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Curriculum Vitae

Personal information

Surname(s) / First name(s)	**Giuliani Donatella**
Address(es)	**42/b, Loc. Madonna Ponte, 61032, Fano (PU),Italy**
Telephone(s)	**Mobile: +39 339 5976298**
E-mail	giulianidonatella@libero.it
Nationality	Italian
Date of birth	28/09/1958
Gender	Female

Desired employment / Occupational field **Researcher in Image Analysis – Mathematical Models in Applied Science**

Work experience

Dates	Since 1992
Occupation or position held	Professor of Mathematics and Physics
Main activities and responsibilities	
Name and address of employer	Scientific Institute “G. Torelli” - Fano (PU)

Dates	From 1/2/1988 to 17/9/1992
Occupation or position held	Software Analyst and Developer for GIS
Main activities and responsibilities	Models Analysis in Cartographic and Photogrammetric Data
Name and address of employer	Ecobit Spa – Via degli Abeti – Pesaro – Italy

Dates	From 2/1/1984 to 31/12/1987
Occupation or position held	Software Analyst for Geoseismic Data
Main activities and responsibilities	Research Activity in Geoseismic Models
Name and address of employer	Aquater Spa, Geological Society (ENI Group) – S. Lorenzo in Campo (PU) - Italy
Type of business or sector	Microseismicity in Geothermical Areas

Education and training

Dates	2013/2015
Title of qualification awarded	**Master in “Trainer for the Teaching of Mathematics”**
Principal subjects/occupational skills covered	Analysis of methodologies and set of problems in teaching Maths (Tutor Prof.Bolondi Giorgio)
Name and type of organisation providing education and training	Department of Mathematics – University of Bologna – Italy
Dates	14/07/2009

Title of qualification awarded	**Philosophical Doctorate (PhD) in Mathematics and Statistics in Computational Sciences (MaSSC)**
Principal subjects/occupational skills covered	Computational Methods in Neuroimaging: Applications to DTI and Morphology Tutor: Prof. Naldi Giovanni
Name and type of organisation providing education and training	Department of Mathematics “Federigo Enriques” – University of Milan – Italy
Dates	2001/2002
Title of qualification awarded	**Master in “Methodologies of e-learning”**
Principal subjects/occupational skills covered	Methodologies of e-learning for teaching
Name and type of organisation providing education and training	Department of Education Science – University of Florence - Italy
Dates	13/04/2000
Title of qualification awarded	**Degree in Mathematics (with marks 106/110)**
Principal subjects/occupational skills covered	Geometry of Biological Structures – Models of biological growth using non-Euclidean geometry Tutor:Prof. Piergallini Riccardo
Name and type of organisation providing education and training	Department of Mathematics – University of Camerino (MC) – Italy
Dates	1982/1983
Title of qualification awarded	**Master in “Theory and Applications of Computational Machines”**
Principal subjects/occupational skills covered	Mathematical Models with numerical resolutions
Name and type of organisation providing education and training	Department of Mathematics – University of Bologna – Italy
Dates	28/10/1982
Title of qualification awarded	**Degree in Physics (with marks 110/110 cum laude)**
Principal subjects/occupational skills covered	Seismology – Numerical Models of Tsunami propagations Tutor: Prof. Boschi Enzo
Name and type of organisation providing education and training	Department of Physics – University of Bologna – Italy

Personal skills and competences

Mother tongue(s) **Specify mother tongue** Italian

Other language(s)						
Self-assessment	**Understanding**			**Speaking**		**Writing**
European level (*)	Listening		Reading	Spoken interaction	Spoken production	
Language	English	C1	C1	B2	B2	C1
Language						

Social skills and competences	Good interpersonal and communication skills Conciliatory nature but caracterized by a good level of perseverance and determination
Organisational skills and competences	Ability to present and lead discussions on topics Good organizational skills and high degree of personal autonomy
Technical skills and competences	Skills in modeling complex systems by using an analytical approach or numerical methods as well software packages, specifically MATLAB, MATHEMATICA, an secondly JAVA. Skills in Numerical Analysis and Image Analysis with application of Computational Geometry
Computer skills and competences	Course attendance in Computational Geometry, Image Analysis and Algorithmic Inference. PhD Thesis in “Neuroimaging: Applications to DTI and Morphology”, with application to DTI and TBSS methods Experience as Analyst and Software Developer in Fortran, C, MATHEMATICA, MATLAB and JAVA
Artistic skills and competences	High interest in art and literature
Additional information	Include here any other information that may be relevant, for example contact persons, references, etc. Prof. Carfagna Elisabetta, Full Professor of Statistics, University of Bologna Prof. Giombi Samuele, Dean of Scientific Institute “Torelli G.” Fano – Italy Prof. Bolondi Giorgio, Full Professor of Complemetary Mathematics Univ of Bologna Prof. Naldi Giovanni, Full Professor of Numerical Analysis, University of Milan

List of Education and Training Activities

-Adjunct Professor in Statistics for Course of Survey Sampling, School of Economics, Management and Statistics, University of Bologna, 2017-2018
-Adjunct Professor in Statistics for Course of Survey Sampling, School of Economics, Management and Statistics, University of Bologna, 2016-2017
-Adjunct Professor in Statistics for Degree Course in Economics and Management, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2015-2016
-Adjunct Professor in Statistics for Degree Course in Economics and Management, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2014-2015
-Adjunct Professor in Statistics for Degree Course in Economics and Management, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2013-2014
-Course on "Introduction of Statistical Methodologies" for the Degree Program on Rule of Law for Development, at the School of Law of Loyola University of Chicago (Rome), 2013
-Adjunct Professor in Statistics for Degree Course in Economics and Management, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2012-2013
-Adjunct Professor in Statistics for Degree Course in Economics and Management of Tourism, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2011-2012
-Adjunct Professor in Statistics for Degree Course in Economics and Management of Tourism, and for Degree Course in Economics and Administration's Business, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2010-2011
-Adjunct Professor in Mathematics for Degree Course of Science Forestry and Environment, Faculty of Agriculture, Polytechnic University of Marche, 2009-2010
-Adjunct Professor in Statistics for Touristic Applications for Degree Course in Economics and Management of Tourism, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2009-2010
-Adjunct Professor in Statistics for Degree Course in Economics and Management of Tourism, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2008-2009
-Adjunct Professor in Statistics for Degree Course in Economics and Business Management, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2008-2009
-Adjunct Professor in Computational Mathematics, Degree Course in Mathematics and Applied Mathematics, Facolty of Science MM.FF.NN., University of Milan, 2007-2008
-Collaboration in the Research Project "Economics, Computer Science and Statistics for a Decision Support System for Sustainable Development Planning" on "Use and development of Algorithmic Inference methods and numerical simulations for possible alternative scenarios", *Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2008*
-Tutor of Statistics for Degree Course in Economics and Management, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2007-2008
-Tutor of Statistics for Degree Course in Economics and Management, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2006-2007
-Speaker in minisymposium "*Gaussian Curvature: a growth parameter for biological structures*" , XII International Congress on Computational and Applied Mathematics (ICCAM 2006), Leuven, Belgium (2006)
-Tutor of Statistics for Degree Course in Economics and Management, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2005-2006
-Adjunct Professor in Statistics for Degree Course in Economics and Management, Faculty of Economy, Scientific-Didactic Polo of Rimini, University of Bologna, 2003-2004
-Tutor of Phisics for Degree Course in Engineering and Production Logistics, Faculty of Engineering, University of Ancona, 2000-2001
-Teacher trainer for Course TIC A (I level) for the Training Plan on Information Technology and Communication, MIUR, 2002-2003
-Training course for teachers in Computer Science (I level), Branca Institute, Pesaro, May-June 1996

List of Publications

1. "A Grayscale Segmentation Approach using the Firefly Algorithm and the Gaussian Mixture Model", Giuliani D, International Journal of Swarm Intelligence Research, Vol. 9, Issue 1, Ed. IGI Global (2017)
2. "A Robust Skeletonization Method for Topological Complex Shapes", Giuliani D., International Journal of Computer Vision and Image Processing, Vol. 7, Issue1, pp 1-1\8, Ed. IGI Global, (2017).
3. "Considerations about the Teaching of Logarithms", Giuliani D., Teaching of Mathematics and Integrated Science, CRDM,2016

4. "Skeletonization of edges extracted by natural images: a novel approach for shape representation", Giuliani D., Computer Vision and Pattern Recognition in Environmental Informatics, Ed. IGI Global,2015
5. "*Skeleton-based analysis of butterflies derived by coloured images", ICPR14, Stockholm,2014*
6. "Skeletonization using the Divergence of an Anisotropic Vector Field Flow", Giuliani D., IEEE Proc. Conf. on Applied Imagery and Pattern Recognition,2013
7. "Edge Extraction with an Anisotropic Vector Field using Divergence Map", Giuliani D., International Journal of Image Processing (IJIP), Volume 6, Issue 4, pp. 255-272, 2012.
8. "Edge Detection from MRI and DTI Images with an Anisotropic Vector Field Flow using Divergence Map", Giuliani D., on Algorithms, Special Issues "Machine Learning for Medical Imaging 2012", Vol.5 Issue 4, pp. 636-653,,2012.
9. "Comparison of biological shapes using extracted edges analysed with polynomial Hermite interpolation", Giuliani D., *Modern Applied Science*, Canadian Center of Science and Education, Vol. 4, No. 4, April, 2010
10. **"**A new statistical approach for the analysis of multi-subjects Diffusion Tensor Imaging: an application to Alzheimer's disease", Giuliani D., Naldi G.,Pievani M.,Frisoni GB, Proceedings of ECS10, 22-26 June 2009
11. "The description of biological growth using Spline Hermite Interpolation", Giuliani D., Poster in the Section *Applications of Mathematics in the Sciences*, 5ª European Conference of Mathematics, Amsterdam, 14-18 July 2008.
12. "Simultaneous Optimization for Two Stage Area Sampling ", E. Carfagna, A. Carfagna, D. Giuliani, Proc. of XLIV Conference of Italian Society Statistics, Università della Calabria, 25-27 June 2008.
13. "Rappresentazione grafica di curve – Parte I", Giuliani D., *Didattica delle Scienze e Informatica nella Scuola*" Ed. La Scuola (Brescia), N. 257, Ottobre 2008
14. "Rappresentazione grafica di curve:come arrotondare le figure – Parte II", Giuliani D., *Didattica delle Scienze e Informatica nella Scuola*, Ed. La Scuola (Brescia), N. 258, November 2008
15. "Gaussian Curvature: a growth parameter for biological structures", Giuliani D., *Mathematical and Computer Modelling*, 42 (2005), pp. 1375-1384,Pergamon Press, Elsevier Science Ltd
16. "La natura conosce la matematica ? Un modello di crescita per strutture biologiche", Giuliani D., *Archimede,* Anno LV, N. 2 (2003)
17. "Seismicity to the west of the Pozzuoli Gulf: behaviour of an area situated on the boundaries of a bradyseismic zone" Proceedings of the International Symposium on Engineering Geology Problems in Seismic Areas, 1986, Vol I, pag 223-237
18. "The Messina straits Tsunami of December 28, 1908: a critical review of experimental Data", Tinti S, Giuliani D., *Il Nuovo Cimento*, vol 6C N. 4 (1983)
19. "The Messina straits Tsunami of December 28, 1908: an analytical model", Tinti S, Giuliani D., *Annales Geophysicae*, vol 1 N. 6 (1983)

List of Presentations

-Presenter of *"A Segmentation Method for Grayscale Images Based on the Firefly Algorithm and the Gaussian Mixture Model",* 20th Intern. Conf. on Metaheuristics, Copenhagen, 11-12 June, 2018
-Presenter of *"Contour and Skeleton-based Analysis of Biological Shapes: A New Approach Derived by the Flow of Divergence",* Fourth International Symposium of Biological Shape Analysis,University of California, Los Angeles*, 19-22 June,2015*
-Presenter of "*Skeleton-based analysis of butterflies derived by coloured images",ICPR14, Stockholm, 24-28 August,2014*
-Presenter of "*Skeletonization using the divergence of an anisotropic vector field flow",*IEEE Applied Imagery Pattern Recognition Workshop 2013, Washington DC October 23-25, 2013
-Presenter of "*A new statistical approach for the analysis of multi-subjects diffusion tensor images: an application to Alzheimer's disease",* Giuliani D., Frisoni G., Naldi G., Pievani M., ECS10, Università degli Studi Milano, June 22-26,2009
-Presenter of "*Diffusion tensor Imaging and its applications to basic neuroscience research and neuroimaging",* Giuliani D., Frisoni G., Naldi G., Pievani M., ECMI, Università degli Studi Milano, 28-29 April, 2008
- Presenter of "*Gaussian Curvature: a growth parameter for biological structures*" , XII International Congress on Computational and Applied Mathematics (ICCAM 2006), Leuven, Belgio (2006)