Curriculum Vitae

Francesco P. Andriulli

Full Professor

Ecole Nationale Supérieure Mines-Télécom Atlantique (IMT Atlantique)

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Research group homepage http://recherche.telecom-bretagne.eu/cerl/

Research and Teaching interests

Computational and Applied Electromagnetics. Well-conditioned formulations and fast solvers. Modelling and design techniques for metamaterials and metasurfaces, wireless components, and microwave circuits. Computational strategies for high-resolution electroencephalographies.

Education

- **Doctor of Philosophy,** University of Michigan, Ann Arbor, Michigan 2005-2008
  Dissertation: Well-Posed Boundary Element Formulations in Electromagnetics. Advisor: Eric Michielssen.
- **M.Sc. in Electrical Engineering and Computer Science**, University of Illinois, Chicago, Illinois. 2002-2004
- **Laurea in Electrical Engineering**, Politecnico di Torino, Turin, Italy 1999-2004

Key facts

- **Principal Investigator of the ERC CoG project** *"321: From Cubic^3 To^2 Linear^1 Complexity in Computational Electromagnetics"*. (ERC Consolidator Grant 2016, **two million euros**, project kick-off in 2017).
- **41 papers** published or in print on international ISI journals, 4 papers under review, and **84 papers** in peer-reviewed conference proceedings, **23 invited contributions.**
- **15 Awards and distinctions** for scientific publications.
- Recipient of the **2015 EurAAP Leopold B. Felsen Award for Excellence in Electrodynamics**
- Recipient of the **URSI Issac Koga Gold Medal** (triennium 2014-2016).
- Recipient of the **IEEE AP-S Donald G. Dudley Undergraduate Teaching Award**.
- **Associate Editor** of **3 major journals of the IEEE**, reviewer for 19 ISI journals.

- **Principal investigator and Coordinator** for **8** national and international research projects (More than 1.3 million euros of personal budget in the last three years).

Honors and Awards

- EurAAP Leopold B. Felsen Award for Excellence in Electrodynamics. 2015
- ICEAA IEEE-APWC Best Paper Award 2015
- URSI Issac Koga Gold Medal (triennium 2014-2016) 2014

  "For contributions to computational electromagnetics, specifically the development of preconditioned and stable integral equation solvers".
- IEEE AP-S Donald G. Dudley Jr. Undergraduate Teaching Award 2014

  "For the excellence in advising undergraduate research and in the development of research inspired courses in applied and computational electromagnetics".
- Young Scientist Award and second prize in the Best Young Scientist Paper Contest URSI International Symposium on Electromagnetic Theory,Hiroshima. 2013
- URSI Young Scientist Award, International Symposium on Electromagnetic Theory (EMTS 2010), Berlin. 2010
- IEEE Antennas and Propagation Society Raj Mittra Travel Grant. 2009
- Best Student Paper Award at the IEEE Antennas and Propagation Society International Symposium, San Diego (authored 2 out of 15 finalist papers). 2008
- Best Student Paper Award at the URSI North American Radio Science Meeting, Ottawa. 2007
- Membership in the honor societies of Eta Kappa Nu, Tau Beta Pi, and Phi Kappa Phi
- In addition FPA co-authored with his students and collaborators other three first prize conference papers (EMTS 2016, URSI-DE Meeting 2014, ICEAA 2009), a second prize conference paper (URSI GASS 2014), two honorable mention conference papers (ICEAA 2011, URSI/IEEE–APS 2013) and other three finalist conference papers (URSI/IEEE-APS 2012, URSI/IEEE-APS 2007, URSI/IEEE-APS 2006).

Research Positions

Full Professor 2014-present
IMT Atlantique
Institut Mines-Telecom
Brest, France

Associate Professor 2010-2014
IMT Atlantique
Institut Mines-Telecom
Brest, France

Research Associate and Adjunct Professor 2008-2010
Department of Electrical Engineering
Politecnico di Torino
Turin, Italy

Research Assistant 2005-2008
The Radiation Laboratory
Department of Electrical Engineering and Computer Science
University of Michigan at Ann Arbor
Ann Arbor, Michigan

Undergraduate Research Assistant 2003-2004
Department of Electrical Engineering
Politecnico di Torino
Turin, Italy

International Short Courses

Advanced Computational EM for Antenna Analysis. Organizer and co-coordinator of this week-long international course which is part of the European School of Antennas. Institut Mines-Telecom, Paris, September 2014.

Fast Solvers for Electromagnetic Integral Equations. Taught as a part of a course of the European School of Antennas at EPFL (October 2010) and at the Politecnico di Torino (October 2012).

Advanced preconditioning techniques for computational electromagnetics. Taught during the URSI/IEEE Antennas and Propagation Society International Symposium in Spokane (2011), Chicago (2012), Orlando (2013), Memphis (2014), Vancouver (2015), Puerto Rico (2016).

Professional Services and Affiliations

Associate Editor, IEEE Transactions on Antennas and Propagation
Associate Editor, IEEE Antennas and Wireless Propagation Letters
Associate Editor, IEEE Access
Associate Editor, IET Microwaves, Antennas & Propagation

Reviewer for the IEEE Transactions on Antennas and Propagation
Reviewer for the IEEE Transactions on Microwave Theory and Techniques
Reviewer for the IEEE Transactions on Electromagnetic Compatibility
Reviewer for the IEEE Antennas and Wireless Propagation Letters
Reviewer for IEEE Access
Reviewer for the Journal of Computational Physics
Reviewer for the Journal of Electromagnetic Waves and Applications
Reviewer for Radio Science

Reviewer for IET Microwave, Antennas and Propagation
Reviewer for the International Journal of Electronics (Taylor and Francis)
Reviewer for the International Journal of Electronics and Communications
Reviewer for the Journal of Circuits, Systems, and Computers
Reviewer for the International Journal of Numerical Modelling
Reviewer for Engineering Analysis with Boundary Elements
Reviewer for the SIAM Journal of Numerical Analysis
Reviewer for Applied Mathematics and Computation
Reviewer for the Journal of Mathematical Analysis and Applications
Reviewer for the Journal of Computational and Applied Mathematics

Senior member of the IEEE
Member of the Society for Industrial and Applied Mathematics (SIAM)
Member of the Applied Computational Electromagnetics Society (ACES)
Member of the American Association for the Advancement of Science (AAAS)
Member of the European Association on Antennas and Propagation (EurAAP)
Member of the IEEE Antennas and Propagation Society
Member of the IEEE Microwave Theory and Techniques Society
Member of the IEEE Engineering in Medicine and Biology Society
Member of the IEEE Education Society

Member of the International Board of the European School of Antennas

TPC memberships, organization of convened sessions, and (selected) invited contributions at international conferences and symposia

Scientific Committee Member International Conference on Electromagnetics in Advanced Applications ICEAA-IEEE APWC 2017. Verona, Italy.

Technical Program Committee Member Journées Scientifiques d'URSI-France, February 2017.

Technical Program Committee Member IEEE International Symposium on Antennas and Propagation 2016. Puerto Rico, USA, June 2016.

Technical Program Committee Member IEEE International Symposium on Antennas and Propagation 2015. Vancouver, Canada, July 2015.

Technical Program Committee Member 2015 IEEE International Conference on Computational Electromagnetics.

Technical Program Committee Member Conférence Européenne sur les Méthodes Numériques en Electromagnétisme (NUMELEC 2015).

Technical Program Committee Member Journées Scientifiques d'URSI-France, July 2014.

Technical Program Committee Member IEEE International Symposium on Antennas and Propagation 2014. Memphis, Tennessee, July 2014.

Technical Program Committee Member IEEE International Symposium on Antennas and Propagation 2013, Florida, July 2013.

Technical Program Committee Member IEEE International Symposium on Antennas and Propagation 2012. Chicago, Illinois, July 2012.

Convened Session Organizer, URSI General Assembly. Beijin, August 2014, Session: Electromagnetic Uncertainty Quantification.

Convened Session Organizer, Applied Computational Electromagnetics Society International Symposium ACES 2013, Session: Fast Integral Equation Methods and Stable Discretizations.

Convened Session Organizer, Applied Computational Electromagnetics Society International Symposium ACES 2012, Session: Advanced Integral Equation Methods.

Convened Session Organizer, European Conference on Antennas and Propagation (EUCAP) 2011, Session: Numerical Methods for Multi-Scale Problems.

Invited talk, Mathematisches Forschungsinstitut Oberwolfach 2013 meeting on Computational Electromagnetism and Acoustics.

Invited paper, F. P. Andriulli, K. Cools, I. Bogaert. Stable Solutions of EM Integral Equation in the Entire Frequency Spectrum Without the Search for Global Loops. International Conference on Advanced COmputational Methods in Engineering.

Invited paper, F. P. Andriulli. Analysis and Efficient Algorithms for a Set of Generalized RWG Basis Functions, EUCAP 2014, De Haag.

Invited paper, F P. Andriulli On the Use of Graph Laplacians in the Integral Equation Modeling of Complex and Multiscale Problems). IEEE APS 2014, Memphis.

Invited paper, F. P. Andriulli, K. Cools, I. Bogaert, and E. Michielssen. A Magnetic Type Integral Operator which is Stable till Extremely Low Frequencie, URSI GASS 2014, Beijing.

Invited talk, F. P. Andriulli. Preconditioned and stable integral formulations. Workshop on Computational Electromagnetics, URSI GASS 2014, Beijing.

Invited paper, F. P. Andriulli. Hierarchical EM Preconditioners with Spectral Domain Partitioning. Proceedings of the 6th European Conference on Antennas and Propagation (EuCAP), 2012.

Invited paper, F. P. Andriulli, "Spectral Properties and Regularization of Loop, Star, and Tree Related Gram Matrices" . *International Review of Progress in Applied Computational Electromagnetics (ACES 2010)*, Tampere Finland, April 2010.

Invited paper, F. P. Andriulli, G. Vecchi, "Helmholtz-stable fast solution of the Combined Field Integral Equation." . *European Conference on Antennas and Propagation (EuCAP),* Barcelona, Spain, April 2010.

Invited paper, F. P. Andriulli, "Analysis and Stable Inversions of Standard Quasi-Helmholtz Decompositions". International Symposium on Electromagnetic Theory (EMTS2010), Berlin, Germany, August 2010.

Invited paper, F. P. Andriulli, G. Vecchi, "On the Regularization of the Vector Potential in the Electric Field Integral Equation." . *European Conference on Antennas*

and Propagation (EuCAP), Rome, Italy, April 2011.

Invited talk, F. P. Andriulli "Perspectives and Open Problems in Preconditioning EM Integral Equations.". invited in the session "Ten Open Problems in Computational Electromagnetics" *IEEE Antennas and Propagat. Int. Symp.,* Spokane, USA, July 2011.

Publications

The publication record includes **41 papers published** on international peer-reviewed ISI journals, 4 journal papers under review, and **84 papers** in **conference proceedings** (of which **23 invited contributions**).

Google Scholar: total citations **>1250**, h-index: **18,** g-index: **33**

http://scholar.google.com/citations?user=w-SFwyMAAAAJ&hl=it

Journal papers

[R1]. A. Dely, F. P. Andriulli, and K. Cools An Impedance Boundary Condition EFIE that is Low-Frequency and Refinement Stable IEEE Transactions on Antennas and Propagation, 2017. Available on IEEExplore Early Access.

[R2]. H. A. Ulku; I. Bogaert; K. Cools; F. P. Andriulli and H. Bagci Mixed Discretization of the Time Domain MFIE at Low Frequencies. IEEE Antennas and Wireless Propagation Letters, 2017. Available on IEEExplore Early Access.

[R3]. S. B. Adrian, F. P. Andriulli, and T. F. Eibert A Hierarchical Preconditioner for the Electric Field Integral Equation on Unstructured Meshes Based on Primal and Dual Haar Bases. Journal of Computational Physics, 2016. In press. Available on Elsevier online.

[R4]. A. A. Ijjeh, M. M. Ney, and F. P. Andriulli Stability and Dispersion Analysis of a TLM Unified Approach for Dispersive Anisotropic Media. IEEE Transactions on Microwave Theory and Techniques, 2016. In press. Available online.

[R5]. J. E. O. Guzman, S. B. Adrian, R. Mitharwal, Y. Beghein, T. Eibert, K. Cools, and F. P. Andriulli On the Hierarchical Preconditioning of the PMCHWT Integral Equation on Simply and Multiply Connected Geometries. IEEE Antennas and Wireless Propagation Letters, 2016. Available on IEEExplore Early Access.

[R6]. S. B. Adrian, F. P. Andriulli, and T. F. Eibert On the Hierarchical Preconditioning of the Combined Field Integral Equation. IEEE Antennas and Wireless Propagation Letters, To Appear. Available on IEEExplore Early Access.

[R7]. R. Mitharwal and F. P. Andriulli A Regularized Boundary Element Formulation for Contactless SAR Evaluations within Homogeneous and Inhomogeneous Head Phantoms (**invited**) Comptes Rendus Physique, Vol. 16, n. 9, 2015, pp. 776-788.

[R8]. Y. Beghein, K. Cools, and F. P. Andriulli A DC-stable, Well Balanced, Calderon Preconditioned Time Domain Electric Field Integral Equation IEEE Transactions on Antennas and Propagation , Vol. 63, n.12, 2015, pp. 5650-5660.

[R9]. Y. Beghein, K. Cools, and F. P. Andriulli A DC Stable and Large-Time Step Well-Balanced TD-EFIE Based on Quasi-Helmholtz Projectors. IEEE Transactions on Antennas and Propagation , Vol. 63, n.7, 2015, pp. 3087-3097.

[R10]. R. Mitharwal and F. P. Andriulli. On the Multiplicative Regularization of Graph Laplacians on Closed and Open Structures with Applications to Spectral Partitioning

IEEE Access , Vol. 62, 2014, pp. 788-796.

[R11]. S. B. Adrian, F. P. Andriulli, and T. F. Eibert Hierarchical Bases Preconditioners for the Electric Field Integral Equation on Multiply Connected Geometries. IEEE Transactions on Antennas and Propagation, Accepted for publication.

[R12]. I. Bogaert and F. P. Andriulli. Maximally Orthogonal High-Order Basis Functions have a Well-Conditioned Gram Matrix. IEEE Transactions on Antennas and Propagation , Vol. 62, n.8, 2014, pp. 4096-4104.

[R13]. I. Bogaert, K. Cools, F. P. Andriulli, and H. Bagci Low-Frequency Scaling of the Standard and Mixed Magnetic Field and Muller Integral Equations.IEEE Transactions on Antennas and Propagation , Vol. 62, n.2, 2014, pp. 822-831.

[R14]. F. P. Andriulli, K. Cools, I. Bogaert, and E. Michielssen. On a Well-Conditioned Electric Field Integral Operator for Multiply Connected Geometries. IEEE Transactions on Antennas and Propagation , Vol. 61, n.4, 2013, pp. 2077-2087.

[R15]. F. Valdes, M. Ghaffari-Miab, F. P. Andriulli, K. Cools, and E. Michielssen. High-Order Calderón Preconditioned Time Domain Integral Equation Solvers. IEEE Transactions on Antennas and Propagation , Vol. 61, n.5, 2013, pp. 2570-2588.

[R16]. F. Valdes, F. P. Andriulli, H. Bagci, and E. Michielssen. Time Domain Single Source Integral Equations for Analyzing Scattering from Homogeneous Penetrable Objects. IEEE Transactions on Antennas and Propagation , Vol. 61, n.3, 2013, pp. 1239-1254.

[R17]. F. P. Andriulli. Loop-Star and Loop-Tree Decompositions: Analysis and Efficient Algorithms . IEEE Transactions on Antennas and Propagation , Vol. 60, n.5, 2012, pp. 2347-2356.

[R18]. F. P. Andriulli, and G. Vecchi. A Helmholtz-Stable Fast Solution of the Electric Field Integral Equation . IEEE Transactions on Antennas and Propagation , Vol. 60, n.5, 2012, pp. 2357-2366.

[R19]. P. Yla-Oijala, S. P. Kiminki, K. Cools, F. P. Andriulli, and S. Jarvenpaa. Mixed Discretization Schemes for Electromagnetic Surface Integral Equations . International Journal of Numerical Modelling: Electronic Networks, Devices and Fields , Vol. 25, n.5, 2012, pp. 525-540.

[R20]. P. Yla-Oijala, S. P. Kiminki, K. Cools, F. P. Andriulli, and S. Jarvenpaa. Stable Discretization of Combined Source Integral Equation for Scattering by Dielectric Objects . IEEE Transactions on Antennas and Propagation , Vol. 60, n.5, 2012, pp. 2575-2578.

[R21]. Y. Beghein, K. Cools, F. P. Andriulli, D. De Zutter, and E. Michielssen. A Calderon Multiplicative Preconditioner for the PMCHWT Equation for Scattering by Chiral Objects. IEEE transactions on antennas and propagation, Vol. 60, n.9, 2012, pp. 4239-4248.

[R22]. K. Cools, F. P. Andriulli, and E. Michielssen. A Calderon Multiplicative Preconditioner for the PMCHWT Integral Equation . IEEE Transactions on Antennas and Propagation , Vol. 59, n.12, 2011, pp. 4579-4587.

[R23]. F. Valdes, F. P. Andriulli, H. Bagci, and E. Michielssen. A Calderon-Preconditioned Single Source Combined Field Integral Equation for Analyzing Scattering from

Homogeneous Penetrable Objects . IEEE Transactions on Antennas and Propagation , Vol. 59, n.6, 2011, pp. 2315-2328.

[R24]. F. Valdes, F. P. Andriulli, K. Cools, and E. Michielssen. High-Order Div- and Quasi Curl-Conforming Basis Functions for Calderon Multiplicative Preconditioning of the EFIE . IEEE Transactions on Antennas and Propagation , Vol. 59, n.4, 2011, pp. 1321-1337.

[R25]. K. Cools, F. P. Andriulli, D. De Zutter, and E. Michielssen. Accurate and Conforming Mixed Discretization of the MFIE . IEEE Antennas and Wireless Propagation Letters , Vol. 10, 2011, pp. 528-531.

[R26]. R. Graglia, A. Peterson, and F. P. Andriulli. Curl-conforming hierarchical vector bases for triangles and tetrahedra . IEEE Transactions on Antennas and Propagation , Vol. 59, n.3, 2011, pp. 950-959.

[R27]. H. Bagci, F. P. Andriulli, K. Cools, F. Olyslager, and E. Michielssen. A Calderon Multiplicative Preconditioner for Coupled Surface-Volume Electric Field Integral Equations . IEEE Transactions on Antennas and Propagation , Vol. 58, n.8, 2010, pp. 2680-2690.

[R28]. F. P. Andriulli, A. Tabacco, and G. Vecchi. Solving the EFIE at Low-Frequencies with a Conditioning that Grows only Logarithmically with the Number of Unknowns. IEEE Transactions on Antennas and Propagation , Vol. 58, n.5, 2010, pp. 1614-1624.

[R29]. H. Bagci, F. P. Andriulli, F. Vipiana, G. Vecchi, and E. Michielssen. A Well-Conditioned Integral-Equation Formulation For Transient Analysis of Low-Frequency Microelectronic Devices. IEEE Transactions on Advanced Packaging , Vol. 33, n.2, 2010, pp. 468-480.

[R30]. F. P. Andriulli, H. Bagci, F. Vipiana, G. Vecchi, and E. Michielssen. Analysis and Regularization of the TD-EFIE Low Frequency Breakdown. IEEE Transactions on Antennas and Propagation , Vol. 57, n.7, 2009, pp. 2034-2046.

[R31]. F. Vipiana, F. P. Andriulli, and G. Vecchi. Two-tier Non-simplex Grid Hierarchic Basis for General 3D Meshes. Waves in Random and Complex Media, Vol. 19, n.1, 2009, pp. 126-146.

[R32]. H. Bagci, F. P. Andriulli, K. Cools, F. Olyslager, and E. Michielssen. A Calderon Multiplicative Preconditioner for the Combined Field Integral Equation. IEEE Transactions on Antennas and Propagation , Vol. 57, n.10, 2009, pp. 3387-3392.

[R33]. K. Cools, F. P. Andriulli, F. Olyslager, and E. Michielssen. Nullspaces of MFIE and Calderon Preconditioned EFIE Operators Applied to Toroidal Surfaces. IEEE Transactions on Antennas and Propagation , Vol. 57, n.10, 2009, pp. 3205-3215.

[R34]. F. P. Andriulli, K. Cools, F. Olyslager, and E. Michielssen. Time-Domain Calderon Identities and their Application to the Integral Equation Analysis of Scattering by PEC Objects, Part II: Stability. IEEE Transactions on Antennas and Propagation , Vol. 57, n.8, 2009, pp. 2365-2375.

[R35]. K. Cools, F. P. Andriulli, F. Olyslager, and E. Michielssen. Time-Domain Calderon Identities and their Application to the Integral Equation Analysis of Scattering by PEC Objects, Part I: Preconditioning. IEEE Transactions on Antennas and Propagation , Vol. 57, n.8, 2009, pp. 2352-2364.

[R36]. F. P. Andriulli, K. Cools, H. Bagci, F. Olyslager, A. Buffa, S. Christiansen, and E. Michielssen. A Multiplicative Calderon Preconditioner for the Electric Field Integral Equation. IEEE Transactions on Antennas and Propagation , Vol. 56, n.8, 2008, pp. 2398-2412.

[R37]. F. P. Andriulli, F. Vipiana, and G. Vecchi. Hierarchical Bases for Non Hierarchic 3D Triangular Meshes. IEEE Transactions on Antennas and Propagation , Vol. 56, n.8, 2008, pp. 2288-2297.

[R38]. F. P. Andriulli, A. Tabacco, and G. Vecchi. A Multiresolution Approach to the Electric Field Integral Equation in Antenna Problems. SIAM Journal on Scientific Computing , Vol. 29, n.1, 2007, pp. 1-21.

[R39]. F. P. Andriulli, and E. Michielssen. A Regularized Combined Field Integral Equation for Scattering from 2D Perfectly Electric Conducting Objects. IEEE Transactions on Antennas and Propagation , Vol. 55, n.9, 2007, pp. 2522-2529.

[R40]. F. P. Andriulli, H. Bagci, F. Vipiana, G. Vecchi, and E. Michielssen. A Marching-On-in-Time Hierarchical Scheme for the Solution of the Time Domain Electric Field Integral Equation. IEEE Transactions on Antennas and Propagation , Vol. 55, n.12, 2007, pp.3734-3738.

[R41]. F. P. Andriulli, G. Vecchi, F. Vipiana, P. Pirinoli, and A. Tabacco. Optimal A-Priori Clipping Estimation for Wavelet Based Method of Moment Matrices. IEEE Transactions on Antennas and Propagation , Vol. 53, n.11, 2005, pp.3726-3734.

Conference Papers

[R1]. J. E. Ortiz Guzman, S. Adrian, R. Mitharwal, Y. Beghein, T. Eibert, K. Cools, and F. P. Andriulli Hierarchical basis preconditioners and their application to the PMWCHT integral equation . Proceedings of the 10th European Conference on Antennas and Propagation (EuCAP), 2016.

[R2]. B. Quercia, F. P. Andriulli, and K. Cools Solving the low-frequency breakdown of the wire-EFIE without the search for global loops . Proceedings of the 10th European Conference on Antennas and Propagation (EuCAP), 2016.

[R3]. S. Adrian, F. P. Andriulli, and T. Eibert. A well-conditioned, Hermitian, positive definite, combined field integral equation for simply and multiply connected geometries. Proceedings of the URSI International Symposium on Electromagnetic Theory (EMTS2016), Helsinki, 2016.

[R4]. F. P. Andriulli. Present and future challenges in preconditioning integral equations for electromagnetics Proceedings of the URSI International Symposium on Electromagnetic Theory (EMTS2016), Helsinki, 2016.

[R5]. A. Pillain, L. Rahmouni,and F. P. Andriulli. On the Handling of Brain Tissue Anisotropy in the Forward EEG Problem with a Conformingly Discretized Surface Integral Method . Proceedings of the IEEE International Simposium on Biomedical Imaging (ISBI), 2016.

[R6]. J.E. Ortiz, A. Pillain, L. Rahmouni,and F. P. Andriulli. On the Preconditioning of the

Symmetric Formulation for the EEG Forward Problem by Leveraging on Calderon Formulas . Proceedings of the IEEE International Simposium on Biomedical Imaging (ISBI), 2016.

[R7]. L. Rahmouni,R. Mitharwal, and F. P. Andriulli. A Mixed Discretized Surface-Volume Integral Equation for Solving EEG Forward Problems with Inhomogeneous and Anisotropic Head Models . Proceedings of the IEEE International Simposium on Biomedical Imaging (ISBI), 2016.

[R8]. L. Rahmouni, R. Mitharwal and F. P. Andriulli. A novel volume integral equation for solving the Electroencephalography forward problem. Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), 2015.

[R9]. S. Adrian, F. P. Andriulli, and T. Eibert. A hermitian and well-conditioned EFIE for fast iterative and direct solvers. Proceedings of the IEEE Antennas and Propagation Society International Symposium , 2015.

[R10]. Y. Beghein, K. Cools, and F. P. Andriulli. A robust and low frequency stable time domain PMCHWT equation (**invited**). International Conference on Electromagnetics in Advanced Applications (ICEAA) , 2015.

[R11]. K. Cools and F. P. Andriulli. Well-conditioned saddle point description for scattering by a metallic junction (**invited**). International Conference on Electromagnetics in Advanced Applications (ICEAA), 2015.

[R12]. Y. Beghein, K. Cools, and F. P. Andriulli. A well-conditioned time domain EFIE for densely discretized low frequency problems (**invited**). International Conference on Electromagnetics in Advanced Applications (ICEAA), 2015.

[R13]. F. P. Andriulli, I. Bogaert, and K. Cools. On the high frequency behavior and stabilization of a preconditioned and resonance-free formulation (**invited**). International Conference on Electromagnetics in Advanced Applications (ICEAA), 2015.

[R14]. Y. Beghein, R. Mitharwal, K. Cools, and F. P. Andriulli. Handling the low-frequency breakdown of the PMCHWT integral equation with the quasi-Helmholtz projectors (**invited**). International Conference on Electromagnetics in Advanced Applications (ICEAA), 2015.

[R15]. C. Raucy, F. P. Andriulli, and Christophe Craeye. Stabilization of the modelling of a Radio-Frequency Quadrupole based on quasi-Helmholtz projectors (**invited**). International Conference on Electromagnetics in Advanced Applications (ICEAA), 2015.

[R16]. A. Ijjeh, M. Ney and F. P. Andriulli. Behavior of Time-Domain volumic methods in presence of high-contrast media or irregular structured mesh interfaces. Proceedings of the 9th European Conference on Antennas and Propagation (EuCAP), 2015.

[R17]. A. Ijjeh, M. Ney and F. P. Andriulli. Dispersion analysis in time-domain simulation of complex dispersive media. Proceedings of the IEEE MTT-S International Conference on Numerical Electromagnetic and Multiphysics Modeling and Optimization (NEMO), 2015.

[R18]. Y. Beghein, K. Cools and F. P. Andriulli. Eliminating the DC instability of the time domain electric field integral equation. Proceedings of the 9th European Conference on

Antennas and Propagation (EuCAP), 2015.

[R19]. K. Cools and F. P. Andriulli. A regularised electric field integral equation for scattering by perfectly conducting junctions. Proceedings of the 9th European Conference on Antennas and Propagation (EuCAP), 2015.

[R20]. A. Pillain, L. Rahmouni and F. P. Andriulli. On an indirect boundary element method for the anisotropic EEG forward problem. Proceedings of the 9th European Conference on Antennas and Propagation (EuCAP), 2015.

[R21]. S. Adrian, F. P. Andriulli, and T. Eibert. Hierarchical bases preconditioners for a conformingly discretized combined field integral equation operator (**invited**). Proceedings of the 9th European Conference on Antennas and Propagation (EuCAP), 2015.

[R22]. S. Adrian, F. P. Andriulli, and T. Eibert. Hierarchical bases on the standard and dual graph for stable solutions of the EFIE operator. Proceedings of the XXXIth URSI General Assembly and Scientific Symposium, 2014.

[R23]. F. Andriulli, I. Bogaert, and K. Cools. A magnetic type integral operator which is stable till extremely low frequencies (**invited**). Proceedings of the XXXIth URSI General Assembly and Scientific Symposium, 2014.

[R24]. S. Adrian, F. P. Andriulli, and T. Eibert. A Calderon preconditioner for the EFIE operator without barycentric refinement of the mesh. Proceedings of the IEEE Antennas and Propagation Society International Symposium , 2014.

[R25]. F. P. Andriulli. Analysis and Efficient Algorithms for a Set of Generalized RWG Basis Functions (**invited**), EUCAP 2014, De Haag

[R26]. L. Ramouni, and F. P. Andriulli. Mixed Discretization Formulations for the Direct EEG Problem. EUCAP 2014. De Haag.

[R27]. S. Adrian, F. P. Andriulli, T. Eibert, Hierarchical Bases On The Standard And Dual Graph For Stable Solutions Of The Efie Operator (**invited**), URSI GASS 2014, Beijing

[R28]. F. P. Andriulli, K. Cools, I. Bogaert, and E. Michielssen. A Well -Conditioned Combined Field Integral Equation Based on Quasi-Helmholtz Projectors (**invited**). International Conference on Electromagnetics in Advanced Applications (ICEAA), 2013.

[R29]. S. Adrian, T. Eibert, and F. P. Andriulli. Primal and Dual Graph Haar Bases for the Hierarchical Regularization of the EFIE on Unstructured Meshes (**invited**). International Conference on Electromagnetics in Advanced Applications (ICEAA), 2013.

[R30]. R. Mitharwal and F. P. Andriulli. Regularized Formulations for Spectral Graph Partitioning. (**invited**) International Conference on Electromagnetics in Advanced Applications (ICEAA), 2013.

[R31]. I. Bogaert, F. P. Andriulli, and K. Cools. Low -Frequency Stability of the Razor Blade Tested MFIE. (**invited**) International Conference on Electromagnetics in Advanced Applications (ICEAA), 2013.

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