

Curriculum vitae of Laurent Albera

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1 Biographical sketch

2010 Habilitation to lead researches (HDR, french diploma necessary to get a Professor position) degree in Sciences from University of Rennes 1.

From 2004 Assistant professor at University of Rennes 1, affiliated with the research group LTSI (Laboratoire Traitement du Signal et de l'Image).

2003 Doctorat Degree in Sciences from University of Nice Sophia-Antipolis (co-advisors Pierre COMON, Pascal CHEVALIER and Anne FERREOL).

2 Research

My research interests include High-Order statistics, Multidimensional Algebra, Blind deconvolution and Equalization, Digital communications, Statistical Signal and Array Processing, and Numerical analysis. More exactly, since 2000 I have currently worked in Blind Source Separation (BSS) and source localization by proposing new numerical methods computing special tensor decompositions such as the popular CANDECOMP/PARAFAC (CANonical DECOMPosition/PARallel FACTor analysis) one. From 2001 to 2013, I was co-publisher of about 60 publications and 5 patents. During this period, I was the co-advisor of six PhD students.

3 Collective and administrative responsibilities

2013 Co-organizer with David Brie at Paris of a one-day seminar on tensor decompositions and applications sponsored by the GDR ISIS (french research groups in signal and image processing).

2011 Teacher of the 6th Edition of the Peyresq summer school on signal and image processing co-organized by the GRETSI and the GDR ISIS (french research groups in signal and image processing).

2011 Technical Program Committee (TPC) member at the 19th European Signal Processing Conference (EUSIPCO'11).

2011 Member of three selection committees for posts of assistant professor in the universities of Nantes and Rennes.

From 2012 to now Responsible of the "Signal Processing" branch of the SISEA (Signal, Images, Embedded Systems and Control) Master 2 of University of Rennes 1.

From 2008 to 2010 Scientific council member at University of Rennes 1.

From 2003 to now Reviewer for several international conferences and journals in signal processing (IEEE International Conference on Acoustics, Speech, and Signal Processing, IEEE EMBS Annual International Conference, EURASIP European Signal Processing Conference, SPRINGER LVA/ICA, IEEE Transactions on Signal Processing, IEEE Signal Processing Letters, ELSEVIER Signal Processing, SPRINGER Journal of Signal Processing Systems, etc.) and for the french research agency (ANR).

4 Selected publications

1. A. KACHENOURA, L. ALBERA, J-J BELLANGER and L. SENHADJI "Non-minimum phase identification based on higher order spectrum slices," in *IEEE Transactions On Signal Processing*, vol. 56, no. 5, pp. 1821-1829, May 2008.
2. A. KARFOUL, L. ALBERA and G. BIROT "Blind underdetermined mixture identification by joint canonical decomposition of HO cumulants," in *IEEE Transactions On Signal Processing*, vol. 58, no. 2, pp. 638-649, February 2010.
3. J. FLEUREAU, J-C. NUNES, A. KACHENOURA, L. ALBERA and L. SENHADJI, "Turning Tangent Empirical Mode Decomposition : a unified framework for mono- and multivariate signals," in *IEEE Transactions On Signal Processing*, vol. 59, no. 3, pp. 1309-1316, March 2011
4. A. KARFOUL, L. ALBERA and L. DE LATHAUWER, "Iterative methods for the canonical decomposition of multi-way arrays : application to blind underdetermined mixture identification," in *Signal Processing, Elsevier*, vol. 91, no. 8, pp. 1789-1802, August 2011.
5. H. BECKER, P. COMON, L. ALBERA, M. HAARDT and I. MERLET, "Multi-way Space-Time-Wave-Vector analysis for EEG source separation," in *Signal Processing, Elsevier*, vol. 92, no. 4, pp. 1021-1031, April 2012.