



Prof. Eric Pottier

Professor of University (Pr-Ex)
PhD Doctor in Signal Processing and
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Background

Eric Pottier (IEEE M'95, SM'06, Fellow2011, SEE SM'07) received the MSc (87) and Ph.D. (90) in « signal processing and telecommunication » from the University of Rennes 1 and defended his Habilitation from the University of Nantes in 1998 on the topic « Contribution to Radar Polarimetry : From Theoretical Approach to Applications ». From 1988 to 1999 he held an associate professor position at IRESTE -University of Nantes, France where he was the head of the Polarimetry Group of the Electronic and Informatic Systems laboratory. Since 1999, he is full professor at the University of Rennes 1, France, where he was the Head of the SAPHIR team (SAR Polarimetry Holography Interferometry Radargrammetry) of the Image Processing and Remote Sensing Group from 1999 to 2011. From 2012 to 2016, he was the Head Director of the Institute of Electronics and Telecommunications of Rennes (I.E.T.R – CNRS UMR 6164) – a staff of more than 360 Professors, Associate-Professors, Assistant Professors, Researchers and PhD Students. He is currently the Head of the PIMA research platform of the University of Rennes 1.

His current activities of research and education are centered in the topics of analog electronics, microwave theory and radar imaging with emphasis in radar polarimetry. His research covers a wide spectrum of areas in connection with a number of different applications of Radar and SAR data. His experience is within a number of disciplines related to processing and analysis of Radar data (ISAR Target Imaging, RCS analysis and reduction, scatterer fluctuating modelisation, scatterer time-frequency analysis, SAR system modelling and simulation) and POLSAR data (polarimetric speckle analysis and reduction, polarimetric segmentation, and classification, polarimetric theorem decomposition) to fundamentals and basic theory of polarimetry.

Activities in education

He has presented advances courses on Radar Polarimetry in the frame of the European TMR Project Radar Polarimetry : Theory and Applications and seminars

to a wide range of international organization and research institutes (DLR, NASDA, JRC, RESTEC, JAXA, IECAS, INPE, ASF).

He was invited as a Keynote Speaker or gave Tutorials during the following symposiums: SPIE-1992 (San Diego), WIPSS 97 (Oberpfaffenhofen), ISAP-2000 (Fukuoka), IGARSS-03 (Toulouse), UPC 2004 (Barcelona), EUSAR-04 (Ulm), NATO RTA-04 (Brussels, Washington DC, Ottawa), POLINSAR-05 (Frascati), IGARSS-05 (Seoul), DRAGON Advanced Training Course 2005 (Beijing), JAXA 2006 (Tohoku), NATO RTA-06 (Warsaw), EUSAR-06 (Dresden), POLINSAR-07 (Frascati), ESA Advanced Training Course 2007 (Lisbon), IGARSS-07 (Barcelona), NRL 2008 (Washington DC), IGARSS-08 (Boston), DRAGON-2 Advanced Training Course 2008 (Wuhan), INPE Brazil (San Jose de Campos), ASF 2009 (Fairbanks), ESA Advanced Training Course 2009 (Prague), Univ Niigate 2009 (Niigata), IGARSS-09 (Cape Town), EUSAR-10 (Aachen), DRAGON-2 Advanced Training Course 2010 (Lanzhou), IGARSS-10 (Hawaii), ESA Advanced Course on radar Polarimetry 2011 (Frascati), IGARSS-11 (Vancouver), ESA Advanced Training Course 2011 (Krakow), IGARSS-12 (Munich), DRAGON-2 Advanced Training Course 2012 (Beijing), ESA Advanced Course on radar Polarimetry 2013 (Frascati), ESA Advanced Training Course 2013 (Athens), IEEE GRSS Summer School on Remote Sensing (UYGU 2014 - Istanbul), ESA Advanced Training Course 2014 (Valencia), DRAGON-3 Advanced Training Course 2014 (Nanchang), 3th ESA Advanced Course on radar Polarimetry 2015 (Frascati), ESA Advanced Training Course 2015 (Bucarest), IGARSS-15 (Milano), DRAGON-3 Advanced Training Course 2015 (Tanjin), IGARSS-16 (Beijing), 4th ESA Advanced Course on radar Polarimetry 2017 (Frascati).

Eric Pottier is annually invited, since 2005, by the European Space Agency as a SAR expert to give lectures in the two following Training Courses on Land Remote Sensing: ESA Advanced Training Course on Land Remote Sensing and ESA – MOST Dragon Cooperation Programme (MOST : Chinese Ministry of Science and Technology)

Since 1989, he has supervised more than 70 research students to graduation (MSc and Ph.D) in Radar Polarimetry covering areas from theory to remote sensing applications.

He has chaired and organized more than 70 sessions in International Conferences. He has been invited to present more than 80 presentations in International Conferences or Seminars and around 20 in National Conferences.

Distinctions / Memberships

- He received the Award for a Very Significant Contribution in the Field of Synthetic Aperture Radar during EUSAR-2000 for his research activities, co-authored with J.S. Lee (US Navy/NRL), in the topic of PolSAR unsupervised segmentation.
- He received the Certificate Of Appreciation For Serving as Lecturer for NATO-RTO Lecture Series SET-081 in 2004 (Brussels, Washington DC, Ottawa and Warsaw).
- He was nominated as Associate Professor of Capital Normal University of Beijing (October 2005), as Invited Professor at I.N.R.S – ETE of Québec (2006 to 2012) and as Guest Professor of the State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing, University of Wuhan, Wuhan – PR China (2008).

- He received the 2007 IEEE GRS-S Letters Prize Paper Award co-authored with S. Guillaso, L. Ferro-Famil and A. Reigber.
- He is a recipient of the 2007 IEEE GRS-S Education Award "*In recognition of his significant educational contributions to Geoscience and Remote Sensing*".
- He has been elevated to IEEE Fellow (January 2011) with the accompanying citation: "*for contributions to polarimetric Synthetic Aperture Radar*"
- He is a recipient of the 2012 Einstein Professorship from the Chinese Academy of Science.
- Since 2014, he is recognized as an IEEE GRSS Distinguished Lecturer
- He is a recipient of the CNFRS-URSI Medal under the auspices of the French Academy of Sciences (2015).

Selected publications

H-index = 32, 10035 citations, 445 referenced papers, maximal citation number for one paper = 1923 (source Google Scholar May 18th, 2017).

He published a book co-authored with Dr. J.S. Lee entitled "*Polarimetric Radar Imaging: From basics to applications*", CRC Press, Taylor & Francis editor, 397 pages, (2009), ISBN: 978-1-4200-5497-2.

He has 14 publications in book chapters, more than 80 papers in refereed journals and more than 390 papers during International Conferences, Symposiums and Workshops.

(top 5 ranking May 18th, 2017)

- S.R. Cloude, E. Pottier, A review of Target Decomposition in Radar Polarimetry, IEEE Transactions on Geoscience and Remote Sensing, Vol 34, n°2, pp 498-518, March 1996 (**1932 citations**)
- S.R. Cloude, E. Pottier, An Entropy Based Classification Scheme for Land Applications of Polarimetric SAR, IEEE Transactions on Geoscience and Remote Sensing, Vol 35, n°1, pp 68-78, January 1997, (**1722 citations**)
- J.S. Lee, E. Pottier entitled "*Polarimetric Radar Imaging: From basics to applications*", CRC Press, Taylor & Francis editor, 397 pages, (2009), ISBN: 978-1-4200-5497-2 (**1227 citations**).
- I. Hajnsek, E. Pottier, S.R. Cloude, Inversion of Surface Parameters from Polarimetric SAR, IEEE Transactions on Geoscience and Remote Sensing, Vol 41, n°4, pp 727-744, April 2003 (**420 citations**).
- J.S. Lee, M.R. Grunes, E. Pottier, L. Ferro-Famil, Unsupervised terrain classification preserving polarimetric scattering characteristics, IEEE Transactions on Geoscience and Remote Sensing, Vol 42, n°4, pp 722-731, April 2004 (**388 citations**)