

Curriculum Vitae et Studiorum

Sebastiano Battiato

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Status: Married (since 1999). He has 2 daughters.

Short Biography

Sebastiano Battiato was born in Catania, Italy, in 1972. He received the degree in Computer Science (summa cum laude) in 1995 at Catania University and his Ph.D in Computer Science and Applied Mathematics in 1999 in Naples. From 1999 to 2003 he has led the “Imaging” team c/o STMicroelectronics in Catania. Since 2004 he works as a Researcher at Department of Mathematics and Computer Science of the University of Catania. His research interests include image enhancement and processing, image coding and camera imaging technology. He published more than 90 papers in international journals, conference proceedings and book chapters. He is co-inventor of about 15 international patents. He is reviewer for several international journals and he has been regularly a member of numerous international conference committees. He has participated in many international and national research projects. He is an Associate Editor of the SPIE Journal of Electronic Imaging (Specialty: digital photography and image compression). He is a director of ICVSS (International Computer Vision Summer School). He is a Senior Member of the IEEE.

Professional Activities and Management

Teaching

- **Multimedia** - University of Catania- A.A. 2004/2005, A.A.2005/2006, A.A. 2006/2007, A.A. 2007/2008, A.A. 2008/2009, A.A. 2009/2010.
- **Computer Vision** - University of Catania - A.A. 2006/2007, A.A. 2007/2008, A.A. 2008/2009, A.A. 2009/2010.
- **Video Processing** - University of Catania - A.A. 2005/2006;
- **Web Programming** - University of Catania- A.A.2005/2006; A.A. 2006/2007.
- **Analisi, progettazioni e simulazioni didattiche di Informatica IV** – University of Catania - A.A. 2000/2001;
- **Programmazione 1** - University of Catania - A.A. 2001/2002;
- **Programmazione 2** - University of Catania - A.A. 2003/2004, A.A. 2004/2005, A.A. 2005/2006
- **Analisi, progettazioni e simulazioni didattiche di Informatica I** – University of Catania - A.A. 2002/2003;
- **Multimedialità e Didattica** - University of Catania- A.A. 2003/2004, A.A. 2004/2005, A.A.2005/2006;

Tutorship

- Advisor of more than 50 Master's Thesis – Computer Science - University of Catania
- Scientific Advisor of Dr. Filippo Stanco (December 2005 – September 2006) Post Doc position on Digital Image Restoration;
- Scientific advisor of Ing. Giovanni Puglisi (Ph.D in Computer Science). Main reseach topic: Video Stabilization.
- Scientific advisor of Ing. Francesco Rundo (Ph.D. in Applied Mathematics). Main research topic: Soft Computing.
- Scientific Advisor of Rosetta Rizzo and Tony Meccio (Ph.D student in Computer Science). Main topic: Image Generation Pipeline for Mobile Imaging Devices.
- Scientific Advisor of Giuseppe Messina (Ph.D student in Computer Science). Main topic: Image Forensics.

International Program Committe (IPC)

- IS&T/SPIE Electronic Imaging – Digital Photography 2010;
- ICISP 2010 – International Conference on Image and Signal Processing, Trois-Rivières, Québec, Canada – Papers published on Lecture Notes in Computer Science (Springer);
- AVSS'09 – 6th IEEE International Conference on *Advanced Video and Signal Based Surveillance*;
- ACM SCCG (*Spring Conference on Computer Graphic*), Budmerice (SK) 2005, 2006, 2007, 2008, 2009;
- International Workshop on *Computer Graphics and Geometric Modeling*– Workshop of ICCS *International Conference on Computational Science*(2007 Beijing, China – 2008, Krakow, Poland, – 2009 Louisiana,USA) – Papers published on *Lecture Notes in Computer Science* (Springer) – (Vol. 4488, 2007 - Vol 5102, 2008 - Vol. 5544, 2009);
- IAPR “*Color Computational Color Imaging Workshop Imaging*” –
 - First Edition Satellite Workshop of IEEE ICIAP *International Conference on Image Analysis and Processing* 2007 – Modena (Italy), 2007;
 - Second Edition – Saint Etienne (France) March 2009.

- Track *Scalable Pattern Recognition* of International Conference *Mexican Computer Science Society*, 2007;
- VISAPP – International Conference on *Computer Vision Theory and Applications* – (Madeira, Portugal, 2008 – Lisboa, Portugal 2009 – Angers, France 2010);
- Member of Editorial Board (Reviewer) of:
 - IAPR ICPR 2010 – International Conference on Pattern Recognition;
 - IEEE ISCS'10 - International Symposium on Circuits and Systems;
 - ACM Multimedia 2009 – Workshop on Multimedia Forensics;
 - IEEE ISCE –International Symposium on Consumer Electronics (2009, 2010);
 - SIGGRAPH '09;
 - *Eurographics* 2008, 2010;
 - 3DTV- CON 09: *The True Vision - Capture, Transmission, and Display of 3D Video* International Conference;
 - ICCSA 2008 - International Conference on Computational Science and Its Application;
 - *Eurographics* 2008;
 - IEEE ICME 08 – International Conference on *Multimedia ed Expo*;
 - WSCG (International Conference in Central Europe on *Computer Graphics, Visualization and Computer Vision*) 2004-2006-2007-2008-2009-2010;
 - IEEE ICIP 2005, 2008, 2009 - International Conference on *Image Processing*;
 - IEEE ISCC'02 – International Symposium on *Computer and Communication*;
 - Security Track@ACM SAC 2004.

National Program Committee

- Conference *Eurographics Italian Chapter* (Catania – 2006, Trento - 2007)

International School

Director (together with Prof. Roberto Cipolla, Univ. di Cambridge, UK) of ICVSS, International Computer Vision Summer School (www.dmi.unict.it/icvss):

- *Detection, Recognition and Segmentation in Context*, Ragusa, Italy – July 2007.
- *Reconstruction and Recognition*, Ragusa, Italy – July 2008.
- *Machine Learning for Computer Vision*, Ragusa, Italy – July 2009.
- *Registration and Video Analysis*, Ragusa, Italy – July 2010.

National School

Director (together with Prof. Giovanni Gallo and Filippo Stanco) of Italian Ph.D. school “*La Visione delle Macchine*” - GIRPR – Catania November 2010.

Conferences/Invited Session

- Co-chair insieme con F. Imai, N. Sampat, J. De Carlo della conferenza internazionale ***Digital Photography VII – IS&T/SPIE Electronic Imaging 2011***- San Francisco, USA, Gennaio 2011;
- Co-chair of “*Image and Video Forensics*”, SIMAI 2010, Cagliari (Italy) –2010;
- Co-chair of “*Image Analysis Methods for Cultural Heritage*”, SIMAI 2010, Cagliari(Italy) – 2010;
- Workshop “*Medical and Industrial Imaging*” , June 2008 Catania (Italy);
- Co-chair of “*Image Analysis Methods for Cultural Heritage*”, SIMAI 2008, Roma (Italy) –2008;

- Co-chair of “*Image Analysis Methods for Industrial Applications*” SIMAI 2006, Ragusa (Italy) , 2006;
- Co-chair and local organizer of 4° Convegno EUROGRAPHICS Italian Chapter (EG_IT) (<http://www.dmi.unict.it/~eg06>), February 2006;

Editorial Activities

- Member of *Editorial Board* of *Journal of Electronic Imaging* (JEI) published by SPIE/IS&T (*digital photography and image coding*).
- Member of *Editorial Board* of *Recent Patents on Electrical Engineering* published by *Bentham Science Publisher*.
- Co-editor of *Proceedings of EUROGRAPHICS Italian Chapter (EG_IT)* (<http://www.dmi.unict.it/~eg06>), Catania, 2006, (EG press);
- *Invite Reviewer* for the following journals:
 - IEEE Transactions on Image Processing (since 2003) ;
 - EURASIP Journal of Applied Signal Processing (since 2003);
 - IASTED Journal of Modelling and Simulation (since 2003);
 - IST/SPIE Journal of Electronic Imaging (since 2004);
 - IEE Proceedings, Vision, Image & Signal Processing (since 2004);
 - IST/SPIE Optical Engineering (since 2004);
 - IEEE Signal Processing Letters (since 2004);
 - IEEE Transactions on Circuits and Systems for VideoTechnology (since 2004);
 - IEE Electronic Letters (since 2004);
 - ELSEVIER, Image Vision and Computing Journal (since 2005);
 - EUROGRAPHICS, Computer Graphics Forum (since 2005);
 - IEEE Transactions on Visualization and Computer Graphics (since 2006);
 - International Journal of Imaging Systems and Technology; Special Issue on "Applied Color Image Processing" (2007);
 - ELSEVIER Signal Processing: Image Communication; Special Issue on *Semantic Analysis for Interactive Multimedia* – (2007);
 - IEEE Transactions on Systems, Man, and Cybernetics--Part B: Cybernetics (since 2009);
 - Springer - Journal of Mathematical Imaging and Vision (since 2009);
 - IEEE Transactions on Multimedia (since 2009);
 - IS&T/SPIE Journal of Imaging Science and Technology (since 2010);
 - Springer – Pattern Analysis and Application (since 2010).
- Invite Reviewer (1 chapter):
Single-Sensor Imaging: Methods and Applications for Digital Cameras, Ed. R. Lukac – CRC Press (2008).
- Reviewer of some editorial proposals for *John Wiley & Sons* (2009).
- He is **Senior Member** of IEEE (The *Institute of Electrical and Electronics Engineers*) since 2006;
- He is Member of IAPR-IC (*International Association Pattern Recognition – Italian Chapter*);

Management

- Scientific management of IPlab@CT, Image Processing Lab (www.dmi.unict.it/~iplab) at Computer Science Department, University of Catania.
- He is a member (2007-2010) of the Technical Committee of a joint research lab between STMicroelectronics and IPlab.
- He has worked in STMicroelectronics (Catania) -AST (Advanced System Technology) where he lead a research group in the field of *Digital Still Camera & Multimedia Innovation*.

Scientific Cooperations

University of Catania (G. Gallo, D. Cantone, D. Catalano, G. Bella, S. Riccobene, F. Stanco, G. Cincotti, A. Pulvirenti, G. Giuffrida), STMicroelectronics (M. Mancuso, A. Bruna, A. Castorina, G. Messina, A. Buemi, M. Guarnera, A. Capra, A. Vitali), University of Cambridge (UK) (R. Cipolla), University of Palermo (E. Ardizzone, M. La Cascia), University of Milano Bicocca (R. Schettini, F. Gasparini), a WPI University (USA) (M. Hofri), Queen Mary University of London (UK) (A. Cavallaro), Aalborg University (DK) (S. Livatino), IBM Watson Research Center (USA) (R. Gennaro), Università di Calabria (P. Pantano, E. Bilotta), Epson Ltd, Canada (R. Lukac), Imperial College (UK) (C. Sismeiro).

Project Evaluation

- *Research Promotion Foundation (RPF) of Cyprus* - PENEK program – 2009.
- *Netherlands Organisation for Scientific Research (NWO)* - NWO *Physical Sciences* – 2009.

Research Projects

- Research contract with AST Catania Lab of STMicroelectronics on “Resolution Enhancement” (2004).
- Research contract with AST Catania Lab di STMicroelectronics on “*Raster_to_SVG*”. (2005).
- Research contract with *MagicMosaics* (Victoria - Canada), www.imagemosaics.com on PIM (*Puzzle Image Mosaic*).
- Research project entitled: “*Sviluppo di materiali e tecnologie per una nuova gamma di Artroprotesi di ginocchio ad elevata flessibilità applicativa*” – FAR – L.297. Involved partners are LIMA (Ud), Dipartimento di Ingegneria Industriale e Meccanica, il Dipartimento di Matematica ed Informatica (University of Catania), Fraunhofer Institut für Techno- und Wirtschaftsmathematik of Kaiserslautern (D) . Specific task of our group has regarded the 3D Bone Segmentation starting from CT data. (July 2005 – September 2007).
- Research contract with AST Catania Lab di STMicroelectronics on “*Video Stabilization*” (July 2006 – July 2007).
- Research Contract with INFORM entitled “*DIAGNOSTICA PER IMMAGINI-DIMAGO*”, (January 2007 - December 2007).

Presented Projects

- He has presented a National Project as coordinator entitled “*Algorithms and methods for the processing of digital images acquired by single-sensor cameras*”. Other partners are: University of Trieste (Prof. G. Ramponi), of Milano Bicocca (Prof. R. Schettini) and CNR-IAC of Roma (Prof. D. Vitulano). Under Evaluation.

- E has proposed as local coordinator (FP7-ICT 2007 -1) a research proposal in a project entitled "New Generation of Emotional Communicating Robots (NEGECR)". Rejected.
- He has proposed as Principal Coordinator a (STREP – Specific Targeted Research Project) proposal (FP6 - ICT) entitled "Multimedia Data Mining Through Semantic Knowledge (MUSE). Other involved partners were: Queen Mary University of London (UK), Fraunhofer Institute (DE), L'informatica (IT), Text Mining Solutions (FR), Imperial College (UK). Project rejected.

Scientific Research

Main topics

- Image (and Video) Enhancement for Imaging Devices
- Advanced Signal Coding and Processing
- Scene Recognition
- Medical Imaging (Bone Classification/Segmentation, Microarray Imaging)
- Computer Graphics (Raster ToVector, Artificial Mosaics)
- Image and Video Forensics

Publications and Patents

Ph. D. Thesis

Metodi Statistici ed Entropici per l'Apprendimento e l'Analisi Automatica di Immagini Digitali (Statistical and Entropy based methods for unsupervised learning and analysis of digital images).
Ph. D. in Applied Mathematic and Computer Science. Tutor: Prof. A. Maugeri. Scientific Advisor: Prof. Giovanni Gallo. University of Naples (Italy), 1999.

Books

- [CB1] *Image Processing for Embedded Devices* – Eds. S. Battiato, A.R. Bruna, G. Messina, G. Puglisi – *Applied Digital Imaging* ebook series – Bentham Science Publisher, 2010 (to appear);
- [CB2] *Computer Vision: Recognition, Registration, and Reconstruction* - Eds. R. Cipolla, S. Battiato, G.M. Farinella - *Studies in Computational Intelligence* – Springer-Verlag press, 2010 (in press);
- [CB3] *Digital Imaging For Cultural Heritage Preservation - Analysis, Restoration and Reconstruction of Ancient Artworks* - Eds. F. Stanco, S. Battiato, G. Gallo - *CRC Press/Taylor & Francis - Digital Imaging and Computer Vision Book series*, 2010 (to appear)

Book's chapter (International)

- [IB1] S. Battiato, G. Gallo - **Multi-resolution Clustering of Texture Images** – Chapter in *Texture Analysis in Machine Vision*, Ed. M. Pietikäinen - Series in Machine Perception and Artificial Intelligence - World Scientific, Vol. 40, pp.41-51 - ISBN 981-02-4373-1, October 2000;
- [IB2] S. Battiato, A. Castorina, G. Messina - **Exposure Correction for Imaging Devices: an Overview** – Chapter in *Single-Sensor Imaging: Methods and Applications for Digital Cameras*, Ed. R. Lukac – CRC Press - ISBN 978-1-4200-5452-1, September 2008;
- [IB3] S. Battiato, R. Lukac - **Color-Mapped Imaging** - In *Encyclopedia of Multimedia*, 2nd edition, (ed.) B. Furth – pp.83-88 - Springer-Verlag – ISBN: 978-0-387-74724-8, October 2008. Including short articles: *Dithering* (pp.198-199), *GIF Format* (pp.272-273), *Median Cut Algorithm* (pp.417-418), *Reindexing Techniques* (pp.768-769).
- [IB4] S. Battiato, R. Lukac - **Video Stabilization Techniques** - In *Encyclopedia of Multimedia*, 2nd edition, (ed.) B. Furth – pp.941-945 - Springer-Verlag - ISBN: 978-0-387-74724-8, October 2008. Including short articles: *Camera Motions* (pp.57-58), *Exposure Values* (pp.217-218), *Motion Blurring* (pp. 428-429).
- [IB5] G.M. Farinella, S. Battiato - **Representation Models and Machine Learning Techniques for Scene Classification** – Chapter in *Pattern Recognition, Machine Vision, Principles and Applications*, Ed. P. S.P. Wang, River publisher, 2010(In press);
- [IB6] S. Battiato, G. Puglisi, A. R. Bruna, A. Capra, M. Guarnera – **Fundamentals and HW/SW Partitioning** – Chapter in *Image Processing for Embedded Devices* – Ed. S. Battiato, A.R. Bruna, G. Messina, G. Puglisi – *Applied Digital Imaging* ebook series – Bentham Science Publisher, 2010 (to appear).
- [IB7] S. Battiato, G. Messina – **Recent Trends and Evolution** - Chapter in *Image Processing for Embedded Devices* – Ed. S. Battiato, A.R. Bruna, G. Messina, G. Puglisi – *Applied Digital Imaging* ebook series – Bentham Science Publisher, 2010 (to appear).
- [IB8] S. Battiato, G. Di Blasi, G. Gallo, G. Puglisi - **Digital Reproduction of Ancient Mosaics** – Chapter in *Digital Imaging for Cultural Heritage Preservation: Analysis, Restoration and Reconstruction of Ancient Artworks* - Eds. F. Stanco, S. Battiato, G. Gallo - CRC Press/Taylor & Francis - Digital Imaging and Computer Vision Book series, 2010 (to appear).

Book's chapter (National)

- [NB1] S. Battiato, G. Messina, R. Rizzo - **Image Forensics - Contraffazione Digitale e Identificazione della Camera di Acquisizione: Status e Prospettive** - Chapter in *IISFA Memberbook 2009 DIGITAL FORENSICS* – Eds. G. Costabile, A. Attanasio – Experta, Italy 2009;
- [NB2] S. Battiato G. Messina - **Video Digitali in Ambito Forense** – Chapter in *Digital Forensics* – Ed. G. Ziccardi – Giuffrè, Italy, 2010 (to appear).

Co-edited Proceedings or Special Issues

- [C1] G. Gallo, S. Battiato, F. Stanco – Proceedings of **Fourth Conference Eurographics Italian Chapter** – ISBN 3-905673-58-4 - Catania (Italy), February 2006.
- [C2] L. Zhang, S. Battiato, R. Schettini, Z. Wang, K.R. Rao - “**Emerging Methods for Color Image and Video Quality Enhancement**” - *EURASIP Journal on Image and Video Processing* – 2010 (to appear).

Teaching books (in italian)

- [T1] S. Battiato, F. Stanco - **Fondamenti di Image Processing** – Guida teorico/pratica per l'elaborazione e la codifica di immagini digitali - EdiArgo 2006 – ISBN 88-88659-49-8 – Ragusa (Italy), October 2006.
- [T2] R.C. Gonzalez, R.E. Woods - **Digital Image Processing** – Third Edition, Pearson (2007). Italian Title : **Elaborazione delle Immagini Digitali** - Terza Edizione, Pearson Paravia Bruno Mondadori (ISBN 978-88-7192505-6) - Ottobre 2008.by S. Battiato, F. Stanco.

International Journals

- [IJ1] S. Battiato, A. Castorina - **Watermarking for Images Based on Color Manipulation and Block Subdivision** - Image Processing&Communications, An International Journal - Vol. 6, No.1-2, pp. 29-38, 2000;
- [IJ2] S. Battiato, M. Mancuso – **An Introduction to the Digital Still Camera Technology** – ST Journal of System Research - Special Issue on *Image Processing for Digital Still Camera*, Vol. 2, No.2, December 2001;
- [IJ3] S. Battiato - **Psychovisual and Statistical Optimization of Quantization Tables for DCT Compression Engines** – ST Journal of System Research - Special Issue on *Image Processing for Digital Still Camera*, Vol. 2, No.2, December 2001;
- [IJ4] S. Battiato, A. Castorina - **High Dynamic Range Imaging: Overview and Application** – ST Journal of System Research - Special Issue on *Image Processing for Digital Still Camera*, Vol. 2, No.2, December 2001;
- [IJ5] S. Battiato - **Entropy and Gibbs Distribution in Image Processing: an Historical Perspective** – Image Processing&Communications, An International Journal – Vol.7, No. 3-4, pp. 35-50, 2001;
- [IJ6] S. Battiato, G. Gallo, S. Nicotra – **Glyph Representation of Directional Texture Properties** – 10-th International Conference in Central Europe on *Computer Graphics, Visualization and Computer Vision*, WSCG 2002 – Plzen, Czech Republic, February 2002 – Published in *Journal of WSCG*, Vol. 10, No.1-3, pp. 48-54, 2002;
- [IJ7] G. Messina, S. Battiato, M. Mancuso, A. Buemi – **Improving Image Resolution by Adaptive Back-projection Correction Techniques** – IEEE Transactions on *Consumer Electronics* – Vol. 48, Issue 3, pp. 409-416, August 2002 - (ISI Impact Factor: 0,563);
- [IJ8] S. Battiato, A. Buemi, G. Impoco, M. Mancuso – **Jpeg2000 Coded Images Optimisation Using a Content-dependent Approach** - IEEE Transactions on *Consumer Electronics* - Vol. 48, Issue 3, pp. 400-408, August 2002 - (ISI Impact Factor: 0,563);
- [IJ9] S. Battiato, G. Gallo, F. Stanco – **A Locally-Adaptive Zooming Algorithm for Digital Images** – *Image Vision and Computing Journal* – Elsevier Science Inc. - Vol. 20, Issue 11, pp. 805-812, September 2002 - (ISI Impact Factor: 1,029);
- [IJ10] S. Battiato, A. Castorina, M. Mancuso - **High Dynamic Range Imaging for Digital Still Camera: an Overview** – *SPIE Journal of Electronic Imaging* – Vol. 12. Issue 3, pp. 459-469, July 2003 - (ISI Impact Factor: 0,803);
- [IJ11] A. Bosco, K. Findlater, S. Battiato, A. Castorina – **Noise Reduction Filter for Full-Frame Imaging Devices** – IEEE Transactions on *Consumer Electronics* – Vol. 49, Issue 3, pp. 676-682, August 2003 - (ISI Impact Factor: 0,428);
- [IJ12] S. Battiato, A. Castorina, M. Guarnera, P. Vivirito – **A Global Enhancement Pipeline for Low-cost Imaging Devices** – IEEE Transactions on *Consumer Electronics* – Vol. 49, Issue 3, pp. 670-675, August 2003 - (ISI Impact Factor: 0,428);
- [IJ13] S. Battiato, A.R. Bruna, A. Buemi, A. Castorina – **Analysis and Characterization of JPEG2000 Standard for Imaging Devices** – IEEE Transactions on *Consumer Electronics* – Vol. 49, Issue 4, pp. 773-779, November 2003 - (ISI Impact Factor: 0,428);

- [IJ14] G. Messina, A. Castorina, A. Bosco, S. Battiato – *Improving Digital Images by Adaptive Exposure* – *Electronic Engineering Times ASIA* – pp. 39-40, February 2004;
- [IJ15] S. Battiato, A. Bosco, A. Castorina, G. Messina – *Automatic Image Enhancement by Content Dependent Exposure Correction* – *EURASIP Journal on Applied Signal Processing* – Vol. 12, pp. 1849-1860 – 2004 - (ISI Impact Factor: 0,583);
- [IJ16] S. Battiato, G. Gallo, G. Impoco, F. Stanco – *An Efficient Re-indexing Algorithm for Colour-Mapped Images* – *IEEE Transactions on Image Processing* – Vol. 13. No. 11, pp. 1419-1423, November 2004 - (ISI Impact Factor: 2,011);
- [IJ17] F. Naccari, S. Battiato, A. Bruna, A. Capra, A. Castorina - *Natural Scenes Classification for Color Enhancement* – *IEEE Transactions on Consumer Electronics* – Vol. 51, Issue 1, pp. 234-239, February 2005 - (ISI Impact Factor: 0,600);
- [IJ18] G. Messina, E. Ingrà, S. Battiato, G. Di Blasi - *Automatic Conversion Techniques from Data Dependent Triangulation to SVG B-Slides* – *SPIE Electronic Imaging Newsletter* – Vol.16, No. 2, November 2005;
- [IJ19] S. Battiato, D.R. Recupero, G. Di Blasi - *Advanced Indexing Scheme For Imaging Applications: Three-Case Studies*– *IET Image Processing (formerly part of IEE Proceedings - Vision, Image, and Signal Processing)* – Vol. 1, Issue 3, pp. 249-268, September 2007 - (ISI Impact Factor 2006: 0,461);
- [IJ20] S. Battiato, G. Di Blasi, G.M. Farinella, G. Gallo - *Digital Mosaic Framework: an Overview* – *Eurographics - Computer Graphic Forum* – Vol. 26, No. 4 - December 2007; (ISI Impact Factor: 1,107);
- [IJ21] S. Battiato, G. Di Blasi, G.M. Farinella, G. Gallo, G.C. Guarnera – *Adaptive Techniques for Microarray Image Analysis with Related Quality Assessment* – *SPIE Journal of Electronic Imaging* – Vol. 16, Issue 4 - 2007 (ISI Impact Factor: 0,455);
- [IJ22] S. Battiato, F. Rundo, F. Stanco - *Self Organizing Motor Maps for Colour Mapped Image Re-indexing* – *IEEE Transactions on Image Processing* – Vol. 16, Issue 12, pp. 2905-2915 – December 2007 (ISI Impact Factor: 2,462);
- [IJ23] A. Bosco, A. Bruna, S. Battiato, G. Bella, G. Puglisi - *Digital Video Stabilization through Curve Warping Techniques* - *IEEE Transactions on Consumer Electronics* - Vol. 54, Issue 2, pp. 220-224, May 2008 (ISI Impact Factor: 0,985);
- [IJ24] S. Battiato, G. Bilotta, A. Heiko, G.M. Farinella, G. Impoco, J. Orlik, G.Russo, A. Zemitis – *Structural Simulation of a Bone-Prosthesis System of the Knee Joint* – *Sensors Journal* – MDPI Open Access - Special Issue on *Medical Images Processing* – Vol. 8, pp. 5897-5926 2008 (ISI Impact Factor: 1,870);
- [IJ25] S. Battiato, M. Guarnera, G. Messina, V. Tomaselli – *Recent Patents on Color Demosaicing* - *Recent Patents on Computer Science*, Bentham Science Publishers Ltd - Volume 1, No. 3, pp. 194-207, November 2008;
- [IJ26] S. Battiato, G. M. Farinella, G. Giuffrida, C. Sismeiro, G. Tribulato - *Using Visual and Text Features for Direct Marketing on Multimedia Messaging Services Domain* – *Multimedia Tools and Applications Journal* (Special Issue on Metadata Mining for Image Understanding), Vol. 42, No. 1, pp. 5-30 - Springer 2009 (ISI Impact Factor 2008: 0,462);
- [IJ27] S. Battiato, A. Bosco, A.R. Bruna, R.Rizzo – *Noise Reduction for CFA Image Sensors Exploiting HVS behavior* – *Sensors Journal* – MDPI Open Access – Special Issue on *Integrated High-performance Imagers*, Vol. 9, Issue 3, pp.1692-1713, 2009 (ISI Impact Factor 2008: 1,870).
- [IJ28] S. Battiato, G. M. Farinella, G. Giuffrida, C. Sismeiro, G. Tribulato - *Exploiting Visual and Text Features for Direct Marketing Learning in Time and Space Constrained Domains* – *Pattern Analysis and Applications*, Springer, 2009 (In Press) (ISI Impact Factor 2008: 1,367);;

- [IJ29] S. Battiato, G.M. Farinella, G. Gallo, D. Ravì - *Exploiting Textons Distributions on Spatial Hierarchy for Scene Classification* – Eurasip Journal on *Image and Video Processing* – Special issue on *Multimedia Modeling*, 2010 (In press)
- [IJ30] S. Battiato, A.R. Bruna, G. Puglisi - *A Robust Block Based Video Stabilization Approach for Mobile Imaging Devices* (2009 submitted);
- [IJ31] G.M. Farinella, S. Battiato - *Scene Classification into DCT Compressed Domain* (2009 submitted);
- [IJ32] S. Battiato, G. M. Farinella, G. Giuffrida, C. Sismeiro, G. Tribulato - *Automatic Image Analysis of Persuasive Communications: The Case of Multimedia Mobile Marketing* (2009 submitted).

International Series

- [IS1] S. Battiato, D. Cantone, D. Catalano, G. Cincotti, M. Hofri – *An Efficient Algorithm for the Approximate Median Selection Problem* – In Proceedings of CIAC'2000 – Rome (Italy) - Lecture Notes in Computer Science Vol.1767, pp. 226-238 – 2000 - (ISI Impact Factor: 0,39);
- [IS2] S. Battiato, D. Catalano, G. Gallo, R. Gennaro - *Robust watermarking for Images Based on Colors Manipulation* - In Proceedings of the 3-rd Workshop on Information Hiding, Dresden, 1999 - Lecture Notes in Computer Science Vol.1768, pp. 302-317 – 2000 - (ISI Impact Factor: 0,39);
- [IS3] S. Battiato, C. Bosco, A. Bruna, G. Di Blasi, G. Gallo – *Statistical Modeling of Huffman Tables Coding* – In Proceedings of ICIAP'05 International Conference on Image Analysis and Processing – Cagliari (Italy) – Lecture Notes in Computer Science, Vol. 3617, pp.711-716 – September 2005 - (ISI Impact Factor: 0,402);
- [IS4] S. Battiato, G. M. Farinella, Giovanni Puglisi – *Statistical Based Vectorization for Standard Vector Graphics* - In Proceedings of International Conference on Computational Science ICCS 2006 - Fifth International Workshop on Computer Graphics and Geometric Modeling, CGGM 2006 – Reading (UK) - Lecture Notes in Computer Science, Vol. 3992, pp.334-341 - May 2006;
- [IS5] S. Battiato, G. M. Farinella, G. Impoco, O. Garretto - *Cortical Bone Classification by Local Context Analysis* – In Proceedings of MIRAGE 07: Computer Vision/Computer Graphics Collaboration Techniques and Applications - March, 2007 - Lecture Notes in Computer Science, Vol.4418, pp.567-578 – 2007;
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- [P14] F. Naccari, A. Castorina, A.R. Bruna, A. Capra, S. Cariolo, S. Battiato, G. Gallo - *Method of Generating a Mask Image of Membership of Single Pixels to Certain Chromaticity Classes and of Adaptive Improvement of a Color Image* - US Patent (Application US 21676405, 2005 – Publication US20060050957 A1, March 2006) US Patent **US7528991B2**, May 2009;
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- [P16] G. Messina, M. I. Guarnera, A. Costanzo, S. Battiato, G. Gallo, S. Nicotra – *Digital Image Processing Method* - US Patent Pending (Application US 11/259937, 2005 – Publication US

- 2006/0104532 A1, May 2006) - European Patent Pending (Priority RM2004A000563 – 2004);
- [P17] A. Bruna, G. Gallo, S. Battiato, S. La Rosa – **Method for Compression of Image Data and Corresponding Apparatus and Computer-Program Product** - US Patent (Application US 11/295174, 2005 - Publication US 20060159356 A1, July 2006) **US7616825B2**, November 2009 - European Patent Pending (Priority. TO2004A000863);
- [P18] S. Battiato, M.G. Guanziroli, F. Rundo, M. Samperi – **A Process and System for Digital Colour Image Compression and Corresponding Computer-Program Product** – European Patent Pending (Priority. TO2007A000246, April 2007);
- [P19] A. Bruna, S. Battiato, G. Puglisi - **Method Of Filtering A Video Sequence Image From Spurious Motion Effects** – US Patent Pending (Application US 12/272591, November 2008).

National Conferences (with Proceedings e Referees)

- [NC1] S. Battiato, G. Di Blasi, G. Gallo, A. LoGiucoco, M. Madonia, S. Nicotra, F. Stanco – **Digital Image Analysis and Enhancement** – In Proceedings of GIRPR'04, 2nd Convegno del Gruppo Italiano Ricercatori in Pattern Recognition, Perugia, September 2004;
- [NC2] S. Battiato, G. Di Blasi, G.M. Farinella, G. Gallo - **A Survey of Digital Mosaic Techniques** – In Proceedings of 4° Conference Eurographics Italian Chapter – pp.129-135 - Catania, 22-24 February 2006;
- [NC3] S. Battiato, F. Stanco – **A New Descreening Technique in the Frequency Domain** - In Proceedings of 4° Conference Eurographics Italian Chapter – pp.137-142 - Catania, 22-24 February 2006;
- [NC4] S. Battiato, F. Rundo, F. Stanco - **Color Palette Images Re-indexing by Self Organizing Motor Maps** - In Proceedings of 4° Conference Eurographics Italian Chapter – pp.241-246 - Catania, 22-24 February 2006;
- [NC5] S. Battiato, G.M. Farinella, G. Puglisi – **SVG Vectorization by Statistical Region Merging** - In Proceedings of 4° Conference Eurographics Italian Chapter – pp.15-21 - Catania, 22-24 February 2006;
- [NC6] S. Battiato, F. Greco, S. Nicotra - **Compressed SVG Representation of Raster Images Vectorized by DDT Triangulation** – In Proceedings of 4° Conference Eurographics Italian Chapter – pp.233-239 - Catania, 22-24 February 2006;
- [NC7] S. Battiato, C. Bosco, G.M. Farinella, G. Impoco - **3D CT Segmentation for Clinical Evaluation of Knee Prosthesis Operations** - In Proceedings of 4° Conference Eurographics Italian Chapter – pp.263-266 - Catania, 22-24 February 2006;
- [NC8] S. Battiato, G. Di Blasi, G.M. Farinella, G. Gallo, G. Impoco – **Medical Imaging Applications: Three Case Studies** – In Proceedings of CISI'06 – Conferenza Italiana sui Sistemi Intelligenti – Ancona, September 2006;
- [NC9] S. Battiato, G. Puglisi, G. Impoco – **Vectorialization of Raster Colour Images** – In Proceedings of II Conferenza Nazionale del Gruppo del Colore - pp. 221-228 Milano, September 2006. Atti Pubblicati sulla Collana Quaderni di Ottica e Fotonica – Colore e Colorimetria: Contributi Multidisciplinari - vol. II - No.14 - Centro Editoriale Toscano, 2006;
- [NC10] S. Battiato, G. Puglisi - **Rendering Order Optimization for SVGStat Improvement** – In Proceedings of 5th Conference Eurographics Italian Chapter 2007 – Trento, February 2007;
- [NC11] S. Battiato, G. Di Blasi, G. Gallo, S. Patti - **Ramses: a Visual Steganographic System** – In Proceedings of 5th Conference Eurographics Italian Chapter 2007 – Trento, February 2007;
- [NC12] P.A. Bertacchini, E. Bilotta, P. Pantano, S. Battiato, M. Cronin, G. Di Blasi, A. Talarico, A. Tavernise - **Modelling and Animation of Theatrical Greek Masks in an Authoring System** - In Proceedings of 5th Conference Eurographics Italian Chapter 2007 – Trento, February 2007;

- [NC13] S. Battiato, G. Bilotta, G. Impoco, G. Russo - *Simulazione Strutturale di un Sistema Osso-Protesi del Ginocchio* – In Proceedings of VII Biomaterial Days – Catania, July 2007;
- [NC14] S. Battiato, G. Di Blasi, G. Gallo, A. Milone – *Realizzazione di Mosaici Artificiali in Ambiente 3D* – In Proceedings of V Convegno AIAR – Associazione Italiana di Archeometria – Siracusa, February 2008;
- [NC15] G. Barone, S. Battiato, G. Gallo, P. Mazzoleni, G. Puglisi, F. Stanco - *Il Problema del Riconoscimento Automatico delle Caratteristiche Petrografiche in Sezione Sottile di Ceramiche di Interesse Archeologico* In Proceedings of VI Convegno AIAR – Associazione Italiana di Archeometria – Pavia, February 2010.

Invited talks

- “Algorithms and Techniques for Digital Image Processing” – Associazione Elettrotecnica ed Elettronica Italiana - December 2002 - Aula Magna - Engineering Faculty - Catania.
- “Adaptive Techniques for Image Enhancement: Expected Color Rendition and Data Fusion”, visiting Research c/o Queen Mary University of London - September 2004.
- “Natural Scene Enhancement by Adaptive Color Correction” November 2004, Dipartimento di Linguistica Università of Calabria (Cosenza - Italy).
- Teacher c/o Winter School on Computer Graphic (<http://vcg.isti.cnr.it/EGIT05/>), organized by 'ISTI-CNR of Pisa Italian Chapter, “SVG: A 2D Graphic Standard”.
- “Segmentazione di Immagini Mediche: casi di studio”, Workshop “*Medical and Industrial Imaging*” c/o Dipartimento di Matematica ed Informatica dell’Università di Catania – June 2008
- “Applicazioni dell’Image Processing in ambito investigativo”, Workshop “*Internet fra società, diritto e attività di indagine*” c/o Tribunale di Siracusa, Italy July 2008.
- “Microarray Image Analysis” c/o *International School of Functional Genomics* - Scicli (RG), Italy July 2008.
- *Invited Tutorial* c/o IV Conferenza Nazionale Gruppo del Colore Como, Italy - September 2008 on “Digital Mosaics: Status e Perspective”.
- “Unsupervised Adult Image Classification: Is it really possible?” Workshop “*Fight against online paedophilia – meeting of European experts*” Siracusa, Italy , December 2008.
- “Image Generation Pipeline on Mobile Devices: Status and Perspective” c/o Movidia Ltd - Dublin, January 2009.
- “Unsupervised Forgery Detection” c/o Interpol - Lyon, France – March 2009.
- “Image Forensics: Status e Perspective” c/o Cassa Nazionale Forense IISFA Italian Chapter - Rome – Italy, April 2009.
- “Mobile Image Forensics: Recovery and Analysis” c/o Università di Bologna - IISFA Forum 2009 May 2009.

Catania, January 2010

Prof. Sebastiano Battiato

