

# Di Blasi Gianpiero



## Personal Information

- Date of birth: April 20th, 1976
- Place of birth: Milan, Italy
- Marital Status: Single
- Nationality: Italian

## Education

- Diploma of engineer with specialization in computer science, obtained in A.Y. 1993/1994 with the final mark of 58/60 at the I.T.I.S. Vittorio Emanuele III of Palermo, Italy
- Degree in Maths with specialization in computer science obtained on July 22th, 1999 with the final mark of 110/110 with honours (mention for the Gugino prize) at the University of Palermo. The title of the thesis is: *Genetic Algorithms and their applications to the cover problem of binary images*; supervisor Prof. Vito Di Gesù
- Ph.D. in Computer Science obtained on March 17th, 2006 at the University of Catania. *The title of the thesis is: Fast Techniques for Non Photorealistic Rendering*; supervisor Prof. Giovanni Gallo

## Professional skills and competences

- Knowledge of the Windows, MacOS X and GNU/Linux-based operating systems
- Excellent knowledge of the Java language
- Good knowledge of the JavaFX language
- Good knowledge of the Java3D and Java Advanced Imaging libraries
- Knowledge of the Java Media Framework and QuickTime for Java libraries
- Good knowledge of the J2ME framework, of the MIDP profile and of the Mobile3D library
- Basic knowledge of the JADE (Java Agent DEvelopment) framework for the development of multi agent systems
- Basic knowledge of the J2EE framework
- Excellent knowledge of the JBuilder and NetBeans development environments
- Good knowledge of the XCode development environment
- Good knowledge of the Matlab development environment
- Basic knowledge of the Pascal, Visual Basic and C/C++ languages
- Good knowledge of the Microsoft Office suite and of the VBA language
- Good knowledge of the OpenOffice.org and NeoOffice/J suites
- Good knowledge of the Adobe Photoshop, Jasc PaintShopPro, TheGIMP and Inkscape software
- Knowledge of the SQL language and of the relational databases
- Knowledge of the XML, SVG, VRML, X3D and UML languages
- Good reading/writing skill for English language, adequate knowledge of spoken English

## Work experience

- Office-worker at the C.I.T.E.G.A. (Consorzio per l'Innovazione Tecnologica E Gestionale Avanzata) of Palermo, Italy, from the 02/02/2000 to the 03/31/2000, position held: tutor
- Office-worker at the Sintel S.r.l. of Palermo, Italy, from the 04/03/2000 to the 06/08/2001, position held: programmer's apprentice
- Office-worker at the Gesoft S.r.l. of Palermo, Italy, from the 06/18/2001 to the 12/31/2002, position held: programmer/ systems analyst
- Ph.D. student in Computer Science (XVIII cycle) at the Department of Maths and Computer Science of the University of Catania from the 03/01/2003 to the 10/31/2005
- Post Doctoral Associate at the Department of Linguistics at the University of Calabria from the 11/01/2005 to the 10/31/2007
- Post Doctoral Associate at the Department of Computer Engineering at the University of Palermo from the 01/03/2009 to the 31/10/2009

## Current Occupation

- Post Doctoral Associate at the Department of Computer Engineering at the University of Palermo from the 01/11/2009

## Professional Experiences

- **Teaching**
  1. Teaching for courses of European education, position held: teacher of Visual Basic
  2. Teaching for courses Gesoft of computer science, position held: teacher of Object Oriented Programming and Java language
  3. Assistance activity for the courses of *Interaction & Multimedia*, *Human-Computer Interaction*, *Computer Graphics* and *Pattern Recognition* for the degree in Computer Science at the Department of Maths and

Computer Science of the University of Catania (A.Y. 2002/2003, 2003/2004, 2004/2005); this activity includes also some seminars such as:

- a. cycle of 4 seminars on loading, saving, processing and enhancement of digital images using the Java language
  - b. cycle of 1 seminar on JBuilder
  - c. cycle of 8 seminars on the Java3D API
  - d. cycle of 1 seminar on the Markov Chains, HMM and segmentation of digital images
4. Assistance activity for practical training and final thesis and of co-examiner for the degree in Computer Science at the Department of Maths and Computer Science of the University of Catania above all in the fields of digital image processing and Computer Graphics
  5. Workshops for the A.S.I.C. (Associazione Studentesca degli Informatici Catanesi)
  6. Employment contract as teacher for the course of *Computer Science for Graphics* for the Academic Diploma of Fine Arts in Catania (AA.YY. 2004/2005, 2005/2006, 2006/2007, 2007/2008)
  7. Teacher for the course *Object Oriented Programming with Java* at the I.T.I.S. G. Marconi of Catania, refresher course only for Teachers (A.Y. 2004/2005)
  8. Winner of a grant for the promotion of the tutorial activities for the A.Y. 2004/2005 for the degree in Computer Science at the Department of Maths and Computer Science of the University of Catania
  9. Employment contract as teacher for the course of *Human-Computer Interaction Laboratory* for the degree in Computer Science at the Department of Maths and Computer Science of the University of Catania (A.Y. 2005/2006)
  10. Cycle of 12 seminars on the Java3D API for the course of *Computer Graphics* for the degree in Computer Science at the Department of Maths and Computer Science of the University of Catania (AA.YY. 2005/2006, 2007/2008)
  11. Cycle of 12 seminars for the course of *Introduction to the Microprogramming in J2ME* for the degree in Computer Science at the Department of Maths and Computer Science of the University of Catania (A.Y. 2005/2006)
  12. Seminars for the course of *Human-Computer Interaction Laboratory* for the degree in Computer Science at the Department of Maths and Computer Science of the University of Catania (A.Y. 2006/2007)
  13. Employment contract as teacher for the course of *Computer Graphics* for the degree in Computer Science at the Department of Maths and Computer Science of the University of Catania (A.Y. 2006/2007)
  14. Employment contract as teacher for the course of *Introduction to the Microprogramming in J2ME* for the degree in Computer Science at the Department of Maths and Computer Science of the University of Catania (AA.YY. 2006/2007, 2007/2008)
  15. Tutorial with the title "Introduction to Java3D" presented in the conference Eurographics Italian Chapter 2006 in Catania in February 2006
- **Software Development**
    1. Development of a visual query generator for the AS/400 databases, with an ad-hoc plug-in for the query generation for the database of the IBM Italy ACG software
    2. Development of a software for the electronic registry and for the document management for the Italian public government
    3. Development of a Java applet for the self on line evaluation of the mathematics skills for the homepage of the Department of Maths and Computer Science of the University of Catania
    4. Development of a Java applet for the self on line evaluation of the computer science skills for the homepage of the Department of Maths and Computer Science of the University of Catania
    5. Development of a software for the visualization and browsing in a three-dimensional environment of the Caltagirone "Lighted Staircase". The software was been developed in collaboration with Miss. Valentina Campisi and has won several awards
    6. Development of a professional software for digital images processing and enhancement, pictorial graphics and artistic rendering
    7. Supervisor of the Mu.S.E.3D project for the A.S.I.C. (Associazione Studentesca degli Informatici Catanesi) for the development of a 3D engine for the diffusion of the cultural heritage
    8. Development of a 3D facial animation system and speech synchronization with an audio file for the "Virtual Museum Net" project for the Department of Linguistics of the University of Calabria
    9. Development of several third parties business frameworks
  - **Miscellany**
    1. Since September 2005 it has been initialed a collaboration contract, currently existent, between the Department of Maths and Computer Science of the University of Catania and the MagicMosaics (Canada), [www.magicmosaics.com](http://www.magicmosaics.com), in order to use the software that implements an algorithm of creation of digital mosaics based on the PIM (Puzzle Image Mosaic) technique

#### **Participation to Meetings and Schools**

- Fifteenth International School for Computer Science Researchers on "Algorithmics for Data Mining and Pattern Discovery" (D.M.I. – University of Catania), Lipari (ME), Italy, 07/13-07/26 2003

- Eurographics Italian Chapter 2003, Milan, Italy, September 2003
- Third Summer School on “Scientific Visualization and 3D Interactive Graphics” (CINECA – Settore Sistemi ad Alte Prestazioni), Casalecchio di Reno (BO), Italy, 09/22-10/03 2003
- School “The Vision of Machines 2004” (GIRPR – Gruppo Italiano Ricercatori in Pattern Recognition), Povo (TN), Italy, 11/08-11/12 2004
- ACM/WSCG2005 (Winter School on Computer Graphics), Plzen, Czech Republic, January 2005
- Eurographics Workshop on Computational Aesthetics 2005, Girona, Spain, May 2005
- EMPG2005 (European Mathematical Psychology Group Meeting), Padova, Italy, September 2005
- Eurographics Italian Chapter 2006, Catania, Italy, February 2006
- Eurographics Italian Chapter 2007, Trento, Italy, February 2007
- CMMSE2009 (International Conference Computational and Mathematical Methods in Science and Engineering), Gijon, Spain, June 2009
- DWCAA2009 (Dolomites Workshop on Constructive Approximation and Applications), Alba di Canazei, Trento, Italy, September 2009

## References

- Prof. Giovanni Gallo
  - Full Professor of Computer Science at the Department of Maths and Computer Science of the University of Catania
  - Ex-President of the Struttura Didattica Aggregata in Computer Science at the Department of Maths and Computer Science of the University of Catania
- Ph. D. Sebastiano Battiato
  - Researcher in Computer Science at the Department of Maths and Computer Science of the University of Catania
- Prof. Pietro Pantano
  - Full Professor of Mathematical Physics at the Department of Maths of the University of Calabria
  - Director of ESG – Evolutionary System Group of the University of Calabria
- Prof. Adele Tortorici
  - Associated Professor of Numerical Analysis at the Department of Computer Engineering at the University of Palermo
- Prof. Elisa Francomano
  - Associated Professor of Numerical Analysis at the Department of Computer Engineering at the University of Palermo
- Elena Toscano
  - Researcher in Numerical Analysis at the Department of Computer Engineering at the University of Palermo

## Publications

- **Journals**
  1. Di Blasi G., Francomano E., Tortorici A., Toscano E., 2010. *Exploiting Numerical Behaviors in SPH*. *Journal of Mathematical Chemistry* (in press)
  2. Battiato S., Di Blasi G., Farinella G.M., Gallo G., Guarnera G.C., 2007. *Adaptive techniques For Microarray Image Analysis with related quality assessment*. *Journal of Electronic Imaging*, Volume 16, Issue 4, October-December 2007
  3. Battiato S., Di Blasi G., Farinella G.M., Gallo G., 2007. *Digital Mosaic Frameworks - an overview*. *Computer Graphics Forum*, Volume 26, Issue 4, pp. 794-812, December 2007
  4. Battiato S., Di Blasi G., Reforgiato Recupero D., 2007. *Advanced Indexing Schema for Imaging Applications: Three-Case Studies*. *IET Image Processing*, Volume 1, Issue 3, pp. 249-268, September 2007
  5. Bilotta E., Di Blasi G., Pantano P., Stranges F., 2007. *A gallery of Chua's Attractors - Part VI*. *International Journal of Bifurcation and Chaos*, Volume 17, Issue 6, pp. 1801-1910, June 2007
  6. Bilotta E., Di Blasi G., Pantano P., Stranges F., 2007. *A gallery of Chua's Attractors - Part V*. *International Journal of Bifurcation and Chaos*, Volume 17, Issue 5, pp. 1383-1511, May 2007
  7. Bilotta E., Di Blasi G., Pantano P., Stranges F., 2007. *A gallery of Chua's Attractors - Part IV*. *International Journal of Bifurcation and Chaos*, Volume 17, Issue 4, pp. 1017-1077, April 2007
  8. Battiato S., Di Blasi G., Gallo G., Ingrà E., Messina G., 2005. *Automatic Conversion Technique from Data Dependent Triangulation to SVG B-Splines*. *IS&T/SPIE Electronic Imaging Newsletter*, Volume 16, Number 2, pag. 4, November 2005
  9. Di Blasi G., Gallo G., 2005. *Artificial Mosaic*. *The Visual Computer*, Volume 21, Issue 6, pp. 373-383, July 2005
- **Books or Chapters of book**
  1. Battiato S., Di Blasi G., Gallo G., Puglisi G., 2010. *Digital Reproduction of Ancient Mosaics*. In F. Stanco, S. Battiato, G. Gallo (Eds) *Digital Imaging for Cultural Heritage Preservation: Analysis, Restoration and Reconstruction of Ancient Artworks*, CRC Press/Taylor & Francis - Digital Imaging and Computer Vision Book series (in press)

2. Bilotta E., Di Blasi G., Giambò S., Pantano P., 2007. *Generating Multi State Cellular Automata by using Chua's "Universal Neuron"*. In T. Ruggeri, M. Sammartino (Eds) *Asymptotic Methods in Non Linear Wave Phenomena*, World Scientific, pp.12-23

- **Conferences**

1. Di Blasi G., Francomano E., Tortorici A., Toscano E., 2009. *A Meshless Method for Image Reconstruction*. In proceedings of *DWCAA2009* (Dolomites Workshop on Constructive Approximation and Applications), Alba di Canazei, Trento, Italy, September 2009, pag. 107
2. Di Blasi G., Francomano E., Tortorici A., Toscano E., 2009. *On the Consistency Restoring in SPH*. In proceedings of *CMMSE2009* (International Conference Computational and Mathematical Methods in Science and Engineering), Gijon, Spain, June 2009
3. Battiato S., Di Blasi G., Gallo G., Guarnera G.C., Puglisi G., 2008. *A Novel Artificial Mosaic Generation Technique Driven by Local Gradient Analysis*. In proceedings of *ICCS2008/CGGM2008* (International Conference on Computational Science, Seventh International Workshop on Computer Graphics and Geometric Modeling), Crakov, Poland, June 2008 (*Lecture Notes in Computer Science*, Volume 5102, pp. 76-85)
4. Battiato S., Di Blasi G., Gallo G., Guarnera G.C., Puglisi G., 2008. *Artificial Mosaics by Gradient Vector Flow*. In proceedings of *Eurographics2008*, Hersonissos, Greece, April 2008
5. Battiato S., Di Blasi G., Gallo G., Milone A., 2008. *Realizzazione di Mosaici Artificiali in Ambiente 3D*. Negli atti del *V Convegno AIAR* (Associazione Italiana di Archeometria), Siracusa, Italia, Febbraio 2008
6. Battiato S., Cariolo S., Di Blasi G., Gallo G., 2007. *Image Enhancement by Region Detection on CFA Data Images*. In proceedings of *VISAPP2007* (International Conference on Computer Vision Theory and Applications), Barcellona, Spain, March 2007
7. Battiato S., Di Blasi G., Gallo G. Patti S., 2007. *Ramses: a Visual Steganographic System*. In proceedings of *Eurographics Italian Chapter 2007*, Trento, Italy, February 2007, pp. 59-64
8. Bertacchini P.A., Bilotta E., Pantano P., Battiato S., Cronin M., Di Blasi G., Talarico A., Tavernise A., 2007. *Modelling and Animation of Theatrical Greek Masks in an Authoring System*. In proceedings of *Eurographics Italian Chapter 2007*, Trento, Italy, February 2007, pp. 191-198
9. Battiato S., Di Blasi G., Farinella G.M., Gallo G., Impoco G., 2006. *Medical Imaging Applications: Three Case Studies*. In proceedings of *CISI2006* (Conferenza Italiana Sistemi Intelligenti), Ancona, Italy, September 2006
10. Bertacchini P.A., Bilotta E., Di Bianco E., Di Blasi G., Pantano P., 2006. *Virtual Museum Net*. In proceedings of *Edutainment 2006* (International Conference on E-learning and Games), Hangzhou, China, April 2006 (*Lecture Notes in Computer Science*, Volume 3942, pp. 1321-1330)
11. Battiato S., Di Blasi G., Farinella G.M., Gallo G., 2006. *A Survey of Digital Mosaic Techniques*. In proceedings of *Eurographics Italian Chapter 2006*, Catania, Italy, February 2006, pp. 129-136
12. Di Blasi G., Gallo G., Petralia M., 2006. *Smart Ideas for Photomosaic Rendering*. In proceedings of *Eurographics Italian Chapter 2006*, Catania, Italy, February 2006, pp. 267-274
13. Campisi V., Di Blasi G., Gallo G., 2006. *Tradition and Virtuality: The Caltagirone Staircase*. In proceedings of *Eurographics Italian Chapter 2006*, Catania, Italy, February 2006, pp. 159-164
14. Battiato S., Di Blasi G., Farinella G.M., Gallo G., 2006. *A Novel Technique for Opus Vermiculatum Mosaic Rendering*. In proceedings of *ACM/WSCG2006* (Winter School on Computer Graphics), Plzen, Czech Republic, January 2006
15. Battiato S., Di Blasi G., Gallo G., Ingrà E., Messina G., 2006. *Bezier Curves Approximation of Triangularized Surfaces using SVG*. In proceedings of *IS&T/SPIE Electronic Imaging 2006*, San Josè, USA, January 2006
16. Battiato S., Di Blasi G., Farinella G.M., Gallo G., Guarnera G.C., 2006. *Ad-Hoc Segmentation Pipeline for Microarray Image Analysis*. In proceedings of *IS&T/SPIE Electronic Imaging 2006*, San Josè, USA, January 2006
17. Battiato S., Bertacchini P.A., Bilotta E., Di Blasi G., Gallo G., Pantano P., 2005. *3D Facial Animation for Virtual Theatre*. In proceedings of *EMPG2005* (European Mathematical Psychology Group Meeting), Padova, Italy, September 2005
18. Battiato S., Bosco C., Bruna A., Di Blasi G., Gallo G., 2005. *Statistical Modeling of Huffman Tables Coding*. In proceedings of *ICIAP2005* (International Conference on Image Analysis and Processing), Cagliari, Italy, September 2005 (*Lecture Notes in Computer Science*, Volume 3617, pp. 711-716)
19. Di Blasi G., Gallo G., Petralia M., 2005. *Puzzle Image Mosaic*. In proceedings of *IASTED/VIIP2005* (International Conference on Visualization, Imaging & Image Processing), Benidorm, Spain, September 2005
20. Battiato S., Di Blasi G., Gallo G., Messina E., 2005. *Firemark: a Java Tool for SVG Watermarking*. In proceedings of *SVGOpen2005*, Enschede, The Netherlands, August 2005
21. Battiato S., Di Blasi G., Gallo G., Greco S., 2005. *ThemeMountain: a SVG-based Visual Data Mining Tool*. In proceedings of *SVGOpen2005*, Enschede, The Netherlands, August 2005
22. Battiato S., Di Blasi G., Gallo G., Messina G., Nicotra S., 2005. *SVG Rendering for Internet Imaging*. In proceedings of *IEEE/CAMP2005* (International Workshop on Computer Architecture for Machine Perception), Palermo, Italy, July 2005

23. Cariolo S., Di Blasi G., Mazzeo V., Patti S., 2005. *Mu.S.E.3D: un sistema multimediale per ambienti tridimensionali per la valorizzazione dei beni culturali*. Negli atti del Convegno "Matematica, Arte e Industria Culturale", Cosenza, Italia, Maggio 2005
24. Di Blasi G., Gallo G., 2005. *Mosaici Artificiali*. Negli atti del Convegno "Matematica, Arte e Industria Culturale", Cosenza, Italia, Maggio 2005
25. Di Blasi G., Gallo G., Petralia M., 2005. *Fast Techniques for Mosaic Rendering*. In proceedings of *Eurographics Workshop on Computational Aesthetics 2005*, Girona, Spain, May 2005, pp. 29-39
26. Di Blasi G., Petralia M., 2005. *Fast Photomosaic*. In poster proceedings of *ACM/WSCG2005 (Winter School on Computer Graphics)*, Plzen, Czech Republic, January 2005
27. Battiato S., Di Blasi G., Gallo G., Messina G., Nicotra S., 2005. *Advanced SVG Rendering of Digital Images*. In poster proceedings of *ACM/WSCG2005 (Winter School on Computer Graphics)*, Plzen, Czech Republic, January 2005
28. Battiato S., Costanzo A., Di Blasi G., Gallo G., Nicotra S., 2005. *SVG Rendering by Watershed Decomposition*. In proceedings of *IS&T/SPIE Electronic Imaging 2005*, San José, USA, January 2005
29. Battiato S., Barbera G., Di Blasi G., Gallo G., Messina G., 2005. *Advanced SVG Triangulation/Polygonalization of Digital Images*. In proceedings of *IS&T/SPIE Electronic Imaging 2005*, San José, USA, January 2005
30. Battiato S., Di Blasi G., Gallo G., Lo Giuoco A., Madonia M., Nicotra S., Stanco F., 2004. *Digital Image Analysis and Enhancement*. In proceedings of *GIRPR2004 (Gruppo Italiano di Ricercatori in Pattern Recognition)*, Perugia, Italy, September 2004
31. Di Blasi G., Reforgiato Recupero D., 2003. *Fast Colorization of Gray Images*. In proceedings of *Eurographics Italian Chapter 2003*, Milan, Italy, September 2003
32. Di Blasi G., Gallo G., 2003. *Autovalutazione on-line delle competenze matematiche*, negli atti del Convegno Nazionale "Apprendere la matematica con le tecnologie", Siracusa, Italia, Maggio 2003, pp. 29-37

#### **Technical Reports**

1. Di Blasi G., Francomano E., Pilato G., Tortorici A., Toscano E., 2009. *Consistency Restoring in SPH for Trigonometric Functions Approximation*, Technical Report RT-ICAR-PA-09-01, Istituto di CALcolo e Reti ad alte prestazioni, Consiglio Nazionale delle Ricerche, March 2009
2. Battiato S., Di Blasi G., Gallo G., Toro S., 2006. *BLAZE: Bilinear LAZA Algorithm for Zooming Enhancement*
3. Battiato S., Cariolo S., Di Blasi G., Gallo G., 2006. *Region Analysis and Detection on CFA Data Images*
4. Battiato S., Bosco C., Di Blasi G., Farinella G.M., Gallo G., 2006. *Huffman Modeling for DCT Based Coding*