

Curriculum Vitæ

Samuel Rota Bulò

Personal data

Place and date of birth: Basel (CH), 10th May 1981
Nationality: Italian
Marital status: unmarried
Permanent address: via Venozzi, 28/E, 31040 Volpago del Montello (TV), Italy
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Affiliation

Fondazione Bruno Kessler - irst
Research Area: Technologies of Vision
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I-38123 Povo, Trento, Italy

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Research interests

My research interests are mainly in the areas of *Computer Vision*, *Machine Learning* and *Pattern Recognition*, but include also *Optimization*, *Game Theory*, *Graph Theory*, and *Stochastic modelling*. Among others, I have attacked computer vision and pattern recognition problems like data clustering, graph matching, image segmentation, perceptual grouping using theories and mathematical tools inherited from evolutionary game theory and graph theory. I have also worked on extending the capabilities of *random forests* - a popular machine learning framework - in order to tackle problems with a structured output space (*e.g.* semantic image labelling), and on bridging random forests and *deep neural networks* to attack challenging, large-scale image classification problems (*e.g.* ImageNet). My recent research efforts are geared towards developing deep learning approaches to attack challenging computer vision problems.

Education

Jan. 2006 – Mar. 2009

PhD in Computer Science

Università Ca' Foscari Venezia, Italy.

Supervisor: prof. Marcello Pelillo

Thesis: "A Game-Theoretic Framework for Similarity-Based Data Clustering"

Sept. 2003 – Oct. 2005

Laurea Specialistica in Computer Science (summa cum laude)

Università Ca' Foscari Venezia, Italy

Supervisor: prof. Marcello Pelillo

Thesis: “Clustering with asymmetric affinities: a game theoretic-based approach”

Sept. 2000 – Jul. 2003

Laurea Triennale in Informatica (*summa cum laude*)

Università Ca' Foscari Venezia, Italy

Supervisor: prof. Marcello Pelillo

Thesis: “Shortest paths on road networks: a hierarchical approach”

Sept. 1995 – Jul. 2000

Diploma di scuola superiore (100/100)

Istituto tecnico commerciale J. Riccati ad indirizzo economico aziendale

Treviso, Italy

Employment

Jan. 2016 – Jun. 2016

Researcher (computer science)

Fondazione Bruno Kessler - irst, Trento, Italy

Research area: “Technologies of Vision”

Jul. 2015 – Dec. 2015

Researcher (computer science)

Microsoft Research, Cambridge, UK

Research area: computer vision and machine learning

Project: Automatic prediction of multiple sclerosis stage from Kinect videos

Contract duration: 6 months

Aug. 2013 – Jun. 2015

Researcher (computer science)

Fondazione Bruno Kessler - irst, Trento, Italy

Research area: “Technologies of Vision”

Apr. 2012 – Jul. 2013

Post-doc position (computer science)

DAIS, Università Ca' Foscari Venezia, Italy

Project: “Similarity-based probabilistic clustering”

Mar. 2010 – Feb. 2012

Post-doc position (computer science)

DAIS, Università Ca' Foscari Venezia, Italy

Project: “Hypergraph clustering based on game-theory. Theory and algorithms”
(funded by “SIMBAD” European FET Open Project)

Jan. 2009 – Dec. 2009

Post-doc position (computer science)

DAIS, Università Ca' Foscari Venezia, Italy

Project: “3D acquisition and modeling of images”

Visiting appointments

- Department of Computer, Control and Management Engineering, University “La Sapienza” of Rome, Italy (Jul. 2016)
- Media Integration and Communication Center, University of Firenze, Italy (Dec. 2012)
- Microsoft Research Cambridge, UK (Feb. 2012)
- Department of Computer Science, University of York, UK (May 2011)
- Institute for Computer Graphics and Vision, Graz University of Technology, Austria (May 2011)
- Department of Electrical and Computer Engineering, IST - Technical University of Lisbon, Portugal (Feb. 2010)
- Department of Statistics and Decision Support Systems, University of Vienna (Apr.-Jun. 2008; Dec. 2008)

Awards and recognitions

- *Winner of Marr Prize* at “International Conference on Computer Vision” (ICCV 2015) with the paper “Deep Neural Decision Forests”
- *Outstanding Reviewer* at “International Conference on Computer Vision” (ICCV 2015)
- *Best Paper Award* at “5th International Conference on Performance Evaluation Methodologies and Tools” (Valuetools 2011) with the paper “Explicit solutions for queues with Hypo-exponential service time and applications to product-form analysis”
- *Best Paper Session* at IEEE/ACM International Symposium on Modelling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS2012) with the paper “A numerical algorithm for the decomposition of cooperating structured Markov processes”
- PhD studies funded by national grant (2006)

Teaching

Lower-division undergraduate courses

- *Computer networks* for part-time students, Università Ca’ Foscari Venezia, Italy (2013)
- *Computer science basics*, IUAV University, Venice, Italy (2012)
- *Object-oriented programming* for part-time students, Università Ca’ Foscari Venezia, Italy (2013)
- *Preparatory course on mathematics and computer science*, Università Ca’ Foscari Venezia, Italy (2008–2011, 2013)
- *Probability and statistics*, assistant teacher, Università Ca’ Foscari Venezia, Italy (2006, 2007)
- *Programming* for part-time students, Università Ca’ Foscari Venezia, Italy (2010–2012)

Upper-division undergraduate courses

- *Information systems and networks*, Università Ca' Foscari Venezia, Italy (2013)
- *Computer vision*, Università Ca' Foscari Venezia, Italy (2010, 2011)

Post-diploma courses

- *FSE Course “Java & Mobile Developer”. Introduction on Java Programming*, at Kairos Spa, Mestre Venezia, Italy (2012)
- *Course of higher technical education (I.F.T.S.). Databases*, ITIS “C. Zuccante” Mestre-Venezia, Italy (2011)

Professional services

Editorial appointments

- Editorial Board Member, *Pattern Recognition*, Elsevier, (2016–)
- Editorial Board Member, *International Journal on Machine Learning and Cybernetics (IJMLC)*, Springer, (2017–)

Program committee member

- 2nd International Conference on Pattern Recognition Applications and Methods (ICPRAM 2013), Barcelona, Spain, Feb. 2013
- 2nd International Workshop on Similarity-Based Pattern Analysis and Recognition (SIMBAD 2013), York, UK, 2013
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2013), Portland, Oregon, USA, 2013
- Learning and Intelligent OptimizatioN Conference (LION 7), Catania, Italy, Jan. 7-11, 2013
- 23rd International Joint Conference on Artificial Intelligence (IJCAI 2013), Beijing, China, Aug. 3-9, 2013
- CVPR Workshop on “Structured Prediction - Tractability, Learning and Inference”, Portland, Oregon, USA, Jun. 25-27, 2013
- 15th International Conference on Computer Analysis of Images and Patterns (CAIP 2013), York, UK, Aug. 27-29, 2013
- 12th Mexican International Conference on Artificial Intelligence (MICAI 2013), Mexico City, Mexico, Nov. 24-30, 2013
- IAPR International Workshop on Structural and Synthactic Pattern Recognition (SSPR 2014), Joensuu, Finland, Aug. 20-22, 2014
- 3rd International Conference on Pattern Recognition Applications and Methods (ICPRAM 2014), ESEO, Angers, Loire Valley, France, Mar. 2014
- International Conference on Image Analysis and Recognition (ICIAR 2014), Vilamoura, Algarve, Portugal, Oct. 2014
- 16th International Conference on Computer Analysis of Images and Patterns (CAIP 2015), Valletta, Malta, Sep. 2-4, 2015
- 4th International Conference on Pattern Recognition Applications and Methods (ICPRAM 2015), Lisbon, Portugal, Jan. 2015

- 3rd International Workshop on Similarity-Based Pattern Analysis and Recognition (SIMBAD 2015), Copenhagen, Denmark, Oct. 12-14, 2015
- International Conference on Image Analysis and Recognition (ICIAR 2015), Niagara Falls, Canada, Jul. 2015
- International Conference on Image Analysis and Processing (ICIAP 2015), Genova, Italy, Sept. 2015
- 5th International Conference on Pattern Recognition Applications and Methods (ICPRAM 2016), Rome, Italy, Feb. 2016
- 2nd International Workshop on Machine Learning, Optimization and Big Data (MOD 2016), Volterra, Italy, Aug. 2016
- International Conference on Image Analysis and Recognition (ICIAR 2016), Povóa de Varzim, Portugal, Jul. 2016
- The joint IAPR International Workshops on Structural and Syntactic Pattern Recognition (SSPR 2016) and Statistical Techniques in Pattern Recognition (SPR 2016), Mérida, Mexico, Dec. 2016
- 13th Asian Conference on Computer Vision (ACCV 2016), Tapei, Taiwan, Nov. 2016
- 6th International Conference on Pattern Recognition Applications and Methods (ICPRAM 2017), Porto, Portugal, Feb. 2017
- 17th International Conference on Computer Analysis of Images and Patterns (CAIP 2017), Yastad, Sweden, Aug. 22-24, 2017
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2017), Honolulu, Hawaii, USA, 2017
- ACM International Conference on Multimedia Retrieval (ICMR 2017), Bucharest, Romania, Jun. 6-9, 2017
- 3rd International Workshop on Machine Learning, Optimization and Big Data (MOD 2017), Volterra, Italy, Sep. 2017
- 1st International Workshop on Brain-Inspired Computer Vision (WBICV2017), Catania, Italy, Sep. 11-12, 2017

Conference and workshop organization

- *Organization committee member*, “International Workshop on Computer Vision” (IWCV). Venice, May, 2008
- *Organization committee member*, “7th IAPR -TC-15 Workshop on Graph-based Representations in Pattern Recognition” (GBR). Venice, May 2009
- *Special session chair* (with Marcello Pelillo), “Learning and Intelligent OptimizatiON 4” (LION 4), Special session on “Learning and Intelligent OptimizatiON in Structured domains” (LION-S). Venice, January, 2010
- *Organization committee member*, “Learning and Intelligent OptimizatiON 4” (LION 4). Venice, January, 2010
- *Session chair*, “Learning and Intelligent OptimizatiON 4” (LION 4). Venice, January, 2010
- *Organizing committee chair*, “1st International Workshop on Similarity-Based Pattern Analysis and Recognition” (SIMBAD). Venice, September, 2011

PhD Thesis committee member

- Albert Solé-Ribalta, *Department d'Enginyeria, Informàtica i Matemàtiques*, Terragona, Spain (2012) (invited as substitute member)

Referee

Journals

- 4OR - A Quarterly Journal of Operations Research
- Advances in Bioinformatics
- BioSystems
- Computer Vision and Image Understanding
- Connection Science
- Discrete Applied Mathematics
- European Journal of Operational Research
- IEEE Transactions on Cybernetics
- IEEE Transactions on Image Processing
- IEEE Transactions on Information Theory
- IEEE Transactions on Pattern Analysis and Machine Intelligence
- IEEE Transactions on Neural Networks and Learning Systems
- IET Computer Vision
- Information Sciences
- INFORMS Journal on Computing
- Graphs and Combinatorics
- Journal of Combinatorial Optimization
- Journal of Global Optimization
- Journal of Machine Learning Research
- Journal of Mathematical Methods of Operations Research
- Journal of Optimization Theory and Applications
- Journal of Visual Image, Communication and Representation
- Knowledge-Based Systems
- Neural Computation
- Pattern Recognition
- Pattern Recognition Letters
- SIAM Journal on Matrix Analysis and Applications
- System, Man and Cybernetics Part B

International Conferences

- IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2008)
- 12th IEEE International Conference on Computer Vision (ICCV 2009)
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2010)

- 21st International Conference on Artificial Neural Networks and Machine Learning (ICANN 2011)
- 8th IAPR-TC-15 International Workshop on Graph-Based Representations in Pattern Recognition (GBR 2011)
- 1st International Workshop on Similarity-Based Pattern Recognition (SIMBAD 2011)
- 5th International Conference on Learning and Intelligent Optimization (LION 2011)
- 12th European Conference on Computer Vision (ECCV 2012)
- 25th IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2012)
- European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECMLPKDD 2012)
- 3rd International Symposium on Games, Automata, Logics, and Formal Verification (GandALF 2012)
- 21st International Conference on Computer Graphics, Visualization and Computer Vision (WSCG 2013)
- IEEE International Conference on Computer Vision (ICCV 2013)
- 27th IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2014)
- 7th International Conference on Performance Evaluation Methodologies and Tools (ValueTools 2014)
- 22nd International Conference on Pattern Recognition (ICPR 2014)
- European Conference on Computer Vision (ECCV 2014)
- 22nd International Conference on Computer Graphics, Visualization and Computer Vision (WSCG 2014)
- 28th IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2015)
- IEEE International Conference on Computer Vision (ICCV 2015)
- 29th IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2016)
- 14th European Conference on Computer Vision (ECCV 2016)
- ACM Multimedia Conference 2016 (ACMMM 2016)
- Geometry Meets Deep Learning (ECCV 2016 Workshop)

PhD Thesis

- Caiming Zhong, *School of Computing*, University of Eastern Finland, Finland (2013)

Invited lectures and tutorials

Invited speaker at international conferences/workshops

- “Clusters, Games and Axioms” Workshop, Lorentz Center, Leiden, The Netherlands, 22-26 June, 2015

Panel discussions

- *Panelist*, IAPR International Workshop on Statistical Techniques in Pattern Recognition, Cesme, Turkey, August 2010

Invited seminars

- Fondazione Bruno Kessler (FBK), Trento, Italy, January, 2013
- Department of Computer Science, University of York, UK, May 2011
- Institute for Computer Graphics and Vision, Graz University of Technology, Austria, May 2011
- Department of Electrical and Computer Engineering, IST, Technical University of Lisbon, Portugal, February 2010
- Faculty of Mathematics, University of Vienna, Austria, December 2008
- Department of Statistics and Decision Support Systems, University of Vienna, Austria, June 2008
- Department of Statistics and Decision Support Systems, University of Vienna, Austria, May 2008
- High School of Valdagno (VI), Valdagno, Italy, February 2008

Scientific supervision and collaborations

International collaborations

- *Mapillary Research*, Graz, Austria: Dr. Peter Kotschieder
- *Microsoft Research*, Cambridge, UK: Dr. Antonio Criminisi, Dr. Pushmeet Kohli
- Department of Electrical and Computer Engineering, *Technical University of Lisbon*, Portugal: prof. Ana Fred, prof. Mario Figueiredo, André Lourenço
- Institute for Computer Graphics and Vision, *University of Technology, Graz, Austria*: prof. Horst Bischof
- Applied Mathematics and Statistics, *University of Vienna, Austria*: prof. Immanuel M. Bomze
- Department of Computer Science, *University of York, UK*: prof. Edwin Hancock
- Computer Vision Group, *Technische Universität München*, Germany: Prof. Daniel Cremers, Dr. Emanuele Rodolà
- Machine Intelligence Unit, *Indian Statistical Institute*, India: Prof. Malay Kumar Kundu

Supervisor of theses

- Co-supervisor of several bachelor and master theses
- Collaborates in the supervision of PhD theses of the group CVPR of Venice

Projects

- Participant, European Commission, FP7 ICT, *VENTURI - immersiVe ENhancement of User-world Interactions*, 2011-2014, EUR 3.600.000 (<https://venturi.fbk.eu/>)
- Participant, Progetto di Ricerca MIUR di Interesse Nazionale (PRIN), *Similarity-Based Methods for Computer Vision and Pattern Recognition: Theory, Algorithms, Applications*, 2007-2009, EUR 83.160

- Participant, European Commission, FP7 FET-Open (STREP), *SIMBAD - Beyond Features: Similarity-Based Pattern Analysis and Recognition*, 2008-2011, EUR 2.171.000 (<http://simbad-fp7.eu>)
- Participant, Progetto di Ricerca MIUR di Interesse Nazionale (PRIN), *Similarity- Based Methods for Computer Vision and Pattern Recognition: Theory, Algorithms, Applications*, 2007-2009, EUR 83.160

Consulting

- Softcomet S.r.l, Treviso, Italy (2006 – today)
- System V S.r.l, Mestre Venezia, Italy (2002 – 2004)

Miscellaneous

- Erdős number = 3 (via M. Pelillo, A. Jagota)
- Citations number (Google scholar, 03.03.2017) = 1101
- H-index (Google scholar, 03.03.2017) = 19
- i10-index (Google scholar, 03.03.2017) = 29

Publications

International journals

- [J.1] S. Rota Bulò, A. Torsello, and M. Pelillo. A game-theoretic approach for partial clique enumeration. *Image and Vision Computing*, vol. 27, n. 7, pp. 911 – 922, 2009. Special Issue on “Graph-Based Representations in Pattern Recognition.”
- [J.2] S. Rota Bulò, and M. Pelillo. A generalization of the Motzkin-Straus theorem to hypergraphs. *Optimization Letters*, vol. 3, n. 2, pp. 287 – 295, 2009.
- [J.3] S. Rota Bulò, M. Pelillo, and I. M. Bomze. Graph-based quadratic optimization: A fast evolutionary approach. *Computer Vision and Image Understanding*, vol. 115, pp.984–995, 2011.
- [J.4] S. Rota Bulò, M. Rabbi, and M. Pelillo. Content-based image retrieval with relevance feedback using random walks. *Pattern Recognition*, vol. 44, pp. 2109–2122, 2011.
- [J.5] S. Rota Bulò, and I. M. Bomze. Infection and immunization: a new class of evolutionary game dynamics. *Games and Economic Behaviour*, vol. 71, pp. 193–211, 2011. Special issue in honor of John F. Nash, jr. .
- [J.6] S. Rota Bulò, E. R. Hancock, F. Aziz and M. Pelillo. Efficient computation of Ihara coefficients using the Bell polynomial recursion. *Linear Algebra and its Applications*, vol. 436, n. 5, pp. 1436–1441, 2012.
- [J.7] P. Kotschieder, S. Rota Bulò, M. Donoser, M. Pelillo and H. Bischof. Evolutionary Hough games for coherent object detection. *Computer Vision and Image Understanding*, vol. 116, n. 11, pp. 1149–1158, 2012.

- [J.8] S. Rota Bulò and M. Pelillo. A game-theoretic approach to hypergraph clustering. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 35, n. 6, pp. 1312–1327, 2013.
- [J.9] P. Kotschieder, S. Rota Bulò, M. Pelillo and H. Bischof. Structured labels in random forests for semantic labelling and object detection. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 36, n. 10, pp. 2104–2116, 2014.
- [J.10] E. Rodolà, S. Rota Bulò and D. Cremers. Robust Region Detection via Consensus Segmentation of Deformable Shapes. *Computer Graphics Forum*, vol. 33, n. 5, p. 97–106, 2014.
- [J.11] A. Marin and S. Rota Bulò. Explicit solutions for queues with Hypo- or Hyper-exponential service time distribution and application to product-form approximations. *Performance Evaluation*, vol. 81, pp. 1–19, 2014.
- [J.12] M. K. Kundu, M. Chowdhury and S. Rota Bulò. A graph-based relevance feedback mechanism in content-based image retrieval. *Knowledge-based Systems*, vol. 73, pp. 254–264, 2015.
- [J.13] A. Lourenço, S. Rota Bulò, N. Rebagliati, A. Fred, M. Figueiredo and M. Pelillo. Probabilistic Consensus Clustering using Evidence Accumulation. *Machine Learning*, vol. 98, n. 1-2, pp. 331–357, 2015.
Special Issue on “MultiClust: Discovering, Summarizing and Using Multiple Clusterings.”
- [J.14] F. Nourbakhsh, S. Rota Bulò and M. Pelillo. A Matrix Factorization Approach to Graph Compression with Partial Information. *International Journal of Machine Learning and Cybernetics*, vol. 6, n. 4, pp. 523–536, 2015.
- [J.15] L. Porzi, S. Rota Bulò, A. Peñate-Sánchez, E. Ricci and F. Moreno-Noguer. Learning Depth-aware Deep Representations for Robotic Perception. *IEEE Robotics and Automation Letters (RA-L)*, vol. 2, n. 2, pp. 468–475, 2017.
- [J.16] S. Rota Bulò, B. Biggio, I. Pillai, M. Pelillo and F. Roli. Randomized Prediction Games for Adversarial Learning. *IEEE Transactions on Neural Networks and Learning Systems*. [to appear]
- [J.17] L. Porzi, S. Rota Bulò, O. Lanz, P. Valigi and E. Ricci. An Automatic Image-to-DEM Alignment Approach for Annotating Mountains Pictures on a Smartphone. *Machine Vision and Applications*, [to appear]
- [J.18] J. Varadarajan, R. Subramanian, S. Rota Bulò, N. Ahuja, O. Lanz and E. Ricci. Joint Estimation of Human Pose and Conversational Groups from Social Scenes. *International Journal of Computer Vision*. [major revision, Aug. 2016]
- [J.19] S. Rota Bulò and M. Pelillo. Dominant Sets clustering: a review. *European Journal of Operational Research*. [under major revision]

Refereed conferences

- [C.1] A. Torsello, S. Rota Bulò, and M. Pelillo. Grouping with asymmetric affinities: A game-theoretic perspective. In: *IEEE Conference on Computer Vision and Pattern Recognition (CVPR2006)*, vol. 1, pp. 292 – 299, 2006.
- [C.2] S. Rota Bulò, A. Torsello, and M. Pelillo. A continuous-based approach for partial clique enumeration. In: *Graph-Based Representations in Pattern Recognition (GBR2007)*, LNCS 4538, pp. 61–70, Springer, 2007. [**oral presentation**]
- [C.3] S. Rota Bulò, and M. Pelillo. A continuous characterization of maximal cliques in k-uniform hypergraphs. In: *Learning and Intelligent OptimizatioN 2 (LION2007 II), Selected Papers*, LNCS 5313, pp. 220 – 233, Springer, 2008. [**oral presentation**]

- [C.4] A. Torsello, S. Rota Bulò and M. Pelillo. Beyond partitions: Allowing overlapping groups in pairwise clustering. In: *19th International Conference on Pattern Recognition (ICPR2008)*, Tampa, Florida, USA, December 2008. [oral presentation]
- [C.5] S. Rota Bulò, A. Albarelli, A. Torsello, and M. Pelillo. A hypergraph-based approach to affine parameters estimation. In: *19th International Conference on Pattern Recognition (ICPR2008)*, Tampa, Florida, USA, December 2008. [oral presentation]
- [C.6] S. Rota Bulò and M. Pelillo. New bounds on the clique number of graphs based on spectral hypergraph theory. In: *Learning and Intelligent Optimization 3 (LION2009), Selected Papers*, LNCS 5851, pp. 45–58, 2009. [oral presentation]
- [C.7] A. Marin and S. Rota Bulò. A general algorithm to compute the steady state solution of product-form cooperating Markov chains. In: *IEEE/ACM International Symposium on Modelling, Analysis and Simulation of Computer and Telecommunication Systems (MAS-COTS2009)*, pp. 515–524, London, UK, 2009. [oral presentation]
- [C.8] A. Albarelli, S. Rota Bulò, A. Torsello and M. Pelillo. Matching as a non-cooperative game. In: *International Conference on Computer Vision (ICCV2009)*, Kyoto, Japan, 2009.
- [C.9] A. Albarelli, E. Rodola', S. Rota Bulò and A. Torsello. Fast 3D surface reconstruction by unambiguous compound phase coding. In: *IEEE International Workshop on 3D Digital Imaging and Modeling (3DIM2009)*, Kyoto, Japan, 2009.
- [C.10] S. Rota Bulò and M. Pelillo. A game-theoretic approach to hypergraph clustering. In: *Advances in Neural Information Processing Systems (NIPS2009)*, vol. 22, pp. 1571–1579, 2009.
- [C.11] S. Rota Bulò and M. Pelillo. Probabilistic clustering using the Baum-Eagon inequality. In: *20th International Conference on Pattern Recognition (ICPR2010)*, Istanbul, Turkey, pp. 1429–1432, 2010. [oral presentation]
- [C.12] S. Rota Bulò, A. Lourenco, A. Fred and M. Pelillo. Pairwise probabilistic clustering using evidence accumulation. In: *Structural, Syntactic, and Statistical Pattern Recognition, Joint IAPR International Workshop, (S+SSPR2010)*, LNCS 6218, pp. 395–404, 2010. [oral presentation]
- [C.13] S. Rota Bulò and M. Pelillo. A new spectral bound on the clique number of graphs. In: *Structural, Syntactic, and Statistical Pattern Recognition, Joint IAPR International Workshop, (S+SSPR2010)*, LNCS 6218, pp. 680–689, 2010. [oral presentation]
- [C.14] S. Rota Bulò, I. M. Bomze M. and Pelillo. Fast population game dynamics for dominant sets and other quadratic optimization problems. In: *Structural, Syntactic, and Statistical Pattern Recognition, Joint IAPR International Workshop, (S+SSPR2010)*, LNCS 6218, pp. 275–285, 2010.
- [C.15] P. Kotschieder, S. Rota Bulò, M. Donoser, M. Pelillo and H. Bischof. Semantic image labelling as a label puzzle game. In: *The 22nd British Machine Vision Conference (BMVC2011)*, pp. 111.1 - 111.12, 2011.
- [C.16] P. Kotschieder, S. Rota Bulò, M. Pelillo and H. Bischof. Structured class-labels in random forests for image labelling. In: *International Conference on Computer Vision (ICCV2011)*, pp. 2190–2197, 2011. [oral presentation]
- [C.17] A. Marin, and S. Rota Bulò. Explicit solutions for queues with hypo-exponential service time and applications to product-form analysis. In: *5th International Conference on Performance Evaluation Methodologies and Tools (VALUETOOLS 2011)*, pp. 166–175, 2011. [oral presentation, BEST PAPER AWARD]

- [C.18] S. Rota Bulò, P. Kotschieder, M. Pelillo and H. Bischof. Structured local predictors for image labelling. In: *IEEE Conference on Computer Vision and Pattern Recognition (CVPR2012)*, pp. 3530-3537, 2012.
- [C.19] A. Marin, S. Rota Bulò and S. Balsamo. A numerical algorithm for the decomposition of cooperating structured Markov processes. In: *IEEE/ACM International Symposium on Modelling, Analysis and Simulation of Computer and Telecommunication Systems (MAS-COTS2012)*, pp. 401-410, Arlington, Virginia, USA, August, 2012. [**oral presentation, BEST PAPER SESSION**]
- [C.20] P. Kotschieder, S. Rota Bulò, A. Criminisi, P. Kohli, M. Pelillo and H. Bischof. Context-sensitive decision forests for object detection. In: *Neural Information Processing Systems (NIPS2012)*, pp. 440-448, Lake Tahoe, Nevada, USA, December, 2012.
- [C.21] A. Lourenço, S. Rota Bulò, N. Rebagliati, M. Figueiredo, A. Fred and M. Pelillo. Probabilistic evidence accumulation for clustering ensembles. In: *2nd International Conference on Pattern Recognition Applications and Methods (ICPRAM2013)*, Barcelona, Spain, February, 2013. [**oral presentation**]
- [C.22] A. Lourenço, S. Rota Bulò, N. Rebagliati, M. Figueiredo, A. Fred and M. Pelillo. Consensus clustering using partial evidence accumulation. In: *6th Iberian Conference on Pattern Recognition and Image Analysis (IbPRIA2013)*, Madeira, Portugal, June, 2013. [**oral presentation**]
- [C.23] N. Rebagliati, S. Rota Bulò and M. Pelillo. Correlation clustering with stochastic labels. In: *2nd International Workshop on Similarity-Based Pattern Analysis (SIMBAD2013)*, York, UK, July, 2013. [**oral presentation**]
- [C.24] A. Lourenço, S. Rota Bulò, A. Fred and M. Pelillo. Consensus Clustering with Robust Evidence Accumulation. In: *Intl. Conf. on Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR2013)*, Lund, Sweden, August, 2013. [**oral presentation**]
- [C.25] A. Lourenço, S. Rota Bulò, C. Carreiras, H. Silva, A. Fred and M. Pelillo. Dominant Set approach to ECG Biometrics. In: *18th Iberoamerican Congress on Pattern Recognition (CIARP2013)*, Havana, CUBA, November, 2013. [**oral presentation**]
- [C.26] B. Biggio, I. Pillai, S. Rota Bulò, D. Ariu, M. Pelillo and F. Roli. Is Data Clustering in Adversarial Settings Secure? In: *6th ACM Workshop on Artificial Intelligence and Security (AISec2013)*, pp. 87-98, Berlin, Germany, November, 2013. [**oral presentation**].
- [C.27] S. Rota Bulò and P. Kotschieder. Neural Decision Forest for Semantic Image Labelling. In: *27th IEEE Conference on Computer Vision and Pattern Recognition (CVPR2014)*, Columbus, Ohio, USA, 2014. [**oral presentation**]
- [C.28] E. Rodolà, S. Rota Bulò, T. Windheuser, M. Vestner and D. Cremers. Dense Non-Rigid Shape Correspondence using Random Forests. In: *27th IEEE Conference on Computer Vision and Pattern Recognition (CVPR2014)*, Columbus, Ohio, USA, 2014
- [C.29] F. Nourbakhsh, S. Rota Bulò and M. Pelillo. A Matrix Factorization Approach to Graph Compression. In: *22nd International Conference on Pattern Recognition (ICPR2014)*, Stockholm, Sweden, 2014. [**oral presentation**]
- [C.30] A. Lourenço, S. Rota Bulò, C. Carreiras and A. Fred. ECG Analysis Using Consensus Clustering. In: *22nd European Signal Processing Conference 2014 (EUSIPCO2014)*, Lisbon, Portugal, 2014. [**oral presentation**]
- [C.31] L. Porzi, S. Rota Bulò, P. Valigi, O. Lanz and E. Ricci. Learning Contours for Automatic Annotations of Mountains Pictures on a Smartphone. In: *8th ACM/IEEE International*

- Conference on Distributed Smart Cameras (ICDSC2014)*, Venezia, Italy, 2014. [**oral presentation**]
- [C.32] S. Mutlu, S. Rota Bulò and O. Lanz. Exploiting color constancy for robust tracking under non-uniform illumination. In: *International Conference on Image Analysis and Recognition (ICIAR2014)*, Vilamoura, Algarve, Portugal, 2014. [**oral presentation**]
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