

# Filippo Vella

Consiglio Nazionale delle Ricerche  
Istituto di Calcolo e Reti ad Alte Prestazioni  
Via Ugo La Malfa n.153  
90146 Palermo Italy

Phone: (+39) 091 803 1058  
Fax: (+39) 091 680 9262  
Email: [filippo\\_dot\\_vella@icar.cnr.it](mailto:filippo_dot_vella@icar.cnr.it)  
Orcid: 0000-0002-2502-0062  
Homepage: <http://www.pa.icar.cnr.it/vella/>

## Esperienza Professionale

Consiglio Nazionale delle Ricerche - Istituto di Calcolo e Reti ad Alte Prestazioni (ICAR)- *Ricercatore* - dal 2008

Consiglio Nazionale delle Ricerche - *Contratto di Ricerca* - 2007

Università degli Studi di Palermo - *Contratto di Ricerca* - 2007

STMicroelectronics, *System Engineer* 2000 - 2004.

## Istruzione e Formazione

Laurea in Ingegneria Elettronica - indirizzo Calcolatori Elettronici - *Summa cum laude* - 2000

Ph.D. in Ingegneria Informatica Università degli Studi di Palermo (Italy) 2004 - 2007

*visiting scholar* presso Center for Signal and Image Processing (CSIP) del Georgia Institute of Technology (Atlanta - USA)

*visiting researcher* presso Computed Science (CSIP) di Boston University (Boston - USA) june 2011

## Attività in Progetti Finanziati

Coordinamento dell'unità di Palermo per il progetto PON SIGMA (PONo1\_00683)

Partecipazione al progetto PON 2007-2013 SYNTHESIS (PONo1\_01687)

Partecipazione al progetto PON 2007-2013 PON Smarth Health 2.0 (PONo4a2\_C/19)

Partecipazione al progetto POR FESR Sicilia 2007-2013 MIRCO - MicroRna in Clinica Ontologica (cup: G71I14000010007)

Partecipazione al progetto POR FESR Sicilia 2007-2013 INNOVATIVE DOCUMENT SHARING (cup: G73F11000100004)

Partecipazione al progetto POR FSE Sicilia Corso di formazione post-laurea per Ricercatori, Progettisti e Sviluppatori di Applicazioni ICT per SMART-CITIES (cup: G78B14000060006)

## Insegnamenti

### *Università degli Studi di Palermo, Corso di Laurea in Ingegneria Cibernetica*

A.A. 2017 - 18 Calcolatori Elettronici (modulo Reti Logiche)

A.A. 2016 - 17 Calcolatori Elettronici (modulo Reti Logiche)

A.A. 2015 - 16 Calcolatori Elettronici

### *Università degli Studi di Palermo, Corso di Laurea in Ingegneria Elettronica*

A.A. 2018 - 19 Calcolatori Elettronici (modulo Fondamenti di Informatica)

A.A. 2017 - 18 Calcolatori Elettronici (modulo Fondamenti di Informatica)

A.A. 2016 - 17 Calcolatori Elettronici (modulo Fondamenti di Informatica)

A.A. 2015 - 16 Calcolatori Elettronici (modulo Fondamenti di Informatica)

A.A. 2014 - 15 Calcolatori Elettronici (modulo Fondamenti di Informatica)

A.A. 2013 - 14 Calcolatori Elettronici

A.A. 2012 - 13 Calcolatori Elettronici

A.A. 2008 - 09 Calcolatori Elettronici

### *Università degli Studi di Palermo, Corso di Laurea in Ingegneria Informatica*

A.A. 2010-11 Programmazione II

A.A. 2009-10 Programmazione II

### *Università degli Studi di Palermo, Corso di Laurea in Ingegneria Civile*

A.A. 2007-08 Informatica Applicata

A.A. 2006-07 Informatica Applicata

## Attività di Revisione per Progetti, Conferenze e Journals

Attività di valutazione tecnico-scientifica di progetti per conto del Ministero dello Sviluppo Economico (MISE) per il bando FABBRICA INTELLIGENTE - D.M. 5 marzo 2018 e del successivo D.D. 20 novembre 2018

Attività di valutazione di progetti per conto del Ministero dell'Istruzione, Università e Ricerca (MIUR) per il bando SIR (Scientific Independence of young Researchers) 2014.

Invited Reviewer per i journal:

IEEE Transaction on Systems, Man and Cybernetics

IEEE Transaction on Pattern Analysis and Machine Intelligence

IEEE Transactions on Circuits and Systems for Video Technology  
Elsevier Robotics and Autonomous Systems  
Elsevier Multimedia Tools and Applications  
Elsevier Journal of Visual Communication and Image Representation  
Elsevier Innovations in Systems and Software Engineering  
International Journal of Biomedical Data Mining  
Multidisciplinary Digital Publishing Institute (MDPI) Sensors  
Open Medicine formerly Central European Journal of Medicine  
SPIE Journal on Electronic Imaging  
  
Springer Intelligent Service Robot

Componente del Comitato di Programma per le conferenze:

The 8th International Workshop on Semantic Computing for Social Networks and Organization Sciences, SCSCN 2020  
  
The Fourth IEEE International Conference on Robotic Computing 2019  
  
The 7th International Workshop on Semantic Computing for Social Networks and Organization Sciences: from user information to social knowledge,SCSN, 2019  
  
The Third IEEE International Conference on Robotic Computing 2018  
  
6th International Workshop on Artificial Intelligence and Cognition, AIC2018 , Italy 2018  
  
13th ACM/IEEE International Conference on Signal-Image Technology & Internet-Based Systems (SITIS), India 2017  
  
10th IEEE International Conference on Semantic Computing (ICSC) , 2016  
  
12th ACM/IEEE International Conference on Signal-Image Technology & Internet-Based Systems (SITIS), Italy 2016  
  
11th ACM/IEEE International Conference on Signal-Image Technology & Internet-Based Systems (SITIS), Thailand 2015  
  
10th ACM/IEEE International Conference on Signal-Image Technology & Internet-Based Systems (SITIS), Marocco 2014  
  
9th ACM/IEEE International Conference on Signal-Image Technology & Internet-Based Systems (SITIS), Japan 2013  
  
2nd International Symposium on Intelligent Informatics Track on Multimedia Systems and Applications (ISI) 2013.  
  
8th ACM/IEEE International Conference on Signal-Image Technology & Internet-Based Systems (SITIS), Italy 2012

The Sixth International Conference on Complex, Intelligent, and Software Intensive Systems (CISIS-2012) (Track 8: Semantic Web, Web Services and Data Integration e Track 4: Multimedia Systems and Virtual Reality)

7th ACM/IEEE International Conference on Signal-Image Technology & Internet-Based Systems (SITIS), France 2011

6th ACM/IEEE International Conference on Signal-Image Technology & Internet-Based Systems (SITIS), Malaysia 2010

5th ACM/IEEE International Conference on Signal-Image Technology & Internet-Based Systems (SITIS), Morocco 2009

3rd International Conference on Computer Vision Theory and Applications (VISAPP), Portugal 2008

Demo Co-Chair:

Sixth IEEE International Conference on Semantic Computing (ICSC) September 19-21, Italy, 2012

Membro del Industry Research Advisory Committee:

The Fourth International Conference on Advances in Signal, Image and Video Processing (SIGNAL) 2019

The Third International Conference on Advances in Signal, Image and Video Processing (SIGNAL) 2018

The Second International Conference on Advances in Signal, Image and Video Processing (SIGNAL) 2017

Membro del comitato tecnico di revisione per le conferenze:

The Fourth International Conference on Computer Vision & Image Processing (CVIP) 2019

Fifth International Symposium on Intelligent Systems Technologies and Applications (ISTA) 2019.

Fourth International Symposium on Intelligent Systems Technologies and Applications (ISTA) 2018

6th IEEE International Conference on Advances in Computing, Communications and Informatics (ICACCI) 2017

Second International Symposium on Intelligent Systems Technologies and Applications (ISTA) 2016

IEEE Symposium on Industrial Electronics & Applications (ISIEA) 2012

Sixth International Conference on Complex, Intelligent, and Software Intensive Systems (CISIS) 2012.

3DTV-CONFERENCE 2012, The True Vision: Capture, Transmission and Display of 3D Video, 2012

3DTV-CONFERENCE 2011, The True Vision: Capture, Transmission and Display of 3D Video, 2011

3DTV-CONFERENCE 2010, The True Vision: Capture, Transmission and Display of 3D Video, 2010

3DTV-CONFERENCE 2009: The True Vision - Capture, Transmission and Display of 3D Video, (3DTV) 2009

IEEE International Conference on Multimedia & Expo (ICME) 2009

3rd International Conference on Computer Vision Theory and Applications (VISAPP) 2009

2nd International Conference on Computer Vision Theory and Applications (VISAPP) 2008

IEEE International Symposium on Computers and Communication, (ISCC) 2002

## Awards & Fellowships

IEEE Senior Member

The paper "Bayer pattern compression by prediction errors" has been selected for the Best Papers List of International Conference on e-business and Telecommunication Networks(ICETE).

The paper "Talking with Sentiment: Adaptive Expression Generation Behavior for Social Robots" was awarded as **Best Paper** of 19th International Workshop of Physical Agents.

Expert on the Subject in Computer Science from University of Palermo

The paper "Bayer pattern compression by prediction errors" è among the **Best Papers** of the International Conference on e-business and Telecommunication Networks(ICETE) 2004.

Member of Ordine degli Ingegneri della Provincia di Trapani

Member of CVPL - Associazione Italiana per la ricerca in Computer Vision, Pattern recognition e machine Learning

## Pubblicazioni

### Journal

- [1] Agnese Augello, Emanuele Cipolla, Ignazio Infantino, Adriano Manfrè, Giovanni Pilato, and Filippo Vella. Social signs processing in a cognitive architecture for an humanoid robot. *Procedia computer science*, 123:63–68, 2018.
- [2] Emanuele Cipolla, Umberto Maniscalco, Riccardo Rizzo, Dario Stabile, and Filippo Vella. Analysis and visualization of meteorological emergencies. *Journal of Ambient Intelligence and Humanized Computing*, 8(1):57–68, 2017.
- [3] Filippo Vella, Ignazio Infantino, and Giuseppe Scardino. Person identification through entropy oriented mean shift clustering of human gaze patterns. *Multimedia Tools and Applications*, 76(2):2289–2313, 2017.
- [4] A Augello, I Infantino, A Manfrè, G Pilato, and F Vella. Analyzing and discussing primary creative traits of a robotic artist. *Biologically Inspired Cognitive Architectures*, 17:22–31, 2016.
- [5] Agnese Augello, Ignazio Infantino, Antonio Lieto, Giovanni Pilato, Riccardo Rizzo, and Filippo Vella. Artwork creation by a cognitive architecture integrating computational creativity and dual process approaches. *Biologically Inspired Cognitive Architectures*, 15:74–86, 2016.
- [6] Agnese Augello, Ignazio Infantino, Adriano Manfrè, Giovanni Pilato, Filippo Vella, and Antonio Chella. Creation and cognition for humanoid live dancing. *Robotics and Autonomous Systems*, 86:128–137, 2016.
- [7] Emanuele Cipolla, Umberto Maniscalco, Riccardo Rizzo, Dario Stabile, and Filippo Vella. Analysis and visualization of meteorological emergencies. *Journal of Ambient Intelligence and Humanized Computing*, pages 1–12, 2016.
- [8] Adriano Manfrè, Agnese Augello, Giovanni Pilato, Filippo Vella, and Ignazio Infantino. Exploiting interactive genetic algorithms for creative humanoid dancing. *Biologically Inspired Cognitive Architectures*, 17:12–21, 2016.

- [9] Adriano Manfrè, Ignazio Infantino, Filippo Vella, and Salvatore Gaglio. An automatic system for humanoid dance creation. *Biologically Inspired Cognitive Architectures*, 2016.
- [10] Agnese Augello, Ignazio Infantino, Giovanni Pilato, Riccardo Rizzo, and Filippo Vella. Creativity evaluation in a cognitive architecture. *Biologically Inspired Cognitive Architectures*, 11:29–37, 2015.
- [11] Agnese Augello, Ignazio Infantino, Giovanni Pilato, Riccardo Rizzo, and Filippo Vella. Binding representational spaces of colors and emotions for creativity. *Biologically Inspired Cognitive Architectures*, 5:64–71, 2013.
- [12] Agnese Augello, Ignazio Infantino, Giovanni Pilato, Riccardo Rizzo, and Filippo Vella. Introducing a creative process on a cognitive architecture. *Biologically Inspired Cognitive Architectures*, 6:131–139, 2013.
- [13] Ignazio Infantino, Giovanni Pilato, Riccardo Rizzo, and Filippo Vella. Humanoid introspection: A practical approach. *International Journal of Advanced Robotic Systems*, 10, 2013.
- [14] La Cascia M.; Morana M.; Vella F. Automatic image representation and clustering on mobile devices. *Journal of Mobile Multimedia (JMM) - Special Issue on Recent Advances in Mobile and Multimedia Applications*, 6(2):158–169, 2010.
- [15] Infantino I., Spoto G., Vella F., and Gaglio S. bi-SIFT: Towards a semantically relevant local descriptor. *Journal of Multimedia Processing and Technologies*, 1(1):63–73, 2010.
- [16] Ardizzone E., La Cascia M., Morana M., and Vella F. Clustering techniques for personal photo album management. *Journal of Electronic Imaging*, 18(4), 2009.
- [17] Spampinato G., Guarnera M., Vella F., and Buemi A. Efficient error handling for video and still picture standards. *IEEE Transactions on Consumer Electronics*, 49, 2003.
- [18] Vella F., Castorina A., Mancuso M., and Messina G. Digital image stabilization by adaptive block motion vectors filtering. *IEEE Transactions on Consumer Electronics*, 48, 2002.

## Capitoli di Libro

- [19] Agnese Augello, Ignazio Infantino, Umberto Maniscalco, Giovanni Pilato, and Filippo Vella. Narrob: A humanoid social storyteller with emotional expression capabilities. In *Biologically Inspired Cognitive Architectures Meeting*, pages 9–15. Springer, Cham, 2018.
- [20] Agnese Augello, Emanuele Cipolla, Ignazio Infantino, Giovanni Pilato, Adriano Manfrè, and Filippo Vella. Creative robot dance with variational encoder. In *International Conference on Computational Creativity*, 2017.
- [21] Dario La Guardia, Adriano Manfrè, Umberto Maniscalco, Simona Ottaviano, Giovanni Pilato, Filippo Vella, and Mario Allegra. Improving spatial reasoning by interacting with a humanoid robot. *Intelligent Interactive Multimedia Systems and Services 2017*, 76:151, 2017.
- [22] Umberto Maniscalco, Giovanni Pilato, and Filippo Vella. Detection of indoor actions through probabilistic induction model. In *International Conference on Intelligent Interactive Multimedia Systems and Services*, pages 129–138. Springer, Cham, 2017.
- [23] Manuele Palmeri, Filippo Vella, Ignazio Infantino, and Salvatore Gaglio. Sign languages recognition based on neural network architecture. In *International Conference on Intelligent Interactive Multimedia Systems and Services*, pages 109–118. Springer, Cham, 2017.

- [24] Agnese Augello, Ignazio Infantino, Adriano Manfr , Giovanni Pilato, Filippo Vella, Manuel Gentile, Giuseppe Citt , Giulia Crifaci, Rossella Raso, and Mario Allegra. A personal intelligent coach for smart embodied learning environments. In *Intelligent Interactive Multimedia Systems and Services 2016*, pages 629–636. Springer International Publishing, 2016.
- [25] Agnese Augello, Umberto Maniscalco, Giovanni Pilato, and Filippo Vella. Disaster prevention virtual advisors through soft sensor paradigm. In *Intelligent Interactive Multimedia Systems and Services 2016*, pages 619–627. Springer International Publishing, 2016.
- [26] Emanuele Cipolla, Riccardo Rizzo, Dario Stabile, and Filippo Vella. A tool for visualization of meteorological data studied for integration in a multi risk management system. In *Intelligent Interactive Multimedia Systems and Services 2016*, pages 275–285. Springer International Publishing, 2016.
- [27] Emanuele Cipolla and Filippo Vella. Data dictionary extraction for robust emergency detection. In *Intelligent Interactive Multimedia Systems and Services 2016*, pages 25–37. Springer International Publishing, 2016.
- [28] Umberto Maniscalco, Giovanni Pilato, and Filippo Vella. Soft sensor network for environmental monitoring. In *Intelligent Interactive Multimedia Systems and Services 2016*, pages 705–714. Springer International Publishing, 2016.
- [29] Ignazio Infantino, Giovanni Pilato, Riccardo Rizzo, and Filippo Vella. I feel blue: Robots and humans sharing color representation for emotional cognitive interaction. In *Biologically Inspired Cognitive Architectures 2012*, pages 161–166. Springer Berlin Heidelberg, 2013.
- [30] Giuseppe Scardino, Ignazio Infantino, and Filippo Vella. Recognition of human identity by detection of user activity. In Louis Marinos and Ioannis Askoxylakis, editors, *Human Aspects of Information Security, Privacy, and Trust*, volume 8030 of *Lecture Notes in Computer Science*, pages 49–58. Springer Berlin Heidelberg, 2013.
- [31] Salvatore Gaglio, Ignazio Infantino, Giovanni Pilato, Riccardo Rizzo, and Filippo Vella. Vision and emotional flow in a cognitive architecture for human-machine interaction. In *Biologically Inspired Cognitive Architectures 2011 - Proceedings of the Second Annual Meeting of the BICA Society, Arlington, Virginia, USA, November 4-6, 2011*, pages 112–117, 2011.
- [32] Ardizzone E., La Cascia M., and Vella F. Unsupervised clustering in personal photo collections. In Marcin Detyniecki, Ulrich Leiner, and Andreas N rnberger, editors, *Adaptive Multimedia Retrieval. Identifying, Summarizing, and Recommending Image and Music*, volume 5811 of *Lecture Notes in Computer Science*. Springer Berlin Heidelberg, 2010.
- [33] Ardizzone E., La Cascia M., and Vella F. Automatic image representation for content-based access to personal photo album. In *Advances in Visual Computing*, volume 4842 of *Lecture Notes in Computer Science*, pages 265–274. Springer, 2007.
- [34] Vella F., Pilato G., Vassallo G., and Gaglio S. A geometric approach to automatic description of iconic scenes. In Esposito F. Ali M., editor, *Innovation in Applied Artificial Intelligence*, volume 3533 of *Lecture Notes in Computer Science*, pages 315–317. Springer-Verlag, 2005.
- [35] Vella F., Pilato G., Vassallo G., and Gaglio S. Latent semantic description of iconic scenes. In De Gregorio M. Di Maio V. Frucci M. Musio C., editor, *Brain, Vision and Artificial intelligence*, volume 3704 of *Lecture Notes in Computer Science*, pages 537–544. Springer-Verlag, 2005.
- [36] Vella F., Pilato G., Motisi I., and Gaglio S. Automatic dictionary creation by sub-symbolic encoding of words. In Marinaro M. and Tagliaferri R., editors, *Neural Nets*, volume 3931 of *Lecture Notes in Computer Science*, pages 113–119. Springer-Verlag, 2005.

## Proceedings

- [37] Agnese Augello, Ignazio Infantino, Umberto Maniscalco, Giovanni Pilato, and Filippo Vella. Introducing narrob, a robotic storyteller. In *International Conference on Games and Learning Alliance*, pages 387–396. Springer, Cham, 2018.
- [38] Ignazio Infantino, Agnese Augello, Umberto Maniscalco, Giovanni Pilato, and Filippo Vella. A cognitive architecture for social robots. In *2018 IEEE 4th International Forum on Research and Technology for Society and Industry (RTSI)*, pages 1–5. IEEE, 2018.
- [39] Igor Rodriguez, Adriano Manfrè, Filippo Vella, Ignazio Infantino, and Elena Lazkano. Talking with sentiment: adaptive expression generation behavior for social robots. In *Workshop of Physical Agents*, pages 209–223. Springer, Cham, 2018.
- [40] Agnese Augello, Emanuele Cipolla, Ignazio Infantino, Giovanni Pilato, Adriano Manfrè, and Filippo Vella. Creative robot dance with variational encoder. In *International Conference on Computational Creativity*, 2017.
- [41] Agnese Augello, Ignazio Infantino, Antonio Lieto, Umberto Maniscalco, Giovanni Pilato, and Filippo Vella. Towards a dual process approach to computational explanation in human-robot social interaction. In *Proceedings of the 1st CAID workshop at IJCAI*, 2017.
- [42] Agnese Augello, Ignazio Infantino, Umberto Maniscalco, Giovanni Pilato, and Filippo Vella. The effects of soft somatosensory system on the execution of robotic tasks. In *Robotic Computing (IRC), IEEE International Conference on*, pages 14–21. IEEE, 2017.
- [43] Emanuele Cipolla, Ignazio Infantino, Umberto Maniscalco, Giovanni Pilato, and Filippo Vella. Indoor actions classification through long short term memory neural networks. In *International Conference on Image Analysis and Processing*, pages 435–444. Springer, Cham, 2017.
- [44] Adriano Manfrè, Ignazio Infantino, Agnese Augello, Giovanni Pilato, and Filippo Vella. Learning by demonstration for a dancing robot within a computational creativity framework. In *Robotic Computing (IRC), IEEE International Conference on*, pages 434–439. IEEE, 2017.
- [45] Vella Filippo, Augello Agnese, Maniscalco Umberto, Bentivenga Vincenzo, and Gaglio Salvatore. Classification of indoor actions through deep neural networks. In *2016 International Conference on Signal-Image Technology & Internet-Based Systems (SITIS)*. IEEE, 2016.
- [46] I Infantino, A Augello, A Manfrè, G Pilato, and F Vella. Robodanza: Live performances of a creative dancing humanoid. In *Proceedings of the Seventh International Conference on Computational Creativity*, 2016.
- [47] Emanuele Cipolla and Filippo Vella. Boosting of association rules for robust emergency detection. In *2015 11th International Conference on Signal-Image Technology & Internet-Based Systems (SITIS)*, pages 185–191. IEEE, 2015.
- [48] Agnese Augello, Ignazio Infantino, Giovanni Pilato, Riccardo Rizzo, and Filippo Vella. Combining representational domains for computational creativity. *Proceedings of 5th international conference on computational creativity, ICC3 2014, June, 2014*.
- [49] Agnese Augello, Ignazio Infantino, Giovanni Pilato, Rocco Rizzo, and Filippo Vella. Robotic creativity driven by motivation and semantic analysis. In *Semantic Computing (ICSC), 2014 IEEE International Conference on*, pages 285–289. IEEE, 2014.
- [50] Emanuele Cipolla and Filippo Vella. Identification of spatio-temporal outliers through minimum spanning tree. In *Signal-Image Technology and Internet-Based Systems (SITIS), 2014 Tenth International Conference on*, pages 248–255. IEEE, 2014.



- [51] Ignazio Infantino, Umberto Maniscalco, Dario Stabile, and Filippo Vella. A fully visual based business document classification system. In *Science and Information Conference (SAI)*, 2014, pages 339–344, 2014.
- [52] Ignazio Infantino, Giovanni Pilato, Riccardo Rizzo, and Filippo Vella. A practical approach to humanoid introspection. *The 2018 Conference on Artificial Life: A Hybrid of the European Conference on Artificial Life (ECAL) and the International Conference on the Synthesis and Simulation of Living Systems (ALIFE)*, pages 1005–1006, 2013.
- [53] Ignazio Infantino, Giuseppe Scardino, and Filippo Vella. Identity recognition through human gaze tracking. In *Signal-Image Technology & Internet-Based Systems (SITIS), 2013 International Conference on*, pages 173–178. IEEE, 2013.
- [54] Ignazio Infantino, Filippo Vella, G Martino, and Salvatore Gaglio. Fast volumetric reconstruction of human body through superquadrics. In *Systems, Man, and Cybernetics (SMC), 2013 IEEE International Conference on*, pages 3721–3726. IEEE, 2013.
- [55] Ignazio Infantino, Salvatore Gaglio, Filippo Vella, and Gaspare Vetrano. Image segmentation through a hierarchy of minimum spanning trees. In *Signal Image Technology and Internet Based Systems (SITIS), 2012 Eighth International Conference on*, pages 381–388. IEEE, 2012.
- [56] Giovanni Pilato, Riccardo Rizzo, Filippo Vella, and Ignazio Infantino. Human-robot interaction based on introspective capability. In *Complex, Intelligent and Software Intensive Systems (CISIS), 2012 Sixth International Conference on*, pages 461–468. IEEE, 2012.
- [57] F. Vella, I. Infantino, S. Gaglio, and G. Vetrano. Image segmentation through a hierarchy of minimum spanning trees. In *Signal Image Technology and Internet Based Systems (SITIS), 2012 Eighth International Conference on*, pages 381–388. IEEE, 2012.
- [58] Ignazio Infantino, Giovanni Pilato, Riccardo Rizzo, and Filippo Vella. A cyc-based web system for semantic organization, search and browsing of knowledge items. In *Complex, Intelligent and Software Intensive Systems (CISIS), 2011 International Conference on*, pages 571–576. IEEE, 2011.
- [59] Ardizzone E., La Cascia M., Morana M., and Vella F. Three-domain image representation for personal photo album management. In *Multimedia Content Access: Algorithms and Systems IV, Proceedings of Society of Photographic Instrumentation Engineers (SPIE)*, volume 6540B, 2010.
- [60] Pilato G., La Cascia M., Vassallo G., and Vella F. A conceptual probabilistic model for the induction of image semantics. In *Proc. Of ICSC 2010 - Fourth IEEE International Conference on Semantic Computing*, 2010.
- [61] Infantino I., Spoto G., Vella F., and Gaglio S. Composition of SIFT features for robust image representation. In *Multimedia Content Access: Algorithms and Systems IV, Proceedings of Society of Photographic Instrumentation Engineers (SPIE)*, volume 6540B, 2010.
- [62] Infantino I., Spoto G., Vella F., and Gaglio S. Image representation with bag-of-biSIFT. In *Proceedings of the 5th International Conference on Signal-Image Technology and Internet-Based Systems (SITIS'09)*, 2009.
- [63] Ardizzone E., La Cascia M., and Vella F. Mean shift clustering for personal photo album organization. In *IEEE Proceedings of ICIP Workshop on Multimedia Information Retrieval: New Trends and Challenges*, 2008.
- [64] Ardizzone E., La Cascia M., and Vella F. A novel approach to personal photo album representation and management. In *Proceedings of Multimedia Content Access: Algorithms and systems II. (Part of 20th Annual IS&T/SPIE Symposium on Electronic Imaging)*, 2008.

- [65] Infantino I., Vella F., Lopes S., and Lodato C. Human-humanoid interaction by an intentional system. In *8th IEEE-RAS International Conference on Humanoid Robots*, 2008.
- [66] Infantino I., Vella F., Lopes S., and Lodato C. Implementation of an intentional vision system to support cognitive architectures. In *International Workshop on Robotic Perception (VISAPP-RoboPerco8), 3rd International Conference on Computer Vision Theory and Applications VISAPP'o8*, 2008.
- [67] Infantino I., Vella F., Lopes S., and Lodato C. An intentional system based on a knowledge base of visual perception. In *AI\*IA'o8, Workshop Verso la Robotica Intenzionale*, 2008.
- [68] Filippo Vella and Chin-Hui Lee. Boosting of maximal figure of merit classifiers for automatic image annotation. In *Proc. of IEEE International Conference on Image Processing*, 2007.
- [69] Filippo Vella and Chin-Hui Lee. Information fusion techniques for automatic image annotation. In Alpes R. Ranchordas, Helder Araújo, and Jordi Vitrià, editors, *VISAPP (2)*, pages 60–67. INSTICC - Institute for Systems and Technologies of Information, Control and Communication, 2007.
- [70] Bruna A., Vella F., Buemi A., and Curti S. Predictive differential modulation for cfa compression. In *Proceedings of the 6th IEEE Nordic Signal Processing Symposium (NORSIG)*, 2004.
- [71] Buemi A., Bruna A., Vella F., and Capra A. Bayer pattern compression by prediction errors. In *Proceedings of International Conference on E-business and Telecommunication Networks(ICETE)*, 2004. included in Best Papers List.
- [72] Arcangelo Bruna, Shawn Smith, Filippo Vella, and Filippo Naccari. Jpeg rate control algorithm for multimedia. *IEEE International Symposium on Consumer Electronics*, 2004, pages 114–117, 2004.
- [73] Guarneri I., Guarnera M., Bosco A., and Vella F. A quality assessment metric based on perceptual hvs behaviors. In *Proceedings of Advanced Concepts for Intelligent Vision Systems (ACIVS)*, 2004.
- [74] Spampinato G., Guarnera M., Vella F., and Buemi A. Improved error detection and concealment techniques for MPEG-4. In *Digest of Technical Papers. IEEE International Conference on Consumer Electronics*, 2003.
- [75] Battiato S., Castorina A., Guarnera M., and Vella F. A fast viewfinder pipeline for cfa digital images. In *Proceedings of IEEE 2003 International Conference on Multimedia and Expo*, 2003.
- [76] Vella F., Castorina A., Mancuso M., and Messina G. Robust digital image stabilization algorithm using block motion vectors. In *Digest of Technical Papers. International Conference on Consumer Electronics*, 2002.
- [77] Curti S., Sirtori D., and Vella F. 3d effect generation from monocular view. In *Proceedings. First International Symposium on 3D Data Processing Visualization and Transmission*, 2002.

## Brevetti

- [78] S. Battiato, A. Castorina, M. Guarnera, and F. Vella. Procedimento e sistema di elaborazione di segnali video per la visualizzazione su display a colori di piccole dimensioni. TO 02A001072. (Patent Pending).
- [79] S. Smith, A.R. Bruna, and F. Vella. Method for image compression, related system and computer product therefore. 0402969.4 (Patent Pending).
- [80] F. Vella, A. Bruna, and A. Buemi. Method and architecture for compressing image data acquired from a bayer color filter array. 04425415.9. (Patent Pending).

- [81] F. Vella, A.R. Bruna, A. V. Buemi, and A.L. Vitali. Method and system for processing signals via perceptive vectorial quantization, computer program product therefore. 20050063472 (Patent Pending).
- [82] F. Vella and M. Mancuso. Method of stabilizing an image sequence. US2004001147 (Patent Pending).
- [83] F. Vella and M. Mancuso. Motion estimation method and stabilization method for an image sequence. US2004027454 (Patent Pending).

## Miscellanea

- [84] F. Vella. Una introduzione alla rappresentazione geometrica del linguaggio. *Il Fardella. Rassegna di cultura e vita scolastica (in italian)*, 9, 2009.