

Dr. Gabriele Moser – Curriculum Vitae

Gabriele Moser received the Laurea degree (M.Sc. equivalent) in telecommunications engineering and the Ph.D. degree in space sciences and engineering from the University of Genoa, in 2001 and 2005, respectively. Since 2014, he has been an Associate Professor of Telecommunications at the University of Genoa. He was Assistant Professor from 2010 to 2014.

He was granted the “Alessandro and Rinaldo Viviani” Laurea thesis award issued by the Italian Electrical and Electronic Association (AEI) and the 2010 Best Paper Award at the 2010 IEEE-WHISPERS workshop (Reykjavic, Iceland). He has been cooperating since 2001 with the “Image Processing and Pattern Recognition for Remote Sensing” (IPRS) research laboratory lead by Prof. S. B. Serpico at the University of Genoa. He is the head of the “Remote sensing for environment and Sustainability” (RIOS) laboratory at the Savona Campus of the University of Genoa. In 2004, he was a visiting Ph.D. student at the *Institut National de Recherche en Informatique et en Automatique* (INRIA, Sophia Antipolis, France). From 2005 to 2009, he was a postdoc research fellow (“assegnista”) at the Universities of Genoa and Florence.

Dr. Moser is the (co)author of more than 100 scientific publications in journals, international edited books, and conference proceedings. He has been an Associate Editor of the international journals IEEE GEOSCIENCE AND REMOTE SENSING LETTERS (GRSL) and PATTERN RECOGNITION LETTERS (PRL) since 2008 and 2011, respectively. He has been a Guest Editor of a Special Issue of the IEEE GEOSCIENCE AND REMOTE SENSING MAGAZINE on “Data Fusion in Remote Sensing” (scheduled in September 2015). He has been a reviewer for several international journals. His research activity is focused on pattern recognition and image analysis methodologies for remote sensing data interpretation. His current research interests include change detection, synthetic aperture radar (SAR) data analysis, kernel-based methods for classification and regression, and Markov random field models for contextual image analysis.

At the University of Genoa, he has been teaching an advanced pattern recognition course for the Ph.D. School in Sciences and Technologies of Information and Communications since 2007; has been teaching image processing and remote sensing courses in M.Sc. programs since 2011; and has been collaborating to the teaching activities of several telecommunications, pattern recognition, and remote sensing courses since 2001. He is the author of two didactic books on remote sensing image analysis and feature transformation topics, respectively.

Dr. Moser has been involved in the technical and management activities of several scientific and applicative projects related to the exploitation of remote sensing data. He participated in several MIUR-PRIN programs, focused on hyperspectral (PRIN-2001) and multitemporal (PRIN-2002) remote sensing image analysis, on geophysical parameter estimation (PRIN-2003), and on data fusion (PRIN-2005). He has been involved in projects funded by the Italian Space Agency on SAR image processing (SARIS program, 2004), flood prevention and management (OPERA program, 2007-2010), and multirisk monitoring of urban areas and infrastructures, by the Italian Department for Civil Protection (PROSCENIO program, 2005-2008), and by the European Union (ENDORSE program, FP7-SPACE, 2011-2013; URBIS program, CIP, 2014-2017).

He is a Senior Member of the Institute of Electrical and Electronic Engineers (IEEE) and a member of the IEEE Geoscience and Remote Sensing Society (GRSS), the Italian Association of Electrical, Electronic, Automation, Computer Science, and Telecommunications, the Italian Group of Researchers in Pattern Recognition, and the National Interuniversity Consortium in Telecommunications.

He has been the Chairman of the Image Analysis and Data Fusion Technical Committee of the IEEE GRSS since 2013. He has been a member of the Program Committees of several international conferences, including the annual SPIE Image and Signal Processing for Remote Sensing conference (since 2008) and the annual IEEE Geoscience and Remote Sensing Symposium (IGARSS; since 2013). He has been Publication Co-Chair and Coordinator of Session Organizers of all invited sessions of IGARSS 2015 (Milan, Italy, July 2015). He has been Technical Co-Chair of the “EARTHVISION – Looking from above: when Earth observation meets vision” workshop at the 2015 Computer Vision and Pattern Recognition conference (CVPR, Boston, MA, June 2015).

Recent international journal publications

1. G. Moser, S. B. Serpico, “Automatic parameter optimization for support vector regression for land and sea surface temperature estimation from remote-sensing data”, *IEEE Trans. Geosci. Remote Sensing*, 47(3):909-921, 2009

2. G. Moser, S. B. Serpico, "Unsupervised change detection from multichannel SAR data by Markovian data fusion", *IEEE Trans. Geosci. Remote Sensing*, 47(7):2114-2128, 2009
3. V. Krylov, G. Moser, S. B. Serpico, J. Zerubia "Enhanced dictionary-based SAR amplitude distribution estimation and its validation with very high-resolution data", *IEEE Geosci. Remote Sensing Letters*, 8(1):148-152, 2011.
4. V. Krylov, G. Moser, S. B. Serpico, J. Zerubia, "Supervised high resolution dual polarization SAR image classification by finite mixtures and copulas", *IEEE J. Selected Topics in Signal Process.*, 5(3): 554-566, 2011.
5. G. Moser, E. Angiati, S. B. Serpico, "Multiscale unsupervised change detection on optical images by Markov random fields and wavelets", *IEEE Geosci. Remote Sensing Letters*, 8(4):725-729, 2011.
6. G. Troglio, J. Le Moigne, J. A. Benediktsson, G. Moser, S. B. Serpico, "Automatic extraction of ellipsoidal features for planetary image registration", *IEEE Geosci. Remote Sensing Letters*, 9(1):95-99, 2012.
7. S. B. Serpico, S. Dellepiane, G. Boni, G. Moser, E. Angiati, R. Rudari, "Information extraction from remote sensing images for flood monitoring and damage evaluation", *Proceedings of the IEEE*, 100(10):2946-2970, 2012.
8. A. Voisin, V. Krylov, G. Moser, S. B. Serpico, J. Zerubia, "Classification of very high resolution SAR images of urban areas using copulas and texture in a hierarchical Markov random field model", *IEEE Geosci. Remote Sensing Letters*, 10(1):96-100, 2013.
9. G. Moser, S. B. Serpico, "Combining support vector machines and Markov random fields in an integrated framework for contextual image classification", *IEEE Trans. Geosci. Remote Sensing*, 51(5):2734-2752, 2013.
10. G. Moser, S. B. Serpico, J. A. Benediktsson, "Land-cover mapping by Markov modeling of spatial-contextual information in very-high-resolution remote sensing images", *Proceedings of the IEEE*, 101(3):631-651, 2013.
11. V. Akbari, A. P. Doulgeris, G. Moser, T. Eltoft, S. N. Anfinsen, S. B. Serpico, "A textural-contextual model for unsupervised segmentation of multipolarization synthetic aperture radar images", *IEEE Trans. Geosci. Remote Sensing*, 51(4):2442-2453, 2013.
12. V. Krylov, G. Moser, S. B. Serpico, J. Zerubia, "On the method of logarithmic cumulants for parametric probability density function estimation", *IEEE Trans. Image Process.*, 22(10):3791-3806, 2013.
13. A. Voisin, V. A. Krylov, G. Moser, S. B. Serpico, J. Zerubia, "Supervised classification of multisensor and multiresolution remote sensing images with a hierarchical copula-based approach", *IEEE Trans. Geosci. Remote Sensing*, 52(6):3346-3358, 2014.
14. G. Moser, M. De Martino, and Sebastiano B. Serpico, "Estimation of air surface temperature from remote sensing images and pixelwise modeling of the estimation uncertainty through support vector machines," *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 8(1):332-349, 2015.