

Curriculum Vitae
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1 Degrees

- 1995 Habilitation to lead Research (HdR), Nice.
- 1985 Doctorate (PhD), Signal processing, Grenoble.
- 1982 DEA (>Master Sc), Automatic control and signal processing.
- 1982 Graduation, INPG, University of Grenoble.

2 Appointments

13 years in private companies, 12 years in public research.

- 1998 - pr Full-time Research Director at CNRS¹
- 1994 - 97 Research Director Associated with CNRS
- 1997 - 98 Teaching & Research Associate at Eurécom Institute², Sophia-Antipolis
- 1988 - 97 R&D scientist at Thomson-Sintra, renamed Thomson Marconi in 1996³
- 1986 - 87 Post-doctoral stay at Stanford, USA, Dept *Electrical Eng.*⁴, supported by INRIA⁵
- 1985 - 86 Research associate, ADR, Grenoble, located at Cephag, Grenoble
- 1982 - 85 Research engineer at Crouzet (Sextant group⁶), Valence. Cifre contract.

3 Academic administration

- 2008-pr **Director** of the Doctoral School STIC (Sciences and Technologies in Information and Communication)
- 2008-pr Head of the SIS department of laboratory I3S (UMR6070)
- 2005-07 **Vice director** of the Doctoral School STIC
- 2005 - 2008 Member of the Commission of Specialists, section 61, Université de Nice Sophia-Antipolis
- 2000 - 05 **Director** of the Master's program "Signal and Digital Communications" (SiCom)
- 1998-07 Head of the ASTRE team in laboratory I3S (UMR6070)
- 2004 - 2007 Member of the Commission of Specialists, section 61-63, Université de Toulon et du Var
- 2001 - 2004 Member of the Commission of Specialists, section 61-63, Université de Toulon et du Var
- 2002 - 2005 Member of the Commission of Specialists, section 61, Université de Nice Sophia-Antipolis

¹Centre National de la Recherche Scientifique: <http://www.cnrs.fr>

²www.eurecom.fr

³For more information concerning this international company, consult: <http://www.thalesgroup.com> or www.tms-sonar.com

⁴Laboratory ISL, www-isl.stanford.edu

⁵Institut National de Recherche en Informatique et en Automatique, <http://www.inria.fr>

⁶<http://www.sextant.thomson-csf.com/eng/sextant/sextant.htm>

4 Teaching

- 2008 Tensor Problems in Engineering, Univ. Berkeley, Mathematical Sciences Research Institute (MSRI), CA.
- 2008 Blind techniques, Univ. Campinas and Univ. Fortaleza, Brasil.
- 2005 Invited course, Graduate School in Systems and Control, Leuven, Belgium, “Blind Techniques and Independent Component Analysis”
- 2000 - 04 Courses on basic Digital Communications, SiCom⁷, Sophia-Antipolis.
- 2001-pr Master courses, “Blind techniques”, Sicom, Sophia-Antipolis
- 2000 - 05 “Blind Multichannel Techniques” at ENSTA, Paris
- 1996 - 98 “Statistical signal processing for communications”; DEA “Aravis”
- 1989 - 94 “Sonar Signal Processing”, ESSI, Sophia-Antipolis.
- 1993 Invited course, Les Houches, “Signal Processing, recent developments”.
- 1993 Invited course “Supervised Classification” Neuro-Nimes, France.
- 1982 - 84 “Distribution theory”, INPG, Grenoble
- 1981 - 82 Elementary linear algebra, IUT electrical engineering, Grenoble

5 Scientific recognition

Nominations & Awards

- 2007 Elevation to **Fellow Member** of the IEEE⁸
- 2007 Elevation to **Emeritus Member** of the SEE⁹
- 2007-pr Member of the Administration Council of the GRETSI¹⁰ association.
- 2007-10 Member of the *IEEE SP* SPTM Technical Committee (Signal Processing Theory and Methods)¹¹
- 2006 Member of the **Editorial Board** of the journal *Signal Processing*¹²
- 2006 Member of the Evaluation Committee of laboratory SAMOVAR (UMR5157)
- 2006 Eurasip Individual **Technical Achievement Award**¹³
- 2006 Member of the Scientific Committee of SUPELEC, commission "Signal and Statistics"
- 2005-08 Member of the *IEEE SP* SAM Technical Committee (Sensor Array and Multichannel processing)¹⁴

⁷See <http://www.i3s.unice.fr/sicom> for more details. This program is part of the doctoral school STIC (Sciences et Technologies de l'Information et de la Communication). See <http://www.unice.fr/edstic>

⁸<http://www.ieee.org/organizations/society/sp/fellowinfo.html>

⁹<http://www.see.asso.fr>

¹⁰<http://www.gretsi.fr>

¹¹<http://www.sptm.gatech.edu>

¹²http://www.elsevier.com/wps/product/cws_home/505662

¹³http://www.eurasip.org/content/default.asp?page=s10_3

¹⁴<http://www.eng2.uconn.edu/~willett>

- 2005 **Monpetit Price**, awarded by the French Academy of Sciences, and rewarding works with industrial applications
- 2005 Member of the Evaluation Committee of the Computer Sciences laboratory of the IGM Institute (UMR8049), as president
- 2002 - 2003 *IEEE Distinguished Lecturer*¹⁵
- 2002 Member of the Evaluation committee of laboratory INT (FRE2310)
- 2001 - 2004 **Associate Editor**, *IEEE Trans. Circuits and Systems I*¹⁶
- 1999 - 2000 Member of Eurasp Best paper award committee (president)
- 1998 SEE Senior Member
- 1995 - 1998 **Associate Editor**, *IEEE Transactions on Signal Processing*¹⁷
- 1996 - 1997 Member of the National Committee of Scientific Research, section 42
- 1995 - 1999 Member of the National Committee of Scientific Research, section 07¹⁸
- 1995 IEEE Senior Member
- 1992 - 1998 Member of the *Scientific and Technical Council*¹⁹ of the Thomson Group²⁰
- 1992 Eurasp Best paper award

Invitations

- 1991-2006: Participation in more 90 PhD or HdR jurys
- Invited conferences:
 - “Tensor decompositions in Engineering,” American Institute of Mathematics (AIM) Workshop on Geometry and representation theory of tensors for computer science, statistics and other areas, AIM Research Conference Center (ARCC), Palo Alto, CA
 - Third Wavila Challenge²¹ (Watermarking Virtual Laboratory) workshop, June 14, 2007, Saint Malo, “Independent Component Analysis and Steganography”
 - Workshop on Algorithms for Modern Massive Datasets²², Stanford, June 24, 2006, “Independent Component Analysis viewed as a Tensor Decomposition”.
 - Fourth International Conference on Three-way methods in Chemistry and Psychology (TRICAP)²³, Chania, Crete, Greece, June 4-9, 2006, “Generic properties of symmetric tensors”.

¹⁵www.ieee-cas.org/dlp.html

¹⁶<http://www.tcas1.sztaki.hu>

¹⁷<http://www.ieee.org/sp>

¹⁸The CN section 07 covers Computer Sciences, Signal Processing, and Automatic Control: <http://www.cnrs.fr/sgcn/sections/tsection.htm>.

¹⁹At that time, the STC is composed of nominated experts; between 0.5% and 1% of the engineers belong to the STC.

²⁰At that time, the group contains 96000 employees spread over 50 countries; see: <http://www.thomson-sa.com> or www.thalesgroup.com

²¹<http://ih07.irisa.fr/ih07>

²²<http://www.stanford.edu/group/mmds>

²³<http://www.telecom.tuc.gr/~nikos>

- 2005: distinguished lecture, *IEEE CAM SAP*, Puerto Vallarta, Dec. 2005, “Algebraic Blind Techniques”.
 - 2005: **invited tutorial**, *IEEE Int Conference on Acoust. Speech Sig. Proc. (ICASSP)*, Philadelphia, March 2005, “Independent Component Analysis and Multi-Way Factor Analysis”.
 - 2004: invited lecture, *Int. Workshop on Matrices in Statistics and optimization (MSO-PMAA’04)*, “Blind Matrix identification by Statistical matching”, CIRM, Marseille, France.
 - 2004: invited lecture, *ARCC Workshop on Tensor Decompositions*, Stanford, Palo Alto, “Canonical Tensor Decompositions”.
 - 2002: keynote address, *Inst. Math. Appl. Conference on Mathematics in Communications*, Lancaster, UK, Dec. 2002
 - 2001: invited plenary, *Int. Conf. on Image and Signal Processing*, Agadir, Morocco
 - 2000: keynote address, *IMA Conf. on Mathematics for Signal Processing*, UK
 - 2000: invited plenary, *IEEE AS-SPCC 2000*, Lake Louise, Canada.
 - 1998: keynote address, *SPIE Conf. on Advanced Signal Proc.*, San Diego.
 - 1997: keynote address, *IEEE Workshop on High-Order Stat.*, Banff, Canada
 - 1995: invited plenary, *ESANN*, Brussels.
 - 1991: invited plenary, *Workshop on High-Order Stat.*, Chamrousse.
- Conferences in a dozen of invited sessions (cf. list of publications)
 - A dozen of invited seminars, *e.g.*, at Institut Henri Poincaré Paris (16 Nov 95), or at ETCA Paris (9 Nov 95), EPFL Lausanne (may 91 and nov 94)...
 - Invited by the *Institute of Mathematics and its Applications (IMA)* at Minneapolis for 1 month in March-April 1992, fully supported by IMA.
 - *Guest Editor* of a special issue of the journal *Signal Processing* appeared in Feb. 1999, together with L. De Lathauwer.
 - *Guest Editor* of a special issue of the *SIAM Journal on Matrix Analysis* to appear spring 2008, together with L. DeLathauwer and N. Mastronardi.

Animation

- 2007: Co-organizer of the two-session Minisymposium “Numerical multilinear algebra: a new beginning”, embedded in the ICIAM²⁴ Conference, Zurich.
- 2006: Co-organizer (as *Finance Chair*) of the 7th IEEE SPAWC(Signal Processing Advances in Wireless Communications)²⁵ Conference, July 2-5, Cannes.
- 2005: Co-organizer with L.DeLathauwer of the *IEE-SIAM Workshop on Tensor Decompositions and Applications (TDA)*, Marseille, France.
- 2000: Organizer of the *3rd Winter school on Telecommunications (EcoTel)*, Antibes, France

²⁴<http://www.iciam07.ch>

²⁵<http://spawc2006.eurecom.fr>

- 1995: Co-organizer together with J.Fonollosa, of the *IEEE Workshop on High-Order Statistics*, Begur, Spain.
- 1991-1995: **Coordinator** of the European Community Working Group *ATHOS* (Advanced Topics in High-Order Statistics)²⁶.
- 1990-2005: various conference chairs, including
 2006: *IEEE SPAWC*, Cannes, France, Finance chair. 2001: *ISSPA*, Malaysia, European liaison. 2000: *3rd Winter School of Telecommunications*, Antibes, France; general chair. 2000: *SSAP 2000*, Pocono Manor, Pennsylvania; European liaison. 1997: *IEEE Workshop on High-Order Statistics*, Banff, Alberta, Canada; International representative. 1993: *IEEE Workshop on High-Order Statistics*, Lake Tahoe, California; European representative...
- 1990-2005: various program committees, including
 2005: *Gretsi'05*, Louvain, Belgium. 2004: *Matrices in Statistics and Optimization*, Luminy. 2004: *ICA'04*, Granada, Spain. 2003: *Gretsi'03*, Paris. 2003: *ICA'03*, Nara, Japan. 2003: *IEEE-EURASIP NSIP*, Grado, Italy. 2003: *ICISP*, Agadir, Morocco. 2001: *3rd ICA'01*, San Diego. 2001: *11th IEEE Workshop on Statistical Signal Processing*, Singapore. 2001: *Gretsi'01*, Toulouse, France. 2000: *ICA'2000*, Helsinki. 1999: *ICA'99*, First IEEE Int. Workshop on ICA, Aussois, France. 1999: *PSIP'99*, First SEE Int. Workshop on Physics in Sig. Imag. Proc., Paris. 1997: *Gretsi'97*, Grenoble, France. 1996: *SSAP'96*, *IEEE Workshop on Statistical Signal and Array Processing*, Corfu, Greece. 1994: *SPIE Conf. on Advance Signal Processing*, San Diego, USA; Organizer of 2 invited sessions. 1991: *Int. Workshop on HOS*, Chamrousse, France.

²⁶<http://www.i3s.unice.fr/comon/6620.html>

6 Publications

6.1 Unpublished conferences

- [1] P. COMON, *Tensor decompositions in Engineering*, American Institute of Mathematics (AIM) Workshop on Geometry and representation theory of tensors for computer science, statistics and other areas, AIM Research Conference Center (ARCC), Palo Alto, CA, July 21-25 2008, invited.
- [2] P. Comon, *Independent Component Analysis and Steganography*, Saint Malo, June 14 2007, Third Wavila Challenge, Watermarking Virtual Laboratory workshop (invited).
- [3] P. COMON, *Independent Component Analysis viewed as a Tensor Decomposition*, Workshop on Algorithms for Modern Massive Datasets, Stanford, June 24 2006, invited.
- [4] P. COMON, *Generic Properties of Symmetric Tensors*, TRICAP, Chania, Crete, Greece, June 4-9 2006, invited.
- [5] P. COMON, “Algebraic Blind Techniques”, *IEEE CAMSAP*, Puerto Vallarta, Mexico, 13 Dec., 2005, invited plenary
- [6] P. COMON, B. MOURRAIN, “Tensor Ranks, and some properties of Tensor Spaces”, *IEE-SIAM Workshop on Tensor Decompositions and Applications* Luminy, France, Aug. 30, 2005, tutorial.
- [7] P. COMON, “Independent component analysis and multi-way factor analysis”, **Tutorial** given at *ICASSP’05*, Philadelphia, March 19 2005, <http://www.i3s.unice.fr/~comon/descriptionTut10.htm>.
- [8] P. COMON, “Cumulant tensors”, *IEEE SP Workshop on HOS*, Banff, Canada, July 21-23 1997, **keynote address**, www.i3s.unice.fr/~comon/plenaryBanff97.html.

6.2 Conference papers appeared in proceedings or book form

- [9] A. GOSH, E. TSIGARIDAS, M. DESCOTEAUX, P. COMON, B. MOURRAIN, R. DERICHE, “A polynomial based approach to extract the maxima of an antipodally-symmetric spherical function and its application to extract fiber directions from the orientation distribution function”, in *11th International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)*, New York, Sept. 6-10 2008, Computational Diffusion MRI Workshop.
- [10] L. GALLUCCIO, O. MICHEL, P. COMON, “Unsupervised segmentation on multi-components datasets: Applications on images and astrophysics data”, in *16th European Signal Processing Conference (Eusipco’08)*, Lausanne, Aug. 25-29 2008.
- [11] M. SORENSEN, S. ICART, P. COMON, L. DENEIRE, “Gradient based approximate joint diagonalization by orthogonal transforms”, in *16th European Signal Processing Conference (Eusipco’08)*, Lausanne, Aug. 25-29 2008.
- [12] R. PHLIPO, V. ZARZOSO, P. COMON, I. LEMAHIEU, “Cumulant matching for independent source extraction”, in *30th Int. IEEE Engineering in Medicine and Biology Conf. (EMBC’08)*, Vancouver, CA, Aug. 20-24 2008.

- [13] V. ZARZOSO, P. COMON, “Robust independent component analysis for blind source separation and extraction”, in *30th Int. IEEE Engineering in Medicine and Biology Conf. (EMBC’08)*, Vancouver, CA, Aug. 20-24 2008.
- [14] P. COMON, J. ten BERGE, “Generic and typical ranks of three-way arrays”, in *Icassp’08*, Las Vegas, March 30 - April 4 2008.
- [15] M. CASTELLA, P. COMON, “Blind separation of instantaneous mixtures of dependent sources”, in *ICA’07*, London, UK, Sept. 9-12 2007.
- [16] V. ZARZOSO, P. COMON, “Comparative speed analysis of FastICA”, in *ICA’07*, London, UK, Sept. 9-12 2007.
- [17] L. GALLUCCIO, O. MICHEL, P. COMON, “Segmentation non-supervisée de champs de données multi-composantes”, in *GRETSI*, Troyes, Sept. 2007.
- [18] L. ALBERA, P. COMON, H. XU, “SAUD, un algorithme d’ica par déflation semi-algébrique”, in *GRETSI*, Troyes, Sept. 2007.
- [19] M. CASTELLA, P. COMON, “Séparation aveugle de sources dépendantes”, in *GRETSI*, Troyes, Sept. 2007.
- [20] C. E. FERNANDES, P. COMON, G. FAVIER, “Order detection and blind identification of 2x1 MISO channels”, in *Icassp’07*, Honolulu, Hawaii, April 15-20 2007.
- [21] V. Zarzoso, P. Comon, “Alphabet-based deflation for blind source extraction in underdetermined mixtures”, in *Proc. ICA Research Network International Workshop*, Liverpool, UK, Sept. 18–19, 2006, pp. 21–24.
- [22] V. ZARZOSO, P. COMON, M. KALLEL, “How fast is FastICA?”, in *XIV European Signal Processing Conference, Eusipco’06*, Florence, Italy, Sept. 4-8 2006.
- [23] J. P. DELMAS, P. COMON, Y. MEURISSE, “Identifiability of BPSK, MSK, and QPSK FIR SISO channels from modified second-order statistics”, in *IEEE Spawc’06*, Cannes, July 2-5 2006.
- [24] M. RAJIH, P. COMON, D. SLOCK, “A deterministic blind receiver for MIMO OFDM systems”, in *IEEE Spawc’06*, Cannes, July 2-5 2006.
- [25] N. PETROCHILOS, P. COMON, “Link between the joint diagonalisation of symmetric cubes and PARAFAC: An application to secondary surveillance radar”, in *IEEE Workshop on Sensor Array and Multichannel Proc.*, Waltham, MA, USA, June 12-14 2006.
- [26] P. COMON, B. MOURRAIN, L-H. LIM, G. GOLUB, “Genericity and rank deficiency of high order symmetric tensors”, in *ICASSP’06*, Toulouse, May 14-19 2006.
- [27] M. RAJIH, P. COMON, “Alternating least squares identification of under-determined mixtures based on the characteristic function”, in *ICASSP’06*, Toulouse, May 14-19 2006.
- [28] M. RAJIH, P. COMON, “Blind identification of under-determined mixtures based on the characteristic function: Influence of the knowledge of source pdf’s”, Puerto Vallarta, Mexico, 13-15 Dec. 2005.

- [29] L. ROTA, V. ZARZOSO, P. COMON, “Parallel deflation with alphabet-based criteria for blind source extraction”, in *IEEE SSP’05*, Bordeaux, France, July, 17-20 2005.
- [30] M. RAJIH, P. COMON, “Enhanced line search applied to blind channel identification: Identifiability conditions”, in *IEEE SSP’05*, Bordeaux, France, July, 17-20 2005.
- [31] V. ZARZOSO, P. COMON, “Blind channel equalization with algebraic optimal step size”, in *Eusipco’05*, Antalya, Turkey, Sept. 4-8 2005.
- [32] M. RAJIH, P. COMON, “Enhanced line search: A novel method to accelerate Parafac”, in *Eusipco’05*, Antalya, Turkey, Sept. 4-8 2005.
- [33] V. ZARZOSO, P. COMON, “Semi-blind constant modulus equalization with optimal step size”, in *ICASSP’05*, Philadelphia, March 18–23 2005, vol. III, pp. 577–580.
- [34] P. COMON, M. RAJIH, “Blind identification of under-determined mixtures based on the characteristic function”, in *ICASSP’05*, Philadelphia, March 18–23 2005, vol. IV, pp. 1005–1008.
- [35] P. CHEVALIER, L. ALBERA, P. COMON, A. FERREOL, “Comparative performance analysis of eight blind source separation methods on radiocommunications signals”, in *IJCNN 04*, Budapest, Hungary, July 25-29 2004.
- [36] P. COMON, M. RAJIH, “Blind identification of complex under-determined mixtures”, in *ICA Conference*, Granada, Spain, Sept 22–24 2004, pp. 105–112.
- [37] J. LEBRUN, P. COMON, “A linear algebra approach to systems of polynomial equations with application to digital communications”, in *Eusipco’04*, Wien, Austria, Sep 7–10 2004.
- [38] P. COMON, M. RAJIH, “Blind identification of under-determined complex mixtures of 2 independent sources”, in *3rd IEEE SAM Workshop*, Barcelona, Spain, July 18–21 2004.
- [39] L. ALBERA, P. COMON, P. CHEVALIER, A. FERREOL, “Blind identification of under-determined mixtures based on the hexacovariance”, in *ICASSP’04*, Montreal, May 17–21 2004, vol. II, pp. 29–32.
- [40] L. ROTA, P. COMON, “Blind equalizers based on polynomial criteria”, in *ICASSP’04*, Montreal, May 17–21 2004, vol. IV, pp. 441–444.
- [41] N. PETROCHILOS, P. COMON, “Separation of ZCM signals: Application in SSR radar”, in *GRETSI’03*, Paris, 8–11 Sept. 2003.
- [42] J. LEBRUN, P. COMON, “Une approche algebrique de l’identification aveugle de canaux de communications”, in *GRETSI’03*, Paris, 8–11 Sept. 2003.
- [43] P. COMON, J. LEBRUN, “Criteres de contraste deterministes pour la separation de sources”, in *GRETSI’03*, Paris, 8–11 Sept. 2003.
- [44] L. ROTA, P. COMON, S. ICART, “Egalisation aveugle de melanges convolutifs MIMO”, in *GRETSI’03*, Paris, 8–11 Sept. 2003.
- [45] J. LEBRUN, P. COMON, “An algebraic approach to blind identification of communication channels”, in *IEEE ISSPA’03*, Paris, 1-4 July 2003.

- [46] J. VANDEWALLE, L. De LATHAUWER, P. COMON, “The generalized higher order SVD and the oriented signal to signal ratios of pairs of signal tensors”, in *ECCTD’03*, Krakow, Poland, 1-4 Sept. 2003.
- [47] P. COMON, J. LEBRUN, “Contrast functions for deterministic blind source separation”, in *SPAWC’03*, Rome, Italy, 15-18 June 2003.
- [48] L. ROTA, P. COMON, S. ICART, “Blind equalization of MIMO channels”, in *SPAWC’03*, Rome, Italy, 15-18 June 2003.
- [49] P. COMON, L. ROTA, S. ICART, “Blind MIMO paraunitary equalizer”, in *ICASSP’03*, Hong-Kong, April 2003, to appear.
- [50] L. ALBERA, A. FERREOL, P. COMON, P. CHEVALIER, “Sixth order blind identification of under-determined mixtures - BIRTH”, in *ICA’03*, Japan, April 1-4 2003.
- [51] P. COMON, L. ROTA, “Blind source separation: A Partial Joint Diagonalization (PAJOD) approach”, in *PSIP’03*, Grenoble, France, 29-31 jan. 2003, to appear.
- [52] P. COMON, “Blind equalization with discrete inputs in the presence of carrier residual”, in *Second IEEE Int. Symp. Sig. Proc. Inf. Theory*, Marrakech, Morocco, Dec. 2002, invited session.
- [53] L. ALBERA, P. COMON, “Asymptotic performance of contrast-based blind source separation algorithms”, in *Second IEEE Sensor Array and Multichannel Signal Processing Workshop*, Rosslyn, VA, 4-6 August 2002.
- [54] P. COMON, “Independent component analysis, contrasts and convolutive mixtures”, in *Second IMA Conference on Mathematics in Communications*, Lancaster, UK, Dec. 16-18, 2002, pp. 10–17, **invited plenary**.
- [55] P. COMON, E. MOREAU, L. ROTA, “Blind separation of convolutive mixtures: a contrast-based joint diagonalization approach”, in *3rd Int. Conf. Independent Component Analysis*, San Diego, Dec. 9-13 2001, pp. 686–691.
- [56] P. COMON, R. LIU, D. SLOCK, “Path-wise wide-sense polynomial receiver for UMTS communications”, in *39th Allerton Conf. Com. Contr. Comput.*, Allerton, Illinois, Usa, Oct 3-5 2001.
- [57] P. COMON, E. MOREAU, L. ROTA, “Séparation de mélanges convolutifs par diagonalisation conjointe”, in *18eme Colloque Gretsi*, Toulouse, 10-13 Sept, 2001.
- [58] R. LIU, P. COMON, “Wide-sense polynomial equalizers in digital communications”, in *18eme Colloque Gretsi*, Toulouse, 10-13 Sept, 2001.
- [59] P. COMON, E. MOREAU, “Blind MIMO equalization and joint-diagonalization criteria”, in *ICASSP’01*, Salt Lake City, May 7-11, 2001, vol. 5, pp. 2749–2752.
- [60] P. COMON, “From source separation to blind equalization, contrast-based approaches”, in *Int. Conf. on Image and Signal Processing (ICISP’01)*, Agadir, Morocco, May 3-5, 2001, **invited plenary**.

- [61] P. COMON, “Tensor decompositions, state of the art and applications”, in *IMA Conf. Mathematics in Signal Processing*, Warwick, UK, Dec. 18-20, 2000, **keynote address**.
- [62] P. COMON, “Block methods for channel identification and source separation”, in *IEEE Symposium on Adaptive Systems for Sig. Proc. Comm. Contr.*, Lake Louise, Alberta, Canada, Oct. 1-4 2000, pp. 87–92, **invited plenary**.
- [63] P. COMON, O. GRELLIER, “Analytical blind identification of a SISO communication channel”, in *IEEE Workshop on Statistical Signal and Array Processing*, Pocono Manor, Pennsylvania, Usa, Aug. 14-16, 2000, pp. 206–210.
- [64] N. PETROCHILOS, P. COMON, “Blind identification of linear-quadratic channels”, in *IEEE Workshop on Statistical Signal and Array Processing*, Pocono Manor, Pennsylvania, Usa, Aug. 14-16, 2000, pp. 181–185.
- [65] N. PETROCHILOS, P. COMON, “ML estimation of SSR signals, identifiability and Cramer-Rao bounds”, in *Eusipco*, Tampere, Finland, 5-8 sept. 2000.
- [66] O. GRELLIER, P. COMON, “Analytical blind discrete source separation”, in *Eusipco*, Tampere, Finland, 5-8 sept. 2000.
- [67] D. MATIC, N. PETROCHILOS, A. TRINDADE, F. SCHONTE, P. COMON, R. PRASAD, “OFDM synchronisation based on the phase rotation of sub-carriers”, in *Vehicular Tech. Conf., VTC*, Tokyo, Japan, 15-18 May 2000, vol. 2, pp. 1260–1264.
- [68] N. PETROCHILOS, P. COMON, “Nonlinear channel identification and performance analysis”, in *IEEE Conf. Acoust. Speech Sig. Proc. ICASSP*, Istanbul, Turkey, June 5-9, 2000, pp. 4094–4097.
- [69] P. COMON, O. GRELLIER, “Analytical blind identification of a SISO communication channel”, in *Third European DSP Edu. Research Conf.*, Esiee, Paris, 20-21 Sept. 2000, Org. Texas Instruments.
- [70] O. GRELLIER, P. COMON, “Egalisation aveugle en présence de sources discrettes”, in *Conférence GretsI*, Vannes, France, 13-17 sept. 1999, pp. 1093–1096.
- [71] O. GRELLIER, P. COMON, “Closed-form blind equalization”, in *SPAWC*, Annapolis, MD, May 9-12 1999, pp. 219–222.
- [72] L. de LATHAUWER, P. COMON, B. de MOOR, “ICA algorithms for 3 sources and 2 sensors”, in *Sixth Sig. Proc. Workshop on Higher Order Statistics*, Caesarea, Israel, June 14–16 1999, pp. 116–120.
- [73] P. CHEVALIER, V. CAPDEVIELLE, P. COMON, “Performance of HO blind source separation methods: Experimental results on ionospheric HF links”, in *ICA99, IEEE Workshop on Indep. Comp. Anal. and Blind Source Separation*, Aussois, France, Jan 11–15 1999, pp. 443–448.
- [74] P. COMON, O. GRELLIER, “Non linear inversion of underdetermined mixtures”, in *ICA99, IEEE Workshop on Indep. Comp. Anal. and Blind Source Separation*, Aussois, France, Jan 11–15 1999, pp. 461–465.

- [75] P. COMON, O. GRELLIER, B. MOURRAIN, “Closed-form blind channel identification with MSK inputs”, in *Asilomar Conference*, Pacific Grove, California, November 1-4 1998, pp. 1569–1573, invited session.
- [76] O. GRELLIER, P. COMON, “Self calibration in presence of discrete sources”, in *Eusipco*, Rhodes, Greece, Sept 8–11 1998, vol. I, pp. 185–188.
- [77] O. GRELLIER, P. COMON, “Performance of blind discrete source separation”, in *Eusipco*, Rhodes, Greece, Sept 8–11 1998, vol. IV, pp. 2061–2064, invited session.
- [78] O. GRELLIER, P. COMON, “Blind separation and equalization of a channel with MSK inputs”, in *SPIE Conference*, San Diego, July 19-24 1998, pp. 26–34, invited session.
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6.6 Journal papers submitted

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6.7 Patents

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- [190] P. COMON, *Method and device for blind equalization of a communication channel*, 27 may 1998, Patent no 9806709, registered for Eurecom Institute.
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7 Recent/Current doctoral students

- N.Petrochilos (co-directed with Alle-Jan Van der Veen), defended on July 10, 2002
- L.Rota (co-directed with Sylvie Icart), defended on December 15, 2004
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- L.Galluccio (co-directed with O.Michel), started October, 2006
- M.Sorensen (co-directed with S.Icart and L.Deneire), started January, 2007.

8 Brief survey of contributions

- 1985-91. Asymptotic Performance of Gaussian Linear Regressors, and construction of Robust Regressors [162] [158] [157] [177]
- Blind techniques
 - 1989. First solution to the Static Blind Source Separation problem (i) iterative [153] [115] [113], (ii) algebraic [112]
 - 1990: First solution to the Convolutional Blind Source Separation problem, with Linear Prediction [179] [99]
 - 1991: First IT-based approach to Blind Source Separation: the concept of Independent Component Analysis (ICA) [107] [149]
 - 1991-2001. Algebraic solutions to the ICA problem. (i) noisy real case [107]; (ii) noisy complex case [85] [60] [138]
 - 1990-2004. Contrasts for and Blind Source Separation from MIMO mixtures (i) convolutional [138] [147] [141], (ii) static [149] [142]
 - 1998-2005. Blind Separation of Discrete Sources [143] [138] [131]
 - 1998-2006. First algebraic (closed form) solution to the problem of Blind Identification of a SISO channel [45] [140] [75]
 - 2001-2005. Blind Source Separation (i) when the channel is Para-Unitary (i.e. after space-time prewhitening) [139], (ii) from HOS only [134]
 - 1999-2005. Semi-Blind Equalization [133] [71]
 - 1997-2002. Surveys [171] [170] [169]
 - 1989-1994. Blind Identification of non minimum phase MA models [152], in particular non monic [99]
 - 1993-98: Blind estimation of time delays, possibly in mixtures with more sources than sensors [144] [145] [95] [96] [87]
 - 2002-2006. Under-determined mixtures (more sources than sensors). (i) Blind Identification [136] [131], (ii) source extraction, and virtual sensors [137] [135]

- 1990-2006. **Tensors**
 - presence of local maxima in ICA [99]
 - rank-one approximate [90]
 - surveys [8] [168]
 - addressed via algebraic geometry tools [148]
 - in ICA [111] [104] [3] [7] [61] [8]
 - Existence and uniqueness of decomposition [125] [185] [26] [4] [6]
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