observatory of Torino:**

- ✓ Design and implementation of main axes servo system software and diagnostic/telemetry;

### **Project alt-azimuthal Telescope (30 cm) as satellite guide prototype, Officine Galileo, Firenze:**

- ✓ Design and implementation of main axes servo system software and diagnostic/telemetry;

### **Project zenithal Telescope with liquid mirror (4m) of the dep. of Physics, University Federico II Napoli:**

- ✓ Design and implementation of the opto-mechanical system, liquid mirror control and focal plane instrumentation;

### **Project Newtonian Telescope of Capodimonte (0.2 m) TNC (OAC Napoli):**

- ✓ Design and setup of main axes servo system software, diagnostic/telemetry and CCD camera;

### *High Energy Astrophysics (period 2006 – 2007)*

#### **Project NEMO R&D (Neutrino Mediterranean Observatory), Capo Passero (Italia):**

- ✓ design and implementation of the off-shore trigger system and of the off-line data mining system on archived data, in collaboration with INFN Section of Napoli (<http://nemo.na.infn.it/>);

### *Astronomical Instrumentation (period 1997 – 2001)*

#### **Project VIMOS (Visible Infrared Multi Object Spectrograph) for the ESO VLT (Chile)**

- ✓ Collaboration to the design and implementation of low-level control software DTS (Device Test Software);

#### **Project TNG DIMM (Differential Image Motion Monitor)**

- ✓ Design and Implementation of the theoretical atmospheric seeing model and the seeing monitor system;
- ✓ DIMM Control System;

### *Cosmology Simulations (period 2006 – 2007)*

#### **Project GODFINGER (Galaxy Objects Detection FINALized to Group Extensive Recognition):**

- ✓ Design and Implementation of a Matlab-based Model of cosmological simulation of groups and clusters in the near Universe, in collaboration with the Dep. of Physics of the University Federico II of Napoli.

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### Astroinformatics & Data Mining (dal 2007)

#### **Project EUCLID (Space Instrument Mission), since 2011:**

- ✓ Co-Leader of Science Ground Segment System Team for Common Data Quality Control for ground data and instrument telemetry;

#### **Project DAME (Data Mining & Exploration), since 2007:**

- ✓ Project Manager of DAME, a WEB application framework for data mining on astrophysical Massive Data Sets, based on the interoperability between VO-compliant data, Soft Computing techniques and distributed computing infrastructures (GRID/CLOUD/HPC), (URL: <http://dame.dsf.unina.it>);
- ✓ P.I. UdR INAF-OACN of the project PRIN-INAF 2010 " Architecture and Tomography of Galaxy Clusters", financed in the 2011, in collaboration with INAF-OATS and Università di Trieste;
- ✓ Consultant for the design and implementation of Soft Computing algorithms, based on neural networks, genetic algorithms and fuzzy Logic, for the data mining in Astrophysics;
- ✓ Tutor of the project "VO-Day in Tour", INAF-OATs, in collaboration with INAF-SI (VObs.it), a series of practical workshops for the dissemination of VO and Data Mining applications and tools in the INAF sites, (<http://www.oats.inaf.it/voday/>), financed by the EURO-VO AIDA project;



### PROFESSIONAL CONSULTING

- ✓ Consulting assignment for the feasibility study of mathematical models for the modernization of the historical center of Naples (Project "The historical center UNESCO of Naples: requirements and methodologies for the Management Plan"), commissioned by the Union of Industrials of Naples, UNISERVIZI srl, June-December 2010;
- ✓ Design and Coordination of the realization of a mobile astronomical observatory (**Project SpaceCar**, financed by Fondazione per il Sud and managed by AUSER Basilicata, in collaboration with INAF and the University Federico II of Napoli, URL: <http://www.spacecar.unina.it> ). The observatory hosts a professional telescope Meade LX200 Schmidt-Cassegrain 40cm (period 2007 – 2009);
- ✓ Design of public outreach multimedia productions for the Museum of Astronomy "Parco per un viaggio nel Cosmo", at Castelgrande (PZ), project financed by Fondo Europeo di Sviluppo Regionale, P.O.R. Basilicata 2000-2006, managed by the Comune di Castelgrande (2008);
- ✓ Scientific Collaboration Contract (November 1995 / November 1996) at INAF-OAC Napoli for the design and development of Artificial Intelligence techniques in astrophysical technologies;
- ✓ Scientific Collaboration Contract (December 1996 / December 1998) at INAF-OAC Napoli for the design and development of astronomical ground-based instrumentation servo systems control (specifically for the project VIMOS);

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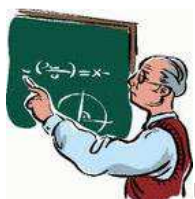
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- ✓ Scientific Association with INFN-Napoli (National Institute of Nuclear Physics) for the collaboration with NEMO R&D project consortium (January 2006 – December 2007) <http://nemo.na.infn.it/>;



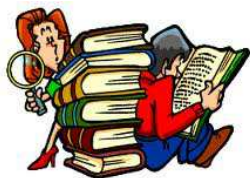
### PUBLIC CONCOURSES

- ✓ Winner of the National competition (D.D. N. 52/98, 08/10/98), with score 90/100, for 1 position of assistant astronomer, in the project “Management and Control of ground-based telescopes”, INAF-OAC Napoli, March 1999 – September 2000.
- ✓ Winner of the National competition (D.D. N. 97/99, 11/11/99), with score 87/90, for 1 position of staff astronomer, INAF-OAC Napoli, September 2000.



### UNIVERSITY EDUCATION TEACHING

- ✓ Professor of *Astronomical Technologies*, Master Degree Course in Astrophysics and Space Sciences, University Federico II of Napoli, Academic Year 2009/2010.
- ✓ Professor of *Astronomical Technologies*, Master Degree Course in Astrophysics and Space Sciences, University Federico II of Napoli, Academic Year 2008/2009. The course is available also on the WEB, inserted in the E-Learning courses of the FEDERICA project, of University Federico II of Napoli (<http://www.federica.unina.it/corsi/tecnologie-astronomiche/>)
- ✓ Professor of *Astronomical Technologies*, Master Degree Course in Astrophysics and Space Sciences, University Federico II of Napoli, Academic Year 2007/2008.
- ✓ Adjunct Professor of *Computer Architectures*, Master Degree Course in Informatics, Faculty of Sciences, University Federico II of Napoli, Academic Year 2006/2007.
- ✓ Adjunct Professor of *Computer Architectures*, Master Degree Course in Informatics, Faculty of Sciences, University Federico II of Napoli, Academic Year 2005/2006.
- ✓ Adjunct Professor of *Laboratory of Computer Architecture*, Master Degree Course in Informatics, Faculty of Sciences, University Federico II of Napoli, Academic Year 2004/2005.
- ✓ Adjunct Professor of *Laboratory of Computer Architecture*, Master Degree Course in Informatics, Faculty of Sciences, University Federico II of Napoli, Academic Year 2003/2004.
- ✓ Adjunct Professor of *Laboratory of Computer Architecture*, Master Degree Course in Informatics, Faculty of Sciences, University Federico II of Napoli, Academic Year 2002/2003.



### ACADEMIC TRAINING

- ✓ PhD in Fundamental and Applied Physics “*Data rich Astronomy: mining synoptic sky surveys*”, candidate S. Cavuoti, XXV Cycle, Department of Physics, Università degli Studi Federico II di Napoli, supervisors M. Brescia and G. Longo;
- ✓ Thesis Supervisor “A Graphical User Interface for the web application VOGCLUSTERS, on globular clusters”, candidate E. Mancini, Bachelor in Informatics, University Federico II Napoli, Academic Year 2010/11, (other tutor prof. G. Russo);
- ✓ Thesis Supervisor “*Sviluppo dell’applicazione DAMEGRID per il progetto DAME attraverso l’infrastruttura SCOPE-GRID*”, candidate G. Vebber, Bachelor in Informatics, University Federico II Napoli, Academic Year 2010/11, (other tutor prof. A. Peron);
- ✓ Thesis Supervisor “*Integrazione di tecniche di apprendimento automatico unsupervised nel progetto DAME*”, candidate M. Guglielmo, Bachelor in Informatics, University Federico II Napoli, Academic Year 2009/10, (other tutor prof. A. Corazza);
- ✓ Thesis Supervisor “*DAME-KappA: Integrazione del Framework Knime nella Suite DAME*”, candidate P. Esposito, Bachelor in Informatics, University Federico II Napoli, Academic Year 2009/10, (other tutor prof. A. Corazza);
- ✓ Thesis Supervisor “*VOGCLUSTERS: A Web Application for the management and analysis of Globular Clusters*”, candidate S. Checola, Bachelor in Informatics, University Federico II Napoli, Academic Year 2009/10, (other tutor prof. A. Corazza);
- ✓ Thesis Supervisor “*Analysis, design, implementation and testing of the front-end component of the DAME data mining project*”, candidate F. Manna, Bachelor in Informatics, University Federico II Napoli, Academic Year 2008/09, (other tutor prof. A. Corazza);
- ✓ Thesis Supervisor “*Design, implementation and testing of the JAVA wrapper for Artificial Intelligence algorithms MLP and SVM in the DAME data mining project*”, candidate A. Di Guido, Bachelor in Informatics, University Federico II Napoli, Academic Year 2008/09, (other tutor prof. A. Corazza);
- ✓ Thesis Supervisor “*NEMO R&D Project: Feasibility Study and statistical validation of the software trigger algorithm*”, candidate G. Riccio, Master Degree in Physics, Faculty of Sciences, University Federico II Napoli, Academic Year 2006/2007, (other tutors G. Longo, G. Barbarino);
- ✓ Thesis Supervisor “*NEMO R&D Project: Design and Implementation of the trigger algorithm*”, candidate G. d’Angelo, Master Degree in Physics, Faculty of Sciences, University Federico II Napoli, Academic Year 2006/2007, (other tutors G. Longo, G. Barbarino);

## Curriculum Vitae et Studiorum & scientific production

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- ✓ Supervisor INAF for the apprenticeship in Informatics “*Analysis, design, implementation and testing of a software component of the DAME data mining project*”, candidate M. Fiore, internal tutor prof. A. Corazza, Master Degree in Informatics, University Federico II Napoli, Academic Year 2008/09;
- ✓ Co-supervisor of laboratory thesis “*Simulation of an active optics system applied to a secondary mirror of a reflector telescope*”, candidates G. D’Angelo, G. Riccio, Course of “Laboratory of Astrophysics” , Master Degree in Physics, Faculty of Sciences, University Federico II Napoli, Academic Year 2003/2004;



### TRAINING COURSES

- ✓ Cycle of lectures on “Astronomical Detectors and Data Reduction Techniques”, Course of Astronomy (Prof. M. Capaccioli), Master Degree in Physics, Faculty of Sciences, University Federico II of Napoli, Academic Year 2002/2003.
- ✓ Adjunct Teacher of WEB course “*Computer Architectures*” on WEB portal “Manuali.Net”, I edition September 2003.
- ✓ Adjunct Teacher of WEB course “*Artificial Intelligence*” on WEB portal “Manuali.Net”, I edition April 2003.
- ✓ Adjunct Teacher of WEB courses “*Algorithms and C Programming*” on WEB portal “Manuali.Net”, March I edition and July II edition 2003.
- ✓ Adjunct Teacher of “*Informatics and Digital Electronics*” for post-degree candidates, Regional courses financed by Regione Basilicata, Castelgrande (PZ), 1999.
- ✓ Cycle of lectures on “Neural Networks”, Course of Cybernetics and Information Theory (Prof. R. Tagliaferri), Master Degree in Informatics, Faculty of Sciences, University of Salerno, Academic Year 1993/94.



### S.O.C. P.O.C. AND L.O.C.

- ✓ **SOC** (Scientific Organizing Committee) member and Chair of the **LOC** (Local Organizing Committee) of International Conference “AstroInformatics 2011”, September 25-29 2011, Sorrento, Italy ( <http://astroinformatics2011.org> );
- ✓ Member of the **POC** (Program Organizing Committee) of International Virtual Observatory Alliance (IVOA) Interoperability Workshop, May 16-21 2011, Napoli, Italy ( [http://dame.dsf.unina.it/ivoa\\_interop\\_2011.html](http://dame.dsf.unina.it/ivoa_interop_2011.html) );

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- ✓ Member of the **POC** and reviewer of CIDU 2010 “Conference on Intelligent Data Understanding”, October 5-7 2010, San Francisco California, USA (<https://dashlink.arc.nasa.gov/group/cidu-2010/>);
- ✓ **SOC** member of the Cycle of workshops INAF “VO-Day in Tour”, EURO-VO AIDA (<http://www.as.oats.inaf.it/voday/>), 2009/2010;
- ✓ **POC** member of International Conference “CIFT/MEPP '96, New Trends in Fuzzy Systems”, Faculty of Architecture, 2<sup>th</sup> University of Napoli, Aversa (NA), October 1996;
- ✓ **LOC** member of the I Italian Conference “WILF '95, Workshop Italiano sulla Logica Fuzzy”, INAF-OAC Napoli, September 1995;



### CONFERENCES AND LECTURES

- ✓ **Invited lecture** “Astroinformatics, data mining and the future of astronomical research”, in collaboration with G. Longo, at ICFDT – 2nd International Conference on Frontiers in Diagnostic Technologies, LNF Frascati, Italy, November 28-30, 2011;
- ✓ **Invited lecture** “DAME: a web 2.0 technology based infrastructure for data exploration”, at AstroInformatics 2011 International Conference, Sorrento, Italy, September 25-29, 2011;
- ✓ **Invited lecture** “Mining Massive Data Sets in Data Rich Sciences”, at ICFDT - 1st International Conference on Frontiers in Diagnostic Technologies, LNF Frascati, Italy, November 25-27, 2009;
- ✓ **Lecture** “The VO Standards for Knowledge Discovery in Databases, The DAME Experience”, at IVOA Interop Meeting, Napoli, May 16, 2011
- ✓ **Lecture** “DAME: A Distributed Web Based Framework for Knowledge Discovery in Databases”, at 54th SAIT Congress "L'astronomia italiana: prospettive per la prossima decade", Astronomical Observatory of Capodimonte, Napoli, May 6, 2010;
- ✓ **Lecture** “DAME: A Distributed Data Mining & Exploration Framework within the Virtual Observatory”, at INGRID "Instrumenting the GRID" Workshop, Poznan, Poland, May 12-14, 2010;
- ✓ **Lecture** “DAME: Astrophysical Data Mining & Exploration on SCoPE GRID”, at Astronomy and Astrophysics Applications in Grids session of EGEE'09 (Uniting our strengths to realize a sustainable European GRID), Barcellona, Spain, September 24 2009;
- ✓ **Internal Lecture** “The VO-Neural/DAME infrastructure: an integrated data mining system for the e-science community”, INAF OACN Napoli, Apr. 2009;
- ✓ **Lecture** “The VO-Neural/DAME infrastructure: an integrated data mining system support for the e-science community”, Workshop finale dei Progetti Grid del PON "Ricerca" 2000-2006, Catania, February 2009;
- ✓ **Lecture** “Un possibile algoritmo di trigger per km<sup>3</sup> e minitorre”, NEMO Collaboration Meeting, LNS INFN, Catania 12-14 Febbraio 2007;
- ✓ **Lecture** “VST Tracking system: preliminary test results“, 50° Congresso Nazionale SAIT, , 29 Maggio – 01 Giugno 2006, Torino;
- ✓ **Internal Lecture** “Compendio di Intelligenza Artificiale” in “AstroMeeting”, 18 febbraio 2003 INAF-OAC Napoli;

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- ✓ **Lecture** “*The VST Telescope Control Software in the ESO VLT Environment*”, ICALEPCS 2001 “8<sup>th</sup> International Conference on Accelerator and Large Experimental Physics Control Systems”, San Jose, California (USA), November 27-30 2001;
- ✓ **Lecture** “*Integration of the VIMOS Control System*”, ICALEPCS 2001 “8<sup>th</sup> International Conference on Accelerator and Large Experimental Physics Control Systems”, San Jose, California (USA), November 27-30 2001;
- ✓ **Lecture** “*The Galileo Telescope Seeing Monitor: Technical Overview and First Results*”, SUCOSIP Workshop “Site Properties of the Canarian Observatories”, La Palma, Canary Islands Ottobre 1997;
- ✓ **Lecture** “*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;
- ✓ **Lecture** “*A Neural Network for the Detection of Astronomical Periodicities in Geologic Records*”, Int. Conf. on Artificial Neural Networks, ICANN '95, Parigi, Francia, Ottobre 1995;
- ✓ **Internal Lecture** “*Tecniche di Intelligenza Artificiale per la geofisica moderna*”, INAF-OAC Napoli, 20/09/1994;



### **SCIENTIFIC PUBLIC OUTREACH**

- ✓ Conference Lecture “*Brain and Cosmos, a parallel between two universes*”, in the Cycle of Conferences “Man, Universe and the frontiers of the knowledge: the Astronomy”, February 2001, Museum of Science and Technique, Foggia, Italy;
- ✓ Realization of a WEB application for the calculation and visualization of the body weight on all the Solar System objects, available on-line on the website and connected to an electronic balance in the Museum of Astrophysics of the INAF-OAC Napoli, since July 2003, <http://www.oacn.inaf.it/~brescia/virtual/index.html>;
- ✓ Cycle of Lectures “*Artificial Intelligence*” available on-line on the website of INAF-OAC Napoli, since 2003;
- ✓ Coordinator of the project “*The Astrophysics goes to school*”, for the activities of department of public outreach & education (POE) of the INAF-OAC, including a course of Science and Technologies in Astrophysics together with the realization of a newtonian 20cm telescope for education purposes October 2004 ([http://www.oacn.inaf.it/~brescia/TNC/sito\\_web/index.htm](http://www.oacn.inaf.it/~brescia/TNC/sito_web/index.htm));
- ✓ Conference Lecture “*The Observation of the Sky*”, in the Event “weeks of scientific culture”, organized by the Department of Science and Technology for the Environment of the University of Molise, March 2005, Isernia, Italy;
- ✓ Conference Lecture “*Technology in Astrophysics*”, in the project “Open Schools-ITG Della Porta: from school to territory”, organized by the Istituto Tecnico statale *Giambattista Della Porta* in collaboration with INAF-OAC Napoli, March 2007;
- ✓ Adjunct Teacher of formation courses on “Techniques in Observations and Astronomical Instrumentation”, for the project SPACECAR (A Mobile Astronomical Observatory), in collaboration with AUSER Basilicata, University Federico II of Napoli and INAF, Potenza, 2009;

## Scientific Production



### BOOKS and Contributions to Edited VOLUMES

- M1. “*Cervelli Artificiali – Macchine per simulare la mente*”, Brescia M., Collana Le Nuove Tessere, Editrice CUEN, Napoli, Maggio **1999**, ISBN 88 7146 470-2.
- M2. “*DAME: A distributed data mining and exploration framework within the Virtual Observatory*”, Brescia M., Cavuoti S., D’Abrusco R., Laurino O., Longo G., **2011**, in Remote Instrumentation for eScience and Related Aspects, F. Davoli et al. (eds.), Springer Science+Business Media, LLC 2011, DOI 10.1007/978-1-4614-0508-5\_17, also appeared as Proceedings of INGRID "Instrumenting the GRID" Workshop, Poznan, Poland, May 12-14, 2010.
- M3. “*New Trends in E-Science: Machine Learning and Knowledge Discovery in Databases*”, Brescia M., **2011**, invited contribution to the Volume “Horizons in Computer Science Research”, Thomas S. Clary (eds.), Series “Horizons in Computer Science”, Nova Science Publishers, ISBN: 978-1-61942-774-7.

### SCIENTIFIC PAPERS

- R1. “*Neural Net aided detection of astronomical periodicities in geologic records*”, Brescia M. et al., Earth and Planetary Science Letters, Elsevier Netherland, Vol. 139 / 1-2, pp. 33-45, Marzo **1996**, [1996E&PSL.139...33B](#)
- R2. “*Neural Net aided detection of astronomical periodicities in geologic records*”, Brescia M. et al., The Earth and Planetary Science Express, ISSN 0926-7514, Elsevier Netherland, Aprile **1996**.
- R3. “*Ground-Based Telescope Pointing and Tracking optimization using a neural controller*”, Mancini D., Brescia M., Schipani P. : Special Issue of Neural Networks, Pergamon, Elsevier Science Ltd., Vol. 16 Numbers 3-4, pp. 365-374, April-May **2003**, ISSN 0893-6080.
- R4. “*A Neural Tool for Ground-Based Telescope Tracking control*”, Brescia M., Mancini D., Schipani P. : AIAA NOTIZIE, periodico dell’Associazione Italiana per l’Intelligenza Artificiale, Anno XVI, N° 4, pp. 57-65, December **2003**.
- R5. “*Sensitivity of an underwater Cherenkov km<sup>3</sup> telescope to TeV neutrinos from galactic microquasars*”, Aiello S., Ambriola M., Ameli F., Amore I., Anghinolfi M., Anzalone A., Barbarino G., Barbarito E., Battaglieri M., Bellotti R., Beverini N., Bonori M., Bouhadeb B., Brescia M. et al. : Astroparticle Physics, Volume 28, Issue 1, p. 1-9, Elsevier Science Ltd., September **2007**, astro-ph/0608053 v1.

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- R6. "Deep seawater inherent optical properties in the Southern Ionian Sea", Riccobene G., Capone A., Aiello S., Ambriola M., Ameli F., Amore I., Anghinolfi M., Anzalone A., Avanzini C., Barbarino G., Battaglieri M., Bellotti R., Beverini N., Bonori M., Bouhadeb B., Brescia M. et al. : *Astroparticle Physics* (editor T.Stanev) Elsevier Science Ltd., Vol. 27 pag. 1-9, February **2007**, [10.1016/j.astropartphys.2006.08.006](http://dx.doi.org/10.1016/j.astropartphys.2006.08.006).
- R7. "Mining the SDSS archive I. Photometric redshifts in the nearby universe", D'Abrusco R., Staiano A., Longo G., Brescia M., Paolillo M., De Filippis E., Tagliaferri R., *The Astrophysical Journal*, Volume 663, Issue 2, pp. 752-764, July **2007**, [10.1086/518020](http://dx.doi.org/10.1086/518020).
- R8. "Nemo: a Project for a  $KM^3$  Underwater Detector for Astrophysical Neutrinos in the Mediterranean Sea", Amore, I.; Aiello, S.; Ambriola, M.; Ameli, F.; Anghinolfi, M.; Anzalone, A.; Barbarino, G.; Barbarito, E.; Battaglieri, M.; Bellotti, R.; Beverini, N.; Bonori, M.; Bouhadeb, B.; [Brescia, M.](#) et al., *International Journal of Modern Physics A*, Volume 22, Issue 21, pp. 3509-3520 (**2007**), World Scientific Publishing Company.
- R9. "Recent achievements of the NEMO project", Migneco E., Aiello,S., Aloisio,A., Ameli,F., Amore,I., Anghinolfi, M., Anzalone, A., Barbarino, G., Barbarito, E., Battaglieri, M., Bazzotti, M., Bellotti, R., Bersani, A., Beverini, N., Biagi, S., Bonori, M., Bouhadeb, B., Brescia, M. et al. (NEMO Collaboration), *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, Volume 588, Issue 1-2, p. 111-118. (**2008**), Elsevier.
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