

Curriculum Vitae – Dr. Christian PICHOT

PART 1

1a. Personal details				
Full name	Dr	Christian	Yves	PICHOT du MEZERAY
Present position	Exceptional Grade Senior Researcher			
Organisation/Employer	CNRS (National Center for Scientific Research), France			
Office Address	Univ. Nice Sophia Antipolis, CNRS, LEAT, UMR 7248			
	Forum Bldg, Campus SophiaTech, 930 Route des Colles, BP 145, Sophia Antipolis Cedex			
	France		Post code	06903
Work telephone/Fax	+33 4 92 94 28 02	Fax	+33 4 92 94 28 99	
Email	christian.pichot@unice.fr			
Personal website	http://leat.unice.fr/pages/personnel/pichot.html			

1b. Academic qualifications	
1982	Doctor of Science (D.Sc.), Paris-Sud University, France
1977	Ph.D., Electrical Engineering, Paris-Sud University, France
1975	M.Sc., Physics and Optics, Paris-Sud University, France
1973	B.Sc., Physics, University of Nice, France

1c. Professional positions held	
2011-present	CNRS Exceptional Grade Senior Researcher, Electronics, Antennas and Telecommunications Laboratory (LEAT), University Nice Sophia Antipolis, CNRS, France.
2008-2013	Co-Director of CREMANT, joint Antenna Research Center, supported by the University Nice Sophia Antipolis, CNRS & Orange Labs, France.
2011	Invited Professor, Hawaii Center for Advanced Communications, University of Hawaii at Manoa, Honolulu, Hawaii, USA.
2000-2011	Director of the Electronics, Antennas and Telecommunications Laboratory (LEAT), University Nice Sophia Antipolis, CNRS, France.
2002-2011	1st Grade Senior Researcher, Electronics, Antennas and Telecommunications Laboratory (LEAT), University Nice-Sophia Antipolis, CNRS, France.
1999	Guest Scientist from the Japan Society for the Promotion of Science (JSPS), Department of Electrical Engineering, Kumamoto University, Japan.
1996-2002	2nd Grade Senior Researcher, Electronics, Antennas & Telecommunications Laboratory (LEAT), University Nice Sophia Antipolis, CNRS, France.
1993-1995	2nd Grade Senior Researcher, Sophia Antipolis Computer Science, Signals & Systems Lab (I3S), University Nice-Sophia Antipolis, CNRS, France.
1991-92	Waves Division Leader, Signals and Systems Laboratory (L2S), CNRS, Supelec Electrical Engineering School, Gif-sur-Yvette, France.
1990-92	CNRS Researcher, Signals and Systems Laboratory (L2S), CNRS, Supelec Electrical Engineering School, Gif-sur-Yvette, France.
1989-90	Visiting Scientist, Signal and Image Processing Research Group, Electrical Engineering Division, Lawrence Livermore National Laboratory, USA.
1979-89	CNRS Researcher, Signals and Systems Laboratory (L2S), CNRS, Supelec Electrical Engineering School, Gif-sur-Yvette, France.
1978-79	Researcher, Supelec Electrical Engineering School, Gif-sur-Yvette, France.
1975-77	Ph.D. student, Integrated Optics Laboratory, Thomson-CSF Central Research Laboratory (LCR), Orsay, France.

1d. Present research/professional speciality	
<ul style="list-style-type: none"> • Modeling of electromagnetic waves radiation and scattering in inhomogeneous media. Antenna design and optimization. • Inverse scattering (Microwave Imaging and Tomography, Complex Permittivity Reconstruction, Object Detection and Recognition). • Development of Microwave Imaging Systems for Biomedical applications, Ultra Wide Band Radar for Sub-surface probing, Geophysics and Civil Engineering applications. Ultra Wide Band Microwave Imaging Systems for Through-The-Wall imaging, Millimeter Wave Radar systems for Collision Avoidance and Target Recognition. • Research activity covering theoretical analysis, numerical modeling, experimental aspects and system developments for various applications for medical applications, geophysical and civil 	

engineering, non-destructive testing, security and military applications, antennas, telecommunications.

1e. Total years of research experience	41 years
---	----------

1f. Professional distinctions and memberships (including honours, prizes, scholarships, boards or governance roles, etc): Main memberships

2015-Present	Chairman of IEEE Antennas & Propagation Society (IEEE AP-S) Award Committee.
2015-Present	Member of IEEE SIGHT (Special Interest Group in Humanitarian Technology).
2014-present	Member of the IEEE Sensors Council and Administrative Committee (AdCom)
2014-present	Member of the Management Committee of the European COST Action TD1301 "Development of an European-based Collaborative Network to Accelerate Technological, Clinical and Marketing Progress in the Area of Medical Microwave Imaging" (French representative).
2013-present	Associate Editor of IEEE Transactions on Antennas and Propagation.
2013-present	Member of the Management Committee of the European COST Action TU1208 "Civil Engineering Applications of Ground Penetrating Radar".
2012-present	Scientific Advisor and Member of the Board, EMTensor GmbH, Vienna, Austria, a company developing microwave imaging systems for medical applications.
2012-2014	Member (Elected to 4-year term) of the Administrative Committee (AdCom) of the IEEE Antennas & Propagation Society (IEEE AP-S).
2012-present	Expert of the Italian Ministry of Research for research applications, submitted from Italian Universities.
2008-2012	Delegate (Elected for 4-year term) representing France and Monaco at EurAAP (<i>European Association on Antennas and Propagation</i>).
2007-2013	Chairman, Advisory Committee of Expertise Domain Telecommunications of DGA (Ministry of Defense Agency, France).
2007- 2011	Chairman of the "Radar & Telecommunications Technologies" Working Group, Advisory Committee of the Electromagnetics and Radar Department, ONERA (French Aerospace Lab), Toulouse, France.
2006-2012	Member of EuCAP Steering Committee (<i>European Conference on Antennas and Propagation</i>)
2005- 2010	Member, Toulon, Naval Sciences & Techniques-Defense Working Group.
2005-2006	Member of the CNRS Advisory Committee on "Microwaves"
2005-2008	Member of the Scientific Council, Univ. of Nice Sophia Antipolis, France
2005-2008	Chairman of the "Design" Platform of the Microelectronics Center PACA, France
2004-2011	Member of the Advisory Committee of the Electromagnetics and Radar Department of ONERA (French Aerospace Lab), Toulouse, France
2000	Associate Editor, IEICE Special Issue on "Problems of Random Scattering and Electromagnetic Wave Sensing"
1997-2009	Member, Advisory Committee, European Microwave Signature Laboratory, European Commission, Joint Research Centre, Ispra, Italy
1993-96	Member, Editorial Board, Inverse Problems
1990-96	Member, Editorial Board, Journal of Imaging Systems Technology

European Microwave Prize 1983

IEEE Fellow for "Contributions to Microwave Imaging and Antenna Designs".

Fellow of the Electromagnetics Academy, USA.

1g. Total number of publications and patents	Journal articles	Books, chapters, edited	book books	Conference communications	Patents
	86	15		280 ¹	2

¹ Including 80 invited presentations in International Conferences

PART 2

2a. Research publications and dissemination
Peer-reviewed journal articles since 2005
C. NANNINI, J.M. RIBERO, J.Y. DAUVIGNAC, Ch. PICHOT "Circularly polarized dielectric resonator antenna". Microwave and Opt. Techn. Lett., Vol. 45, No. 5, pp. 367-369, June 2005.
B.D. NGUYEN, C. MIGLIACCIO, Ch. PICHOT, N. YONEMOTO, K. YAMAMOTO "Compact primary source for W-band reflector antenna". Electron. Lett., Vol. 41, No. 23, pp. 1262-1264,

November 2005.

B.D. NGUYEN, C. MIGLIACCIO, Ch. PICHOT, N. ROLLAND

"Design of microstrip to waveguide transition in the W-band suitable for integrated circuits connections". Microwave and Opt. Techn. Lett., Vol. 47, No. 6, pp. 518-520, December 2005.

G. GUARNIERI, S. SELLERI, G. PELOSI, C. DEDEBAN, Ch. PICHOT

"Innovative basis and weight functions for wire junctions in time-domain moment method". IEE Proc. Microwaves, Antennas, Propagat., Vol. 153, No.1, pp. 61-66, February 2006.

R. TARNUS, X. DEROBERT, Ch. PICHOT

"Performances de l'imagerie microonde 2D appliquée à la tomographie entre forages". Bulletin des laboratoires des Ponts et Chaussées, No. 260, pp. 41-53, Janvier-Mars 2006.

J. LANTERI, J.Y. DAUVIGNAC, Ch. PICHOT, C. MIGLIACCIO

"Beam-scanning improvement of reflectarrays by reducing the cell size at millimetre waves". Microwave and Opt. Techn. Lett., Vol. 48, No. 5, pp. 966-968, May 2006.

B.D. NGUYEN, C. MIGLIACCIO, Ch. PICHOT, K. YAMAMOTO, N. YONEMOTO

"W-Band Fresnel zone plate reflector for helicopter collision avoidance radar". IEEE Trans. Antennas Propagat. Vol. 55, No. 5, pp. 1452-1456, May 2007.

N. MAAREF, P. MILLOT, X. FERRIERES, Ch. PICHOT, O. PICON

"Electromagnetic imaging method based on time reversal processing applied to through-the-wall target localization". Progress in Electromagnetics Research M (PIERM), Vol. 1, pp. 59-67, February 2008, ISSN: 1937-8726.

B.D. NGUYEN, J. LANTERI, J.Y. DAUVIGNAC, Ch. PICHOT, C. MIGLIACCIO

"94 GHz Folded Fresnel reflector using C-patch elements". IEEE Trans. Antennas and Propagat, Vol. 56, No. 11, pp. 3373-3381, November 2008.

C. D'AMICO, M. PELLET, Ch. PICHOT, A. MYSYROWICZ

"Dipolar-like antenna emission in the radiofrequency range by laser-produced plasma channels in air". J. Phys. D: Appl. Phys. Vol. 41, No. 24, paper 245206, November 2008.

M. YEDLIN, A. CRESP, Ch. PICHOT, I. ALIFERIS, J.Y. DAUVIGNAC, S. GAFFET, G. SENECHAL

"Ultra-wideband microwave imaging of heterogeneities". Journal of Applied Geophysics, Vol.68, No.1, pp.17-25, May 2009.

N. MAAREF, P. MILLOT, Ch. PICHOT, O. PICON

"A study of UWB FMCW radar for the stand-off detection of human beings in motion inside in a building". IEEE Trans. Geoscience and Remote Sensing. RSBI Special Issue, Vol.47, No. 5, pp.1297-1300, May 2009.

T.P. NGUYEN, Ch. PICHOT, C. MIGLIACCIO, W. MENZEL

"Study of folded reflector multibeam antenna with dielectric rods as primary source". IEEE Antennas and Wireless Propagation Letters, Vol. 8, pp. 786-789, August 2009.

M. MULTARI, J. LANTERI, J.L. LE SONN, L. BROCHIER, Ch. PICHOT, C. MIGLIACCIO, J.L. DESVILLES, P. FEIL

"77 GHz stepped lens with sectorial radiation pattern as primary feed of a lens based CATR". IEEE Transactions on Antennas and Propagation, Vol. 58, No.1, pp. 207-211, January 2010.

T.P. NGUYEN, Ch. PICHOT, C. MIGLIACCIO

"Millimetre-wave polarization-dependant monopulse printed Fresnel reflector". Microwave and Opt. Techn. Lett., Vol. 52, No. 1, pp. 25-28, January 2010.

B. FORESTIER, A. HOUARD, M. DURAND, Y.B. ANDRE, B. PRADE, J.Y. DAUVIGNAC, F. PERRET, Ch. PICHOT, M. PELLET, A. MYSYROWICZ

"Radiofrequency conical emission from femtosecond filaments in air". Applied Physics Letters, Vol. 96, N°14, pp. 141111-141111-3, April 2010.

K. MAZOUNI, J. LANTERI, N. YONEMOTO, J.Y. DAUVIGNAC, Ch. PICHOT, C. MIGLIACCIO

"Millimeter-wave circularly polarized Fresnel reflector for on-board radar on rescue helicopters". IEEE Transactions on Antennas and Propagation, Vol. 58, No.8, pp. 2763-2766, August 2010.

A. ZEITLER, J. LANTERI, Ch. PICHOT, C. MIGLIACCIO, P. FEIL, W. MENZEL

"Folded reflectarrays with shaped beam pattern for foreign debris detection on runways". IEEE Transactions on Antennas and Propagation, Vol. 58, No.9, pp. 3065-3068, September 2010.

E. AGASTRA, C. DEDEBAN, G. GUARNIERI, S. MADDIO, G. PELOSI, Ch. PICHOT, S. SELLERI

"Space and time basis function design for the method of moments in time-domain analysis of wire and planar structures". International Journal of RF & Computer-Aided Engineering (Int. J. RF Microw. C E), Vol. 21, No. 55, pp. 551-559 (published on line 28 July 2011), September 2011.

K. MAZOUNI, Ch. PICHOT, J. LANTERI, J.Y. DAUVIGNAC, Ch. PICHOT, C. MIGLIACCIO, S. FUTATSUMORI, A. KOHMURA, Y. YONEMOTO

"77 GHz offset reflectarray for FOD detection on airport runways". International Journal of Microwave and Wireless Technologies, Vol. 4, No.1, pp. 37-43, February 2012.

M. ZOPPI, C. DEDEBAN, Ch. PICHOT, S. SELLERI, G. PELOSI

"Optimal location of multi-antenna systems - Influence of noise-corrupted data". Applied Computational Electromagnetics Society Journal, Vol.27, No.2, pp. 198-205, February 2012.

K. MAZOUNI, A. ZEITLER, J. LANTERI, Ch. PICHOT, J.-Y. DAUVIGNAC, C. MIGLIACCIO, N. YONEMOTO,

A. KHOMURA, S. FUTATSUMORI

"76.5 GHz millimeter-wave radar for foreign objects debris detection on airport runways". International Journal of Microwave and Wireless Technologies, vol.4, special issue 3 (IJMWT Special Issue on the 2011 National Microwave Days in France), pp. 317-326, June 2012.

U. d'ELIA, G. PELOSI, Ch. PICHOT, S. SELLERI, M. ZOPPI

"A physical optics approach to the analysis of large frequency selective radomes". Progress In Electromagnetic Research (PIER), Vol. 138, pp. 537-553, 2013.

B. BOUDAMOUZ, P. MILLOT, Ch. PICHOT

"Through the wall radar imaging with MIMO beamforming processing-Simulation and experimental results". American Journal of Remote Sensing, Vol. 1, No.1, pp. 7-12, February 2013.

A. ZEITLER, C. MIGLIACCIO, A. MOYNOT, I. ALIFERIS, L. BROCHIER, J.-Y. DAUVIGNAC, Ch. PICHOT

"Amplitude and phase measurements of scattered fields for quantitative imaging in the W-band". IEEE Transactions on Antennas and Propagation, Vol. 61, No.7, pp. 3927-3931, July 2013.

P.H. TOURNIER, I. ALIFERIS, M. BONAZZOLI, M. de BUHAN, M. DARBAS, V. DOLEAN, F. HECHT, P. JOLIVET, I. EL KANFOUD, C. MIGLIACCIO, F. NATAF, Ch. PICHOT, S. SEMENOV

"Microwave tomographic imaging of cerebrovascular accidents by using high-performance computing". To appear in Parallel Computing.

P.H. TOURNIER, M. BONAZZOLI, V. DOLEAN, F. RAPETTI, F. HECHT, F. NATAF, I. ALIFERIS, I. EL KANFOUD, C. MIGLIACCIO, M. de BUHAN, M. DARBAS, S. SEMENOV, Ch. PICHOT

"Numerical modeling and high speed parallel computing: new perspectives for tomographic microwave imaging for brain stroke detection and monitoring". To appear in IEEE Antennas & Propagation Magazine.

Invited Article.

Peer reviewed books, book chapters, books edited

Ch. PICHOT

"Electromagnétisme". Fascicules E-1200 et E-1201, Editions des Techniques de l'Ingénieur, Série Electronique, (1986).

M. HELIER, Ch. PICHOT

"Structures de guidage pour circuits microondes et millimétriques". Fascicules E-3260 et E-3261, Editions des Techniques de l'Ingénieur, Série Electronique, (1989).

M. HELIER, Ch. PICHOT, M. NEY

"Structures de guidage HF". Fascicules E1 169-170-171-172, Editions des Techniques de l'Ingénieur, Série Electronique, (2003).

[J.Ch. BOLOMEY, G. PERONNET, Ch. PICHOT, L. JOFRE, M. GAUTHERIE, J.L. GUERQUIN-KERN

"L'imagerie microonde active en génie biomédical". Chapitre de *L'imagerie du corps humain*, Editions de Physique/CNRS, (1984), pp. 53-76.

A. FRANCHOIS, L. GARNERO, Ch. PICHOT, J.P. HUGONIN

"Application of the simulated annealing technique to microwave tomography: Preliminary results". *Inverse Methods in Action*, P.C. Sabatier (Ed.), Springer-Verlag, Berlin, (1990), pp. 62-68.

J.P. HUGONIN, Ch. PICHOT, N. JOACHIMOWICZ

"Quantitative reconstruction of complex permittivity distributions by means of microwave tomography". *Inverse Methods in Action*, P.C. Sabatier (Ed.), Springer-Verlag, Berlin (1990), pp. 302-310.

Ch. PICHOT, P. TROUILLET

"Diagnostic of reinforced structures: an active microwave imaging method". *Bridge Evaluation, Repair and Rehabilitation*, NATO ASI series, A.S. Nowak (Ed.), Kluwer Academic Publishers, Dordrecht (1991).

L. CHOMMELOUX, B. DUCHENE, Ch. PICHOT, D. LESSELIER, W. TABBARA, J.Ch. BOLOMEY

"On the microwave or ultrasonic imaging of buried targets by diffraction tomography". *Direct and Inverse in Radar Polarimetry*, W.M. Boerner et al. (Eds.), Kluwer Academic Publishers, Dordrecht (1992), Part 2, pp. 1083-1104.

J.Ch. BOLOMEY, Ch. PICHOT

"Some applications of diffraction tomography to electromagnetics- The particular case of Microwaves". *Inverse Problems in Scattering and Imaging*, M. Bertero and E.R. Pike (Eds.), Malvern Physics Series, Adam Hilger, Bristol (1992), pp. 319-344.

N. JOACHIMOWICZ, J.Ch. BOLOMEY, Ch. PICHOT

Process tomography-A strategy for industrial exploitation, edited by M.S. Beck, E. Campogrande, M. Morris, R.A Williams and R.C. Waterfall, (1993), pp. 164-166.

Ch. PICHOT, P. LOBEL, L. BLANC-FÉRAUD, M. BARLAUD, K. BELKEBIR, J.M. ELISSALT, J.M. GEFFRIN

"Gradient and Newton-Kantorovich methods for microwave tomography". *Inverse Problems in Medical Imaging and Nondestructive Testing*. W.H. Engl, A.K. Louis, W. Rundell (Eds.), Springer-Verlag, Wien, (1997), pp. 168-187.

P. LOBEL, Ch. PICHOT, L. BLANC-FÉRAUD, M. BARLAUD,

"Edge-preserving regularization for quantitative reconstruction algorithms in microwave imaging". *Tomography and Image Processing*, A. Ramm (Ed.), Plenum Press, New-York, (1998), pp. 113-124.

P.J. MONTEIRO, Ch. PICHOT, K. BELKEBIR

"Computer tomography of reinforced concrete", Chapter 12, *Materials Science of Concrete V*, Y. Skalny and S. Mindess (Eds.), American Ceramic Society, Westerville (1998), pp. 537-572.

I. ALIFERIS, Ch. PICHOT, J.Y. DAUVIGNAC, E. GUILLANTON

"Tomographic reconstructions of buried objects using nonlinear and regularized and inversion method", *Non-Linear Electromagnetic Systems - Studies in Applied Electromagnetics and Mechanics*. Vol. 18 - P. Di Barba & A. Savini Eds., IOS Press, Amsterdam, The Netherlands (2000), pp. 237-240. ISSN: 1383-7281. ISBN 1 58603 024 8.

Ch. PICHOT, J.Y. DAUVIGNAC, E. LE BRUSQ

"Qualitative and quantitative reconstruction algorithms for electromagnetic subsurface tomography", *Microwave nondestructive evaluation and imaging* – M. Pastorino Ed., Research Signpost, Trivandrum, Inde. 2002. ISBN:81-7736-081-7.

Refereed international conference proceedings since 2010

R. CUGGIA, G. VERISSIMO, J.L. DUBARD, M. NEY, Ch. PICHOT

"Modeling of VLF/LF Antenna Insulators with an Arbitrarily Oriented Thin Wire Loaded TLM Node", Proceed. European Conference on Antennas and Propagation (EuCAP 2010) (12-16 April 2010, Barcelona, Spain), Paper 1849657.pdf, pp. 1-5.

G. VERISSIMO, R. CUGGIA, J.L. DUBARD, M. NEY, Ch. PICHOT

"Multi-Scale Modeling of Antennas with TLM Method", Proceed. European Conference on Antennas and Propagation (EuCAP 2010) (12-16 April 2010, Barcelona, Spain), Paper 1849686.pdf, pp.1-5.

T. SAKAMOTO, T. SATO, A. CRESP, I. ALIFERIS, J.Y. DAUVIGNAC, Ch. PICHOT

"An experimental study on multi-static ultra wideband radar imaging with SEABED And Synthetic aperture", Proceed. 26th International Review of Progress in Applied Computational Electromagnetics (ACES2010) (25-29 April 2010, Tampere, Finland). Paper 28-01-ACES2010-1061.pdf

N. MAAREF, P. MILLOT, Ch. PICHOT

"Ultra wide band radar system for Through-The-Wall microwave localization and imaging". Proceed. 8th European Conference on Synthetic Aperture Radar (EUSAR 2010) (7-10 June 2010, Aachen, Germany). Paper p67-pichot.pdf, pp. 1-4.

P. MILLOT, B. BOUDAMOUZ, T. VOLPERT, Ch. PICHOT

"MIMO radar concept for detecting human beings through walls in the presence of background clutter", Proceed. Progress in Electromagnetics Research Symposium (PIERS 2010) (5-8 July 2010, Cambridge, USA).

M. ZOPPI, C. DEDEBAN, Ch. PICHOT, S. SELLERI, G. PELOSI

"Antenna shape synthesis of various planar configurations using a hybrid conjugate gradient method". Special Session on "Inverse Techniques for Antenna Synthesis". 2010 IEEE International Conference on Wireless Information Technology and Systems (IEEE ICWITS 2010), (28 August-3 September 2010, Honolulu, USA). Paper WITS1258.pdf.

G. VERISSIMO, R. CUGGIA, M. CUEILLE, J.L. DUBARD, M. NEY, Ch. PICHOT

"Multi-scale modeling of VLF/LF antennas with an arbitrarily oriented thin wire TLM node integrating lumped component". Special Session on "Multiscale Modeling in Antenna Design". 2010 IEEE International Conference on Wireless Information Technology and Systems (IEEE ICWITS 2010), (28 August-3 September 2010, Honolulu, USA). Paper WITS1255.pdf, 10.1109/ICWITS.2010.5611891, pp. 1-4.

M. YEDLIN, G. SENECHAL, D. ROUSSET, N. FORTINO, J.Y. DAUVIGNAC, S. GAFFET, T. MONFRET, Ch. PICHOT

"Comparative study using an UWB measurement system and a RAMAC GPR system for subsurface imaging of the Vaucluse karst aquifer". Special Session on "Microwave Imaging". 2010 IEEE International Conference on Wireless Information Technology and Systems (IEEE ICWITS 2010), (28 August-3 September 2010, Honolulu, Hawaii, USA). Paper WITS1254.pdf.

U. D'ELIA, L. Di GUIDA, G. PELOSI, Ch. PICHOT, S. SELLERI, M. ZOPPI

"Physical optic analysis of frequency selective radome". Proceed. XVIII RiNEm1st National Meeting, URSI, Commission B (6-10 September 2010, Benevento, Italy), pp. 332-335.

A. CRESP, M.J. YEDLIN, T. SAKAMOTO, I. ALIFERIS, T. SATO, J.Y. DAUVIGNAC, Ch. PICHOT

"Comparison of the Time-Reversal and SEABED imaging algorithms applied on ultra-wideband experimental SPR data". Proceed. EuRAD 2010 (26 September-1st October 2010, Paris, France), pp. 360-363.

P. FEIL, A. ZEITLER, T.P. NGUYEN, Ch. PICHOT, C. MIGLIACCIO, W. MENZEL

"Foreign object debris detection using a 78 GHz sensor with cosec antenna". Proceed. 7th European Radar Conference (EuRAD2010) (26 September- 1st October 2010, Paris, France), pp. 33-36.

B. BOUDAMOUZ, P. MILLOT, Ch. PICHOT

"Through the Wall MIMO radar detection with stepped frequency waveforms". Proceed. 7th European Radar Conference (EuRAD2010) (26 September- 1st October 2010, Paris, France), pp. 400-402.

K. MAZOUNI, A. KOHMURA, S. FUTATSUMORI, N. YONEMOTO, J.Y. DAUVIGNAC, Ch. PICHOT, C. MIGLIACCIO,

"77 GHz FM-CW radar for FODs detection". Proceed. 7th European Radar Conference (EuRAD2010) (26

September-1st October 2010, Paris, France), pp. 451-454

N. MAAREF, P. MILLOT, Ch. PICHOT

"Ultra Wide Band Radar System for Through-The-Wall Microwave Imaging". Proceed. 3rd Young Researchers International Symposium, Global Center of Excellence (GCOE) on Photonics and Electronics Science and Engineering, (8 December 2010, Katsura Campus, Kyoto University, Kyoto, Japan), pp. 24-25.

C. MIGLIACCIO, K. MAZOUNI, A. BREARD, A. ZEITLER, J. LANTERI, J.-Y. DAUVIGNAC, Ch. PICHOT, N. YONEMOTO, A. KOHMURA, S. FUTATSUMORI

"Reflect arrays for mm-wave radar applications". Proceed. IEEE-AP-S 2011 and USNC/URSI National Radio Science Meeting (3-8 July 2011, Spokane, Washington, USA), Paper 00105.pdf, 10.1109/APS.2011.5996651, pp. 105-108.

G. VERISSIMO, J.L. DUBARD, M. NEY, Ch. PICHOT

"TLM modeling of thin-wire in dispersive media". Proceed. Computational Electromagnetics Workshop (CEM'11) (August 10-13, 2011, Izmir, Turkey), 10.1109/CEM.2011.6047323, pp. 30-33.

M. ZOPPI, C. DEDEBAN, Ch. PICHOT, S. SELLERI, G. PELOSI

"Optimal location of multi-antenna systems using a conjugate gradient method". Proceed. Computational Electromagnetics Workshop (CEM'11) (August 10-13, 2011, Izmir, Turkey), 10.1109/CEM.2011.6047329, pp. 53-56.

B. BOUDAMOUZ, P. MILLOT, Ch. PICHOT

"Through the wall radar imaging with MIMO conventional beamforming processing". Proceed. 3rd Microwaves, Radar and Remote Sensing Symposium (MRRS2011) (25-27 August 2011, Kiev, Ukraine), 10.1109/MRRS.2011.6053647, pp. 251-254.

K. MAZOUNI, A. ZEITLER, J. LANTERI, Ch. PICHOT, J.Y. DAUVIGNAC, C. MIGLIACCIO, N. YONEMOTO, A. KOHMURA, S. FUTATSUMORI

"76.5 millimeter-wave radar for Foreign Object Debris on airport runways". Proceed. 8th European Radar Conference (EuRAD2011) (9-14 October 2011, Manchester, UK), pp. 222-225.

J.Y. DAUVIGNAC, N. FORTINO, F. PERRET, S. GAFFET, M. AUGUSTE, T. MONFRET, G. SENECHAL, D. ROUSSET, M. YEDLIN, Ch. PICHOT

"ANR MAXWELL: presentation, evolution of the measurement set-up and results". ANR MAXWELL Workshop Ultra-Wide Band Subsurface Imaging, (13-14 October 2011, Saignon, France). CDWorkshop ANR MAXWELL.

A. ZEITLER, C. MIGLIACCIO, A. MOYNOT, I. ALIFERIS, L. BROCHIER, J.Y. DAUVIGNAC, Ch. PICHOT

"W-band imaging with complex scattered field measurements of a dielectric cylinder". 6th European Conference on Antennas and Propagation (EuCAP2012) (26-30 March 2012, Prague, Czech Republic), 10.1109/EuCAP.2012.6206565, pp. 3686-3689.

M. ZOPPI, Ch. PICHOT, C. DEDEBAN, S. SELLERI, G. PELOSI

"Optimal location of multiple objects or multi-antenna systems". Special Session on "Theoretical, Algorithmic, and Technical Advances in Electromagnetic Inverse Scattering". 2012 IEEE International Symposium on Antennas and Propagation and USNC/URSI Meeting (2012 IEEE AP-S & USNC/URSI), (July 8-14, 2012, Chicago, USA), Paper s353p2.pdf. 10.1109/APS.2012.6348824, pp. 1-4.

B. BOUDAMOUZ, P. MILLOT, Ch. PICHOT

"MIMO antenna design with genetic algorithm for TTW radar imaging". 9th European Radar Conference (EuRAD2012), 42nd European Microwave Conference (EuMW2012) (28 October-2 November 2012, Amsterdam, The Netherlands), pp. 150-153.

M. ZOPPI, Ch. PICHOT, C. DEDEBAN, S. SELLERI, G. PELOSI

"Shape optimization of planar antennas using Level Set method". Special Session on "Antenna Synthesis & Inverse Problems", 2012 IEEE International Conference on Wireless Information Technology and Systems (IEEE ICWITS 2012), (November 11-16, 2012, Maui, Hawaii, USA), Paper WITS1077.pdf, pp. 1-4.

A. MOYNOT, A. ZEITLER, I. ALIFERIS, C. MIGLIACCIO, J.Y. DAUVIGNAC, Ch. PICHOT

"Millimeter-wave imaging: quantitative reconstructions from experimental data in the W-band". Special Session on "Antenna Synthesis & Inverse Problems", 2012 IEEE International Conference on Wireless Information Technology and Systems (IEEE ICWITS 2012), (November 11-16, 2012, Maui, Hawaii, USA), Paper WITS1155.pdf, pp. 1-4.

R. J. FERGUSON, M.J. YEDLIN, Ch. PICHOT, J.Y. DAUVIGNAC, N. FORTINO, S. GAFFET

"Depth migration of monostatic and bistatic georadar data". 24th Annual CREWES (Consortium for research in Elastic Wave Exploration Seismology) Sponsors Meeting, (28-30 November 2012, Banff, Alberta, Canada). 2012 Annual CREWES Report, Chapter 19 (available at <http://www.crewes.org>)

R. J. FERGUSON, M. YEDLIN, Ch. PICHOT, J.-Y. DAUVIGNAC, N. FORTINO, S. GAFFET

"Imaging of ultra-wide band georadar data". Proceed. European Geosciences Union General Assembly (EGU2013) (7-12 April 2013, Vienna, Austria), Geophysical Research Abstracts, Vol. 15, EGU2013-12919, 2013.

Ch. PICHOT

"Microwave imaging and sensors for medical applications". Interdisciplinary Symposium on Signals and Systems for Medical Applications, (3-4 June 2013, Paris, France).

Z. ZHAO, M. ZOPPI, Ch. PICHOT, C. DEDEBAN, S. SELLERI, G. PELOSI

"Inversion algorithm for optimizing multi-antenna systems". 2013 IEEE-AP-S and USNC-URSI National Radio

<p>Science Meeting (7-12 July 2013, Orlando, USA), pp. 532-533. M. N. BIN ZAWAWI, J. LANTERI, C. MIGLIACCIO, Ch. PICHOT "20 GHz active reflectarray using 1-bit phase shifter". 2013 IEEE-AP-S and USNC-URSI National Radio Science Meeting (7-12 July 2013, Orlando, USA), pp. 1668-1669. B. BOUDAMOUZ, P. MILLOT, X. FERRIERES, Ch. PICHOT "UWB MIMO EM radar imaging for the detection of human beings inside buildings". 34th PIERS (Progress in Electromagnetic Research Symposium) (12-15 August 2013, Stockholm, Sweden). P. MILLOT, B. BOUDAMOUZ, N. MAAREF, X.FERRIERES, L. CASADEBAIG, Ch. PICHOT "Overview of EM imaging and detection of concealed objects: EM modeling, efficient signal processing and experimental results". 34th PIERS (Progress in Electromagnetic Research Symposium) (12-15 August 2013, Stockholm, Sweden). Z. ZHAO, Ch. PICHOT, C. DEDEBAN "Shape gradient optimization for planar antenna arrays". 2014 IEEE-AP-S and USNC-URSI National Radio Science Meeting (6-12 July 2014, Memphis, USA), pp. 1954-1955. C. MIGLIACCIO, J. LANTERI, A. ZEITLER, CH. PICHOT, J-Y. DAUVIGNAC "MM-Wave Systems for Mobile and Security Applications in the W-band: Which Gap Toward Identification?", 2015 IEEE MTT-S International Conference on Microwaves for Intelligent Mobility (ICMIM), (April 27-29, 2015, Heidelberg, Germany). F. NSENGIYUMVA, Ch. PICHOT, I. ALIFERIS, J. LANTERI, C. MIGLIACCIO "Detection of Debris (FOD) on runways in W-band: relevance and validity domain of two-dimensional approaches". ICEAA 2015 (International Conference on Electromagnetics in Advanced Applications) (September 7-11, 2015, Torino, Italy). Special Session "Inverse Scattering Methods in Electromagnetic Imaging". Z. ZHAO, Ch. PICHOT, C. DEDEBAN "Level-set shape optimization for planar antenna arrays". ICEAA 2015 (International Conference on Electromagnetics in Advanced Applications) (September 7-11, 2015, Torino, Italy). Special Session "Inverse Scattering Methods in Electromagnetic Imaging". I. EL KANFOUD, V. DOLEAN, C. MIGLIACCIO, J. LANTERI, I. ALIFERIS, CH. PICHOT, P.-H.TOURNIER, F. NATAF, F. HECHT, S. SEMENOV, M. BONAZZOLI, F. RAPETTI, R. PASQUETTI, M. DE BUHAN, M. KRAY, M. DARBAS "Whole-microwave system modeling for brain imaging". 2015 IEEE CAMA (International Conference on Antenna Measurements & Applications) (November 30-December 2, 2015, Chiang Mai, Thailand). Special Session "Recent Advances in Electromagnetic Imaging". F. NSENGIYUMVA, Ch. PICHOT, I. ALIFERIS, J. LANTERI, C. MIGLIACCIO "Millimeter-wave imaging of foreign object debris (FOD) based on two-dimensional approach. 2015 IEEE CAMA (International Conference on Antenna Measurements & Applications) (November 30-December 2, 2015, Chiang Mai, Thailand). Special Session "Recent Advances in Electromagnetic Imaging". Z. ZHAO, Ch. PICHOT, C. DEDEBAN "Topological Shape Gradient and Level-Set Method for Optimizing Planar Antennas". 2015 IEEE CAMA (International Conference on Antenna Measurements & Applications) (November 30-December 2, 2015, Chiang Mai, Thailand). Special Session "Recent Advances in Electromagnetic Imaging". F. NSENGIYUMVA, Ch. PICHOT, C. MIGLIACCIO, J. LANTERI, I. ALIFERIS "Quantitative millimeter-wave imaging in W-band". 2016 IEEE-AP-S and USNC-URSI National Radio Science Meeting (June 25-July, 2 2016, Puerto Rico, USA).</p>
Patents
<p>Ch. PICHOT, L. CHOMMELOUX, D. PICARD, J.Ch. BOLOMEY 1991 US Patent. For receiving & transmitting microwave radiation for forming images of buried objects. C. MIGLIACCIO, B.D. NGUYEN, Ch. PICHOT, N. YONEMOTO, K. YAMAMOTO, K. YAMADA, 2010 US Patent. Reflectarray and a millimetre wave radar.</p>
Other forms of dissemination (reports for clients, technical reports, popular press, etc)
Numerous confidential research reports to major companies and SMEs

2b. Previous research work
<p>Research title: Analysis of the propagation in inhomogeneous optical waveguides Principal outcome: Rigorous and exact numerical solution of the inhomogeneous slab waveguide and for the diffused channel waveguide. Principal end-user and contact: Thomson-CSF Central Research Laboratory, Integrated Optics laboratory, Orsay, France. Director: Dr. Claude Puech. Research title: Numerical solutions of singular integral equations Principal outcome: Rigorous numerical solution of singularities arising in integral equations. Principal end-user and contact: Signals and Systems Laboratory, CNRS-Supelec Electrical</p>

Engineering School, Gif-sur-Yvette, France. Supervisor: Prof. Elie Roubine.

Research title: Microwave imaging of inhomogeneous for biomedical applications

Principal outcome: Development of a microwave camera at 2.45 GHz for cancer detection and hyperthermia treatment monitoring.

Principal end-user & contact: The Curie Institute, Paris. Dr. Geneviève Gaboriaud.

Research title: Microwave imaging of buried objects, anti-tank & anti-personal mines.

Principal outcome: Development of Ultra Wideband antennas and reconstruction algorithms for microwave tomography.

Principal end-user and contact: THALES Group for the French Ministry of Defense.

Research title: Microwave Imaging of rebars in reinforced concrete

Principal outcome: Development of an Ultra Wideband Microwave Imaging camera

Principal end-user and contact: The LCPC, French Public Works Laboratory, Ministry of Transportation, Paris, France. Dr. Jean-Pierre Baron.

2c. Demonstration of relationships with end-users

- Multiple contracts with private companies and governmental institutions to develop prototypes,
- Contracts and scientific advisor for industrial companies
- Public panels; newspaper/ magazine articles, TV & radio interviews; science films.
- Scientific advisor for Local, National or Foreign governmental authorities.