

Personal Information



Name Daniele Cavallo
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Work Experience

2015 - present	Assistant professor	Delft University of Technology , Delft, Netherlands
2015 (Mar-May)	Visiting researcher	Chalmers University of Technology , Gothenburg, Sweden
2011 - 2015	Postdoc	Delft University of Technology , Delft, Netherlands
2007 - 2011	Ph.D. student	Eindhoven University of Technology , Eindhoven, Netherlands
2007 - 2011	Antenna researcher	TNO Defence, Security and Safety , The Hague, Netherlands

Expertise/ Research Interests

Applied electromagnetics, antennas, microwave and terahertz components
Terahertz on-chip antennas, integrated antennas for car radars and ultra-fast wireless communication, phased arrays, wideband connected array antennas, theory and design of artificial dielectrics, dielectric lens antennas

Education

2007 - 2011	Ph.D. in Electrical Engineering (Cum laude) , from Eindhoven University of Technology, Eindhoven, Netherlands
2004 - 2007	M.Sc. in Telecommunication Engineering (Summa cum laude) , from University of Sannio, Benevento, Italy
2001 - 2004	B.Sc. in Telecommunication Engineering (Summa cum laude) , from University of Sannio, Benevento, Italy
1996 - 2001	Scientific high school degree (Score: 100/100) , from Scientific Lyceum G. Rummo, Benevento, Italy

Advanced Technical Courses

<i>Date:</i>	<i>Title:</i>	<i>Taught by / School:</i>	<i>Organizer:</i>
Apr 11 2014	Asymptotic High Frequency Methods for Solving EM Wave Problems (Ray Methods)	Prof. P. Pathak (Ohio State University)	European Conference on Antennas and Propagation (short course)
Jun 11-20 2012	Advanced Green's Function Methods	Prof. P. Pathak (Ohio State University)	PhD School in Information Eng., University of Siena, Siena, Italy
Jun 27-Jul 1 2010	Antenna Imaging Techniques	European School of Antennas (ESoA)	Delft University of Technology, Delft, Netherlands
May 10-18 2010	Advanced Mathematics for Antenna Analysis	European School of Antennas (ESoA)	University of Zagreb and University of Siena, Dubrovnik, Croatia
Apr 7-11 2008	Ultra-Wide-Band Antennas	European School of Antennas (ESoA)	University of Karlsruhe, Karlsruhe, Germany
May 7-11 2007	Phased Arrays and Reflectarrays	Antenna Centre of Excellence (ACE)	TNO Defence, Security and Safety, The Hague, Netherlands

Editorial Duties

2016 - present **Associate Editor** of *IEEE TRANSACTION ON ANTENNAS AND PROPAGATION*

Grants/Awards/Recognitions

- **NWO-Veni personal grant (250 k€)**, "Efficient On-Chip Antennas for Terahertz Applications" (2015-2017).
- **STW Partnership Advanced 5G Solutions (500 k€)**, "WAtt LEvel transmitters at mm-waves (WhALE)" (2017-2020).

- **ERC Proof of Concept Grant (150 k€)**, “AD-HOC: Artificial Dielectrics for High-frequency On-Chip antennas” (2017)
- **“Best Paper Award in Electromagnetics and Antenna Theory”** at the 11th *European Conference on Antennas and Propagation (EUCAP 2017)*, Paris, France, March 19-24, 2017.
- **Ph.D.** degree awarded with “*cum laude*” distinction (the top 5 % PhD graduates are eligible).
- **Nominee** for the **TU/e Doctoral Project Award** 2012 as the “Best Doctoral Project”.
- **“Best Innovative Paper Prize”** at the 30th ESA Workshop on Antennas for Earth Observation, Science, Telecommunication and Navigation Space Missions, Noordwijk, The Netherlands, May 27-30, 2008.
- Supervisor of the student receiving the **“Best student paper award”** at 7th *European Conference on Antennas and Propagation (EUCAP 2013)*, Gothenburg, Sweden, April 8-12, 2013.
- Co-recipient of the **“Best Poster Award”** at the Annual Netherlands Antenna Research Framework (NARF) Workshop, 2013.
- Supervisor of the student receiving the **“Special Mention for Excellent Presentation”** at the 9th *European Conference on Antennas and Propagation (EUCAP 2015)*, Lisbon, Portugal, April 13-18, 2015.
- Co-promotor of the student receiving the **“Else Kooi Prijs”** 2016: annual award for young researchers in the field of applied semiconductor research conducted in the Netherlands. The award comes with a prize of 5000 euros.
- **Top downloaded article** of the IEEE Transactions on Terahertz Science and Technology from IEEE Xplore (March-May 2015).

Publications

Journals Papers	Conference Papers	Invited Conf. Papers	Patents
22	93	20	2
Citation indexes	Google Scholar	Scopus	
Number of Citations	509	373	
h-index	13	12	
i10-index	15	12	

Invited Seminars

Apr. 2015	“Design Concepts for High-Efficiency On-Chip Antennas” Chalmers University of technology, Gothenburg, Sweden
Jun. 2017	“Artificial Dielectric Layers: Theory and Applications to On-Chip Antennas and Wideband Phased Arrays” Université de Rennes 1, IETR (Institut d'Electronique et de Télécommunications de Rennes), Rennes, France
Oct. 2017	“High-Frequency Antenna Solutions for Present and Future Radar and Communication Systems” HUAWEI Antenna Technology Summit, Munich, Germany
Oct. 2018	“Wideband Antenna Concepts for Millimeter-Wave Wireless Communication” HUAWEI Antenna Technology Summit, Munich, Germany

Research projects

Title	Role	Funding Agency
Efficient on-chip antennas for terahertz applications (NWO VENI)	Principal Investigator	Netherlands Organization for Scientific Research (NWO)
WAtt LEvel transmitters at mm-waves (WhALE)	Co-investigator	Dutch tech. foundation (STW), NXP
3D Elements for phased array systems (3D-Antenna)	Researcher	TNO
THz silicon-Integrated CAMera for low-cost imaging (TICAM)	Researcher	STW, NXP
Artificial Dielectrics for High-frequency On-Chip antennas (AD-HOC)	Researcher	European Research Council (ERC)
Mm-wave antennas in package for automotive radar	Researcher	NXP
Multi Object Spectrometer with an Array of superconducting Integrated Circuits (MOSAIC)	Researcher	European Research Council (ERC)
Advanced Antenna Architectures for THz Sensing Instruments	Researcher	European Research Council (ERC)
280 GHz CMOS integrated power amplifier (DOTSEVEN)	Researcher	European Community (FP7)
Micromachined terahertz systems (M3TERA)	Researcher	European Union's Horizon 2020
THz Imaging Phenomenology Platforms for Stand-off IED detection	Researcher	European Defence Agency (EDA)
On-chip 1.1 THz power generator	Researcher	STW
Artificial dielectric layers for integrated antenna applications	Researcher	STW

Advanced Antenna Concepts for Aircraft in Flight Entertainment	Researcher	European Space Agency (ESA)
Merging Electronics and Micro&nano PHotonics in Integrated Systems (MEMPHIS)	Researcher	Dutch Ministry of Education, Culture and Science
TNO Radar program	Researcher	Dutch Ministry of Defence
Integrated Technology Mast System (ITMS)	Researcher	Dutch Ministry of Defence
Coordinating the Antenna Research in Europe (CARE)	Researcher	European Community (FP7)
Sensor Technology Applied in Reconfigurable Systems (STARS)	Researcher	Dutch Ministry of Economic Affairs

Ph.D. students/Postdocs/Master students supervised

Name	Year(s)	Position	Project	Institute	Role
R. van Schelven	2017-2021	PhD	Power combiner and antennas for 5G	TU Delft	Main supervisor
C. Yepes	2015-2019	PhD	Angular and frequency selectivity in arrays	TU Delft	Main supervisor
A. P. Laguna	2017-2021	PhD	MOSAIC antenna and quasi-optical designs	TU Delft	Co-supervisor
S. van Berkel	2015-2019	PhD	Integrated THz camera for low-cost imaging	TU Delft	Co-supervisor
H. Shivamurthy	2019-2020	Postdoc	Wideband wide-scanning array design	TU Delft	Main supervisor
C. Tirband	2018-2019	Master student	Chip-to-probe transition	TU Delft	Main supervisor
A. van Katwijk	2018-2019	Master student	Wideband phased array for radar	TU Delft	Main supervisor
R. van Schelven	2016-2017	Master student	3D moment method for arrays (cum laude)	TU Delft	Main supervisor
C. Felita	2016-2017	Master student	Analysis of non-aligned artificial dielectrics	TU Delft	Main supervisor
A. P. Laguna	2015-2016	Master student	MOSAIC antenna (cum laude)	TU Delft	Main supervisor
W. Zhu	2014-2015	Master student	77 GHz integrated in package antenna design	TU Delft	Main supervisor
W.H. Syed	2011-2015	PhD	Artificial dielectric layers (cum laude)	TU Delft	Co-Promotor
H. Shivamurthy	2013-2014	Master student	Wideband wide-scanning array design	TU Delft	Main supervisor
O. Yurduseven	2012-2016	PhD	Focal plane arrays for terahertz imaging	TU Delft	Daily supervisor
N. Turker-Tokan	2011	Visiting postdoc	Pulse distortion properties for UWB antennas	TU Delft	Daily supervisor
F. Tokan	2011	Visiting postdoc	Lateral wave antenna	TU Delft	Daily supervisor
L. Cifola	2011	PhD	Rat-race design for common-mode rejection	TNO	Daily supervisor
S. Savoia	2010	Master student	Inherently filtering connected-array (filtenna)	TNO	Daily supervisor
A. Micco	2009	Master student	Common-mode rejection loop design	TNO	Daily supervisor
D. Morello	2009	Master student	Study of finite connected arrays in reception	TNO	Daily supervisor
C. Casali	2009	Post-master trainee	Cross-pol correction in dual-pol phased arrays	TNO	Daily supervisor
M. Verdi	2008	Post-master trainee	Analysis of measured data from antenna array	TNO	Daily supervisor

Teaching

- Courses taught at Master and Bachelor level
 - Spectral Domain Methods in Electromagnetics (TU Delft, responsible instructor)
 - Guiding and radiating structures (TU Delft, responsible instructor)
 - Quasi Optics (TU Delft, lecturer)
 - Advanced Electromagnetics (TU Delft, lecturer)
 - Electromagnetics (TU Delft, lecturer)
 - Sub-mm and terahertz physics and applications (TU Delft, lecturer)
- Courses taught at PhD level
 - Arrays and Reflectarrays (The European School of Antennas, Sept. 3-7, 2018, Louvain-La-Neuve, Belgium)

Teaching Qualifications

- **UTQ: University Teaching Qualification.** Attended courses:
 - Development of teaching and active learning
 - Delivery of teaching and active learning
 - Assessment test construction and analysis
 - Supervising individual students

Session chaired at international conferences

- 2010 IEEE International Symposium on Antennas and Propagation (APSURSI 2010), Toronto, Canada, Jul. 11-17, 2010.
Session chaired: Phased Array Feeding and Impedance Matching

- 2015 European Conference on Antennas and Propagation (EuCAP 2015), Lisbon, Portugal, Apr. 12-17 April 2015.
Session chaired: Millimeter-Wave, Submillimeter-Wave and Terahertz Antennas
- 2017 European Conference on Antennas and Propagation (EuCAP 2017), Paris, France, Mar. 19-24, 2017.
Session chaired: Metasurfaces
- 2017 IEEE International Symposium on Antennas and Propagation (APSURSI 2017), San Diego, CA, USA, Jul. 9-14, 2017.
Session chaired: Design and Analysis of Metamaterials

Review for Journals/Conference/Grant proposals

- Reviewer for Journals:
IEEE Transaction on Antennas and Propagation, IEEE Antennas and Wireless Propagation Letters, IEEE Antennas and Propagation Magazine, IEEE Transactions on Terahertz Science and Technology, IEEE Transactions on Microwave Theory and Techniques, International Journal of Microwave and Wireless Technologies
- Reviewer for Conferences:
European Conference on Antennas and Propagation 2015, 2016, 2017, European Microwave Week Conference 2012
- Member of **Technical Program Committee** for Conferences
European Conference on Antennas and Propagation 2019, International Symposium on Antennas and Propagation 2015
- Grants:
Reviewer of a proposal for the *Icelandic Research Fund* (largest fund for academic researchers in Iceland), as an expert outside of Iceland; internal TUDelft reviewer for NWO VENI proposals.

Memberships

Member of the Institute of Electrical and Electronics Engineers (IEEE) and of the European Association on Antennas and Propagation (EurAAP).

University Committees

- Member of the editorial board of the magazine *Quadraad*, of the Faculty of Electrical Engineering, Mathematics and Computer Science of TUDelft.
- Member of the “Cloud Group on Values” for defining the faculty core principles
- Jury member at the closing symposium for the final project “The Booming Bass” in the EPO1 (*Elektrotechnisch Project Onderwijs: Electrotechnical Project Education*) in 2016 and 2017.

Personal Development Courses

- Personal development program for tenure trackers (Leeuwendaal, 2015, over a 3-month period)
Topics: Leadership in academic settings, coaching PhD’s & MSc’s, behavioral flexibility, delegating tasks, assertiveness, time & priority management, networking, entrepreneurship, coping with stress, self-confidence, etc.
- Intercultural & Leadership Development Program (KIT Royal Tropical Institute, Intercultural Professionals BV, 2018)

Personal Skills

<i>Languages</i>	Italian (<i>native proficiency</i>), English (<i>full professional proficiency</i>)
<i>Social skills</i>	Very good organizational skills, open-mindedness, cooperative attitude Experience acquired in working both independently and in multidisciplinary teams
<i>Technical skills</i>	<i>Operating systems:</i> Windows <i>Programming languages:</i> Fortran, Java, C, C++, Visual Basic, HTML <i>Applications:</i> <ul style="list-style-type: none"> - <i>Microsoft Office tools:</i> Word, Excel, Powerpoint, Access, Outlook - <i>Electromagnetic and Circuit CAD tools:</i> Ansys Designer, Ansys HFSS, CST Microwave Studio, Sonnet Suite, ADF, RealTime, 5Spice, ADS - <i>Graphical tools:</i> Corel Draw, MS Picture Manager, MS Paint - <i>Text editors for scientific documents:</i> Latex, Exp, Mathtype, Word Equation Editor 2010 - <i>Numerical computing environment:</i> Matlab, Mathematica - <i>Web development:</i> Dreamweaver

Hobbies

Guitar playing (for 25 years), jazz music, gym, drawing, travelling, jogging

References

Andrea Neto (TUDelft, a.neto@tudelft.nl), Giampiero Gerini (TNO, giampiero.gerini@tno.nl), Vincenzo Galdi (Unisannio, vgaldi@unisannio.it), Angelo Freni (Univ. Florence, angelo.freni@unifi.it), Giovanni Toso (ESA, Giovanni.Toso@esa.int)

Annex: List of Publications

Journal papers (22)

- J1. A. Neto, D. Cavallo, G. Gerini, and G. Toso, "Scanning performances of wideband connected arrays in the presence of a backing reflector," *IEEE Trans. Antennas Propag.*, vol. 57, no. 10, pp. 3092-3102, Oct. 2009.
- J2. D. Cavallo, A. Neto, and G. Gerini, "PCB slot based transformers to avoid common-mode resonances in connected arrays of dipoles," *IEEE Trans. Antennas Propag.*, vol. 58, no. 8, pp. 2767-2771, Aug. 2010.
- J3. D. Cavallo, A. Neto, and G. Gerini, "Green's function based equivalent circuits for connected arrays in transmission and in reception," *IEEE Trans. Antennas Propag.*, vol. 59, no. 5, pp. 1535-1545, May 2011.
- J4. A. Neto, D. Cavallo, and G. Gerini, "Edge-born waves in connected arrays: A finite \times infinite analytical representation," *IEEE Trans. Antennas Propag.*, vol. 59, no. 10, pp. 3646-3657, Oct. 2011.
- J5. D. Cavallo, A. Neto, and G. Gerini, "Analytical description and design of printed dipole arrays for wideband wide-scan applications," *IEEE Trans. Antennas Propag.*, vol. 60, no. 12, pp. 6027-6031, Dec. 2012.
- J6. D. Cavallo, A. Neto, G. Gerini, A. Micco, and V. Galdi, "A 3 to 5 GHz wideband array of connected dipoles with low cross polarization and wide-scan capability," *IEEE Trans. Antennas Propag.*, vol. 61, no. 3, pp. 1148-1154, Mar. 2013.
- J7. D. Cavallo and A. Neto, "A connected array of slots supporting broadband leaky waves," *IEEE Trans. Antennas Propag.*, vol. 61, no. 4, pp. 1986-1994, Apr. 2013.
- J8. N. Türker Tokan, A. Neto, F. Tokan, and D. Cavallo, "Comparative study on pulse distortion and phase aberration of directive UWB antennas," *IET Microw. Antennas Propag.*, vol. 7, no. 12, pp. 1021-1026, Sep. 2013.
- J9. O. Yurduseven, D. Cavallo, and A. Neto, "Wideband dielectric lens antenna with stable radiation patterns fed by coherent array of connected leaky slots," *IEEE Trans. Antennas Propag.*, vol. 62, no. 4, pp. 1895-1902, Apr. 2014.
- J10. F. Tokan, N. Turker Tokan, A. Neto, and D. Cavallo, "The lateral wave antenna," *IEEE Trans. Antennas Propag.*, vol. 62, no. 6, pp. 2909-2916, Jun. 2014.
- J11. B. Blázquez, N. Llobart, D. Cavallo, A. Freni, and A. Neto, "A rigorous equivalent network for linearly polarized THz absorbers," *IEEE Trans. Antennas Propag.*, vol. 62, no. 10, pp. 5077-5088, Oct. 2014.
- J12. D. Cavallo, W. H. Syed, and A. Neto, "Closed-form analysis of artificial dielectric layers—Part I: Properties of a single layer under plane-wave incidence," *IEEE Trans. Antennas Propag.*, vol. 62, no. 12, pp. 6256-6264, Dec. 2014.
- J13. D. Cavallo, W. H. Syed, and A. Neto, "Closed-form analysis of artificial dielectric layers—Part II: Extension to multiple layers and arbitrary illumination," *IEEE Trans. Antennas Propag.*, vol. 62, no. 12, pp. 6265-6273, Dec. 2014.
- J14. W. H. Syed, G. Fiorentino, D. Cavallo, M. Spirito, P. M. Sarro, and A. Neto, "Design, fabrication and measurement of 0.3 THz on-chip double-slot antenna enhanced by artificial dielectrics," *IEEE Trans. THz Sci. Tech.*, vol. 5, no. 2, pp. 288-298, Mar. 2015.
- J15. O. Yurduseven, D. Cavallo, A. Neto, G. Carluccio, and M. Albani, "Parametric analysis of extended hemispherical dielectric lenses fed by a broadband connected array of leaky-wave slots," *IET Microw. Antennas Propag.*, vol. 9, no. 7, pp. 611-617, May 2015.
- J16. W. H. Syed, D. Cavallo, H. Thippur Shivamurthy, and A. Neto, "Wideband, wide-scan planar array of connected slots loaded with artificial dielectric superstrates," *IEEE Trans. Antennas Propag.*, vol. 64, no. 2, pp. 543-553, Feb. 2016.
- J17. R. J. Bolt, D. Cavallo, G. Gerini, D. Deurloo, R. Grooters, A. Neto, and G. Toso, "Characterization of a dual-polarized connected-dipole array for Ku-band mobile terminals," *IEEE Trans. Antennas Propag.*, vol. 64, no. 2, pp. 591-598, Feb. 2016.
- J18. D. Cavallo, W. H. Syed, and A. Neto, "Equivalent transmission line models for the analysis of edge effects in finite connected and tightly-coupled arrays," *IEEE Trans. Antennas Propag.*, vol. 65, no. 4, pp. 1788-1796, Apr. 2017.
- J19. D. Cavallo and C. Felita, "Analytical formulas for artificial dielectrics with non-aligned layers," *IEEE Trans. Antennas Propag.*, vol. 65, no. 10, pp. 5303-5311, Oct. 2017.
- J20. C. Yepes, D. Cavallo, E. Gandini, S. Monni, A. Neto, and F. E. van Vliet, "Angular stable frequency selective surface combined with a wide-scan phased array," *IEEE Trans. Antennas Propag.*, vol. 66, no. 2, pp. 1046-1051, Feb. 2018.
- J21. D. Cavallo, W. H. Syed, and A. Neto, "Connected-slot array with artificial dielectrics: A 6 to 15 GHz dual-pol wide-scan prototype," *IEEE Trans. Antennas Propag.*, vol. 66, no. 6, pp. 3201-3206, Jun. 2018.
- J22. D. Cavallo, "Dissipation losses in artificial dielectric layers," *IEEE Trans. Antennas Propag.*, vol. 66, no. 12, Dec. 2018.
- J23. C. Yepes, E. Gandini, S. Monni, A. Neto, F. E. van Vliet, and D. Cavallo, "Impedance and radiation properties of finite and infinite arrays of tilted elements," *IEEE Trans. Antennas Propag.*, in preparation, 2019.
- J24. R. van Schelven, D. Cavallo, and A. Neto, "Equivalent circuit models for planar dipole and slot antennas with finite length," *IEEE Trans. Antennas Propag.*, in preparation, 2019.

- J25. H. Thippur Shivamurthy, S. van Katwijk, D. Cavallo "On the cross-polarization levels in wideband wide-scanning phased arrays with dielectric superstrates," *IEEE Trans. Antennas Propag.*, in preparation, 2019.

Patents (2)

- P1. A. Neto, D. Cavallo, G. Gerini, R. Grooters, and G. Toso, "Array antenna feed structures," Eur. Patent EP2110883A1, U.S. Patent US9865936B2, World Patent WO2009128716A1, Oct. 21, 2009.
- P2. M. Spella, W. H. Syed, D. Cavallo, M. Huang, and L. van Gemert, "Integrated circuit package," U.S. Patent US20180233465A1, 2018.

Conference publications (93, of which 20 invited)

- C1. D. Cavallo, A. Neto, and G. Gerini, "Connected array antennas for ultrawide band radar applications," *IEEE Conference on Microwave, Communication, Antennas and Electronic Systems (COMCAS)*, Tel Aviv, Israel, May 13-14, 2008, pp. 1-10.
- C2. D. Cavallo, A. Neto, G. Gerini, and G. Toso, "On the potentials of connected slots and dipoles in the presence of a backing reflector," *30th ESA Workshop on Antennas for Earth Observation, Science, Telecommunication and Navigation Space Missions*, Noordwijk, The Netherlands, May 27-30, 2008. (**Best Innovative Paper Prize**)
- C3. D. Cavallo, A. Neto, and G. Gerini, "Toward the design of a wide-scan, wide-band, low-cross-pol printed array," *URSI Forum 2008*, Brussels, Belgium, May 30, 2008.
- C4. D. Cavallo, A. Neto, G. Gerini, and G. Toso, "On the potentials of connected array technology for wide band, wide scanning, dual polarized applications," *IEEE Antennas and Propagation Society International Symposium*, San Diego, CA, Jul. 5-12, 2008.
- C5. A. Neto, D. Cavallo, G. Gerini, G. Toso, and F. E. van Vliet, "A comparison between the green's functions of connected slots and dipoles in the presence of a backing reflector," *38th European Microwave Conference*, Amsterdam, The Netherlands, Oct. 27-31, 2008, pp. 508-510.
- C6. A. Neto, D. Cavallo, and G. Gerini, "UWB, wide angle scanning, planar arrays based on connected dipoles concept," *Sensors & Electronics Technology Panel Specialist Meeting (SET-120) on Ultra Wideband Radar Systems*, Toulouse, France, Oct. 27-28, 2008.
- C7. D. Cavallo, A. Neto, G. Gerini, and G. Toso, "Scanning performances of wide band connected arrays of slots and dipoles," *3rd European Conference on Antennas and Propagation*, Berlin, Germany, Mar. 23-27, 2009, pp. 1222-1224.
- C8. D. Cavallo, A. Neto, G. Gerini, and G. Toso, "A wide-band dual-polarized array of connected dipoles," *5th ESA Workshop on Millimetre Wave Technology and Applications and 31st ESA Antenna Workshop*, Noordwijk, The Netherlands, May 18-20, 2009, pp. 209-216.
- C9. A. Neto, D. Cavallo, and G. Gerini, "Common mode, differential mode and baluns: the secrets," *5th ESA Workshop on Millimetre Wave Technology and Applications and 31st ESA Antenna Workshop*, Noordwijk, The Netherlands, May 18-20, 2009, pp. 718-723.
- C10. D. Cavallo, A. Neto, G. Gerini, and G. Toso, "A wide-band dual-pol array of printed dipoles," *IEEE Antennas and Propagation Society International Symposium*, Charleston, SC, Jun. 1-5, 2009, p. 1F114.1.
- C11. D. Cavallo, A. Neto, and G. Gerini, "Analysis of common-mode resonances in arrays of connected dipoles and possible solutions," *6th European Radar Conference*, Rome, Italy, Sep. 30 – Oct. 2, 2009, pp. 441-444.
- C12. D. Cavallo, A. Neto, and G. Gerini, "Common mode resonances in UWB connected arrays of dipoles: measurements from the demonstrator and exit strategy," *11th Edition of the International Conference on Electromagnetics in Advanced Applications*, Turin, Italy, Sep. 14-18, 2009, pp. 435-438. (**invited paper**)
- C13. G. Gerini, D. Cavallo, A. Neto, and F. van den Bogaart, "Connected arrays of dipoles for telecom and radar applications: the solution for the common mode problem," *Wide Band Sparse Element Array Antennas (WiSE) End Symposium*, Wassenaar, Netherlands, Mar. 4, 2010. (**invited paper**)
- C14. D. Cavallo, A. Neto, G. Gerini, and A. Micco, "A novel printed-circuit-board feeding structure for common-mode rejection in wide-scanning connected arrays of dipoles," *4th European Conference on Antennas and Propagation*, Barcelona, Spain, Apr. 12-16, 2010.
- C15. D. Cavallo, A. Neto, G. Gerini, and D. Morello, "A dual-band planar array of connected dipoles: experimental validation based on bistatic RCS measurements," *4th European Conference on Antennas and Propagation*, Barcelona, Spain, Apr. 12-16, 2010. (**convened paper**)
- C16. A. Neto, D. Cavallo, and G. Gerini, "Performance of wide band connected arrays in scanning: the equivalent circuit and its validation through a dual-band prototype demonstrator," *IEEE Antennas and Propagation Society International Symposium*, Toronto, Ontario, Canada, Jul. 11-17, 2010.
- C17. D. Cavallo, A. Neto, and G. Gerini, "A 10.5-14.5 GHz wide-scanning connected array of dipoles with common-mode

rejection loops to ensure polarization purity," *IEEE Antennas and Propagation Society International Symposium*, Toronto, Ontario, Canada, Jul. 11-17, 2010.

- C18.** D. Cavallo, A. Neto, G. Gerini, and F. Smits, "Connected arrays of dipoles for broad band, wide angle scanning, dual polarized applications: a novel solution to the common mode problem," *IEEE International Symposium on Phased Array Systems & Technology*, Boston, MA, Oct. 12-15, 2010.
- C19.** D. Cavallo, A. Neto, and G. Gerini, "Rigorous equivalent circuits for connected arrays and their exploitation in antenna matching characterization," *32th ESA Antenna Workshop on Antennas for Space Applications*, ESTEC, Noordwijk, The Netherlands, Oct. 5-8, 2010.
- C20.** A. Neto, D. Cavallo, and G. Gerini, "Finiteness of connected arrays: how to control guided edge waves with proper loading impedances," *32th ESA Antenna Workshop on Antennas for Space Applications*, ESTEC, Noordwijk, The Netherlands, Oct. 5-8, 2010.
- C21.** D. Cavallo, S. Savoia, G. Gerini, A. Neto, and V. Galdi, "Design of a low profile printed array of loaded dipoles with inherent frequency selectivity properties," *5th European Conference on Antennas and Propagation*, Rome, Italy, Apr. 11-15, 2011.
- C22.** A. Neto, D. Cavallo, and G. Gerini, "Finiteness effects in wideband connected arrays: Analytical models to highlight the effect of the loading impedances," *5th European Conference on Antennas and Propagation*, Rome, Italy, Apr. 11-15, 2011. **(convened paper)**
- C23.** A. Neto, D. Cavallo, and G. Gerini, "Truncation effects in connected arrays: Analytical models to describe the edge-induced wave phenomena," *IEEE Antennas and Propagation Society International Symposium*, Spokane, Washington, USA, Jul. 3-8, 2011.
- C24.** D. Cavallo, A. Neto, and G. Gerini, "Theoretical analysis and design of connected arrays of dipoles with inter-element capacitance," *USNC/URSI National Radio Science Meeting*, Spokane, Washington, USA, Jul. 3-8, 2011.
- C25.** D. Cavallo, G. Gerini, and A. Neto, "Connected array antennas," *2011 Research Retreat Centre for Wireless Technology Eindhoven (CWTe)*, Eindhoven, The Netherlands, Oct. 18, 2011.
- C26.** D. Cavallo, A. Neto, and G. Gerini, "A wideband (3 to 5 GHz) wide-scan connected array of dipoles with low cross polarization," *6th European Conference on Antennas and Propagation*, Prague, Czech Republic, Mar. 26-30, 2012.
- C27.** L. Cifola, D. Cavallo, G. Gerini, A. Morini, and G. Venanzoni, "Common-mode rejection in a connected array of dipoles with inherent frequency selectivity properties," *6th European Conference on Antennas and Propagation*, Prague, Czech Republic, Mar. 26-30, 2012.
- C28.** D. Cavallo, A. Neto, and G. Gerini, "A Ku-band dual-polarization connected array of dipoles with wide-scan capability for in-flight entertainment," *IEEE Antennas and Propagation Society International Symposium*, Chicago, IL, USA, Jul. 8-14, 2012. **(invited paper)**
- C29.** A. Neto and D. Cavallo, "Non dispersive antenna array architectures for THz sensing systems: connected leaky wave slots," *IEEE Antennas and Propagation Society International Symposium*, Chicago, IL, USA, Jul. 8-14, 2012. **(invited paper)**
- C30.** L. Cifola, D. Cavallo, G. Gerini, and A. Morini, "Rat-race design for connected dipole array feed," *IEEE Antennas and Propagation Society International Symposium*, Chicago, IL, USA, Jul. 8-14, 2012.
- C31.** L. Cifola, D. Cavallo, G. Gerini, and A. Morini, "Integrated filtering in a planar array of connected dipoles including a common-mode rejection module," *European Microwave Week 2012*, Amsterdam, Netherlands, Oct. 28 - Nov. 2, 2012.
- C32.** D. Cavallo, O. Yurduseven, A. Neto, G. Carluccio, and M. Albani, "Connected arrays of slots as feed of a dielectric lens: Analysis, design and experimental validation," *7th European Conference on Antennas and Propagation*, Gothenburg, Sweden, Apr. 8-12, 2013.
- C33.** D. Cavallo, G. Gerini, R. Bolt, D. Deurloo, R. Grooters, A. Neto, G. Toso, and R. Midthassel, "Ku-band dual-polarized array of connected dipoles for SATCOM terminals: Theory and hardware validation," *7th European Conference on Antennas and Propagation*, Gothenburg, Sweden, Apr. 8-12, 2013. **(convened paper)**
- C34.** O. Yurduseven, D. Cavallo, and A. Neto, "Dielectric lens fed by coherent connected-slot array as wideband reflector feed," *7th European Conference on Antennas and Propagation*, Gothenburg, Sweden, Apr. 8-12, 2013. **(Best Student Paper Award)**
- C35.** W. H. Syed, D. Cavallo, and A. Neto, "Artificial dielectric layers for efficient feeding of lens antennas: Rigorous analysis and experimental validation," *7th European Conference on Antennas and Propagation*, Gothenburg, Sweden, Apr. 8-12, 2013 **(finalist for best student paper)**.
- C36.** W. H. Syed, D. Cavallo, and A. Neto, "Artificial Dielectric Layers as Surface-Wave-Less Antenna Substrate," presented at the *Annual Netherlands Antenna Research Framework (NARF) Workshop*, Delft, Netherlands, May 31, 2013 **(Best Poster Award)**.
- C37.** D. Cavallo, O. Yurduseven, A. Neto, G. Carluccio, and M. Albani, "Connected arrays of slots as feed of a dielectric lens," presented at the *Annual Netherlands Antenna Research Framework (NARF) Workshop*, May 31, 2013.
- C38.** W. H. Syed, D. Cavallo, and A. Neto, "An analytical approach to describe plane-wave propagation in finite artificial dielectric layers," *IEEE Antennas and Propagation Society International Symposium*, Orlando, FL, USA, Jul. 7-13, 2013.

- C39. D. Cavallo, O. Yurduseven, A. Neto, G. Carluccio, and M. Albani, "Extended hemispherical lens fed by wideband arrays of connected leaky-wave slots," *IEEE Antennas and Propagation Society International Symposium*, Orlando, FL, USA, Jul. 7-13, 2013.
- C40. D. Cavallo, A. Visweswaran, N. Llombart, M. Spirito, W. H. Syed, A. Neto, and J. Long, "Design of wideband and high-efficiency antenna array on chip at 1.1 terahertz," *8th European Conference on Antennas and Propagation*, The Hague, Netherlands, Apr. 6-11, 2014. **(convened paper)**
- C41. D. Cavallo, W. H. Syed, and A. Neto, "Closed-form expressions for the analysis of finite-height artificial dielectric layers," *8th European Conference on Antennas and Propagation*, The Hague, Netherlands, Apr. 6-11, 2014.
- C42. O. Yurduseven, A. Neto, and D. Cavallo, "Investigation of the radiation characteristics of the leaky-lens antenna for small dielectric lenses," *8th European Conference on Antennas and Propagation*, The Hague, Netherlands, Apr. 6-11, 2014.
- C43. W. H. Syed, A. Neto, D. Cavallo, and P. van Zeijl, "Artificial dielectric based connected array of slots at 60 GHz," *8th European Conference on Antennas and Propagation*, The Hague, Netherlands, Apr. 6-11, 2014.
- C44. D. Dancila, D. Cavallo, I. E. Lager, A. Neto, and A. Rydberg, "Analytical model for patch-slot elements of reconfigurable reflectarray," *6th COST Working Group Meeting & Technical Workshop*, Bucharest, Romania, May 26-28, 2014.
- C45. D. Cavallo, W. H. Syed, and A. Neto, "Closed-form analysis of the decoupling properties of artificial dielectric layers," *IEEE Antennas and Propagation Society International Symposium*, Memphis, TN, USA, Jul. 6-12, 2014.
- C46. W. H. Syed, D. Cavallo, A. Neto, and P. van Zeijl, "Design of connected array loaded with artificial dielectric at 60 GHz," *IEEE Antennas and Propagation Society International Symposium*, Memphis, TN, USA, Jul. 6-12, 2014.
- C47. W. H. Syed, G. Fiorentino, D. Cavallo, M. Spirito, A. Neto, and P. M. Sarro, "Front-to-back ratio enhancement of on-chip antenna using artificial dielectrics at 300 GHz," *IEEE Antennas and Propagation Society International Symposium*, Memphis, TN, USA, Jul. 6-12, 2014.
- C48. O. Yurduseven, D. Cavallo, and A. Neto, "Asymptotic evaluation of the radiation from small dielectric lenses fed by a single leaky-wave slot," *IEEE Antennas and Propagation Society International Symposium*, Memphis, TN, USA, Jul. 6-12, 2014.
- C49. W. H. Syed, G. Fiorentino, D. Cavallo, M. Spirito, A. Neto, and P. M. Sarro, "Enhancement of front to back ratio of on chip antenna by artificial dielectrics at 300 GHz," *39th International Conference on Infrared, Millimeter, and Terahertz Waves*, Tucson, AZ, Sep. 14-19 2014.
- C50. M. Perenzoni and D. Cavallo, "Design of an efficient 900 GHz antenna in standard CMOS technology for imaging arrays," *9th European Conference on Antennas and Propagation*, Lisbon, Portugal, Apr. 12-17, 2015.
- C51. W. H. Syed, G. Fiorentino, D. Cavallo, P. M. Sarro, and A. Neto, "On-chip double slot antenna at 300 GHz enhanced by artificial dielectrics," *9th European Conference on Antennas and Propagation*, Lisbon, Portugal, Apr. 12-17, 2015 **(Second Best Student Paper)**.
- C52. W. H. Syed, D. Cavallo, H. Thippur Shivamurthy, and A. Neto, "Design of wideband, wide-scan planar arrays by combining connected arrays and artificial dielectrics," *9th European Conference on Antennas and Propagation*, Lisbon, Portugal, Apr. 12-17, 2015.
- C53. D. Cavallo, A. Visweswaran, N. Llombart, M. Spirito, A. Neto, and J. Long, "High-efficiency on-chip antenna array for terahertz power source," *9th European Conference on Antennas and Propagation*, Lisbon, Portugal, Apr. 12-17, 2015.
- C54. D. Cavallo, W. H. Syed, H. Thippur Shivamurthy, and A. Neto, "A planar wideband wide-scan phased array: connected array loaded with artificial dielectric layers," *IEEE Antennas and Propagation Society International Symposium*, Vancouver, Canada, Jul. 19-25, 2015.
- C55. D. Cavallo, W. H. Syed, and A. Neto, "Closed-form solutions for the analysis of artificial dielectric layers under generic field incidence," *IEEE Antennas and Propagation Society International Symposium*, Vancouver, Canada, Jul. 19-25, 2015. **(invited paper)**
- C56. D. Cavallo and A. Neto, "Connected arrays from microwave to THz frequencies in ten years," *IEEE Antennas and Propagation Society International Symposium*, Vancouver, Canada, Jul. 19-25, 2015. **(invited paper)**
- C57. D. Cavallo, A. Visweswaran, M. Spirito, J. R. Long, N. Llombart, and A. Neto, "Antenna design for a 1 THz source in SiGe-BiCMOS technology," *IEEE Antennas and Propagation Society International Symposium*, Vancouver, Canada, Jul. 19-25, 2015.
- C58. M. Alonso-delPino, D. Cavallo, H. Thippur Shivamurthy, H. Gao, and M. Spirito, "BiCMOS integrated waveguide power combiner at submillimeter-wave frequencies," *40th International Conference on Infrared, Millimeter, and Terahertz Waves*, Honk Kong, Aug. 23-28 2015.
- C59. W. H. Syed, G. Fiorentino, D. Cavallo, P. M. Sarro, A. Neto, and I. E. Lager, "Performance enhancement of 300 GHz on-chip double slot antenna by means of artificial dielectrics," *45th European Microwave Conference*, Paris, France, Sep. 6-11, 2015.
- C60. W. H. Syed, D. Cavallo, H. Thippur-Shivamurthy, and A. Neto, "A planar wideband wide-scan connected array loaded with artificial dielectric layers," *36th ESA Antenna Workshop on Antennas and RF Systems for Space Science*, Noordwijk,

Netherlands, Oct. 6-9, 2015.

- C61.** W. H. Syed, D. Cavallo, and A. Neto, "Applications of artificial dielectric layers for integrated antennas," *International Symposium on Antennas and Propagation*, Hobart, Tasmania, Australia, Nov. 9-12, 2015. **(invited paper)**
- C62.** S. van Berkel, D. Cavallo, N. Llombart, A. Neto, "THz silicon-integrated CAMera for low-cost imaging applications (TiCAM)," *Joint Symposium URSI-Benelux, NARF, and IEEE AP-S Meeting on Smart Antennas and Propagation*, Enschede, The Netherlands, Dec. 2015.
- C63.** D. Cavallo, A. Pascual Laguna, and W. H. Syed, "Wideband and high-efficiency radiation from chip with artificial dielectric superstrates," *10th European Conference on Antennas and Propagation*, Davos, Switzerland, Apr. 11-15, 2016.
- C64.** W. H. Syed, D. Cavallo, and A. Neto, "Truncation effects in finite wideband connected arrays loaded with artificial dielectrics," *10th European Conference on Antennas and Propagation*, Davos, Switzerland, Apr. 11-15, 2016.
- C65.** M. Alonso-delPino, H. Thippur Shivamurthy, D. Cavallo, L. Galatro, and M. Spirito, "BiCMOS integrated waveguide with artificial dielectric at submillimeter wave frequencies," *IEEE MTT International Microwave Symposium*, San Francisco, CA, USA, May 22-27, 2016.
- C66.** D. Cavallo, W. H. Syed, and A. Neto, "Comparison of the edge effects in finite connected array of dipoles and slots in relation to the load impedance," *IEEE Antennas and Propagation Society International Symposium*, Puerto Rico, Jun. 26-Jul. 1, 2016.
- C67.** D. Cavallo, W. H. Syed, and A. Neto, "Efficiency and bandwidth enhancement of on-chip antennas by using connected arrays and artificial dielectrics," *41st International Conference on Infrared, Millimeter and Terahertz Waves*, Copenhagen, Denmark, Sep. 25-30, 2016.
- C68.** C. J. Yepes, D. Cavallo, A. Neto, S. Monni, and F. van Vliet, "Frequency selective surface design for improved antenna array out-of-band rejection," *IEEE International Symposium on Phased Array Systems and Technology*, Waltham, MA, USA, Oct. 18-21, 2016.
- C69.** D. Cavallo, W. H. Syed, and A. Neto, "Wideband wide-scan connected-slot arrays with artificial dielectric superstrates," *IEEE International Symposium on Phased Array Systems and Technology*, Waltham, MA, USA, Oct. 18-21, 2016. **(invited paper)**
- C70.** D. Cavallo, W. H. Syed, and A. Neto, "Artificial-dielectric enabled antennas for high-frequency radiation from integrated circuits," *11th European Conference on Antennas and Propagation*, Paris, France, Mar. 19-24, 2017. **(convended paper)**
- C71.** D. Cavallo, W. H. Syed, and A. Neto, "Planar wide-scan wideband arrays based on connected slots and artificial dielectrics," *11th European Conference on Antennas and Propagation*, Paris, France, Mar. 19-24, 2017. **(convended paper)**
- C72.** C. Yepes, D. Cavallo, A. Neto, E. Gandini, S. Monni, and F. E. van Vliet, "Co-design of frequency selective surface and antenna array with low angular dependence," *11th European Conference on Antennas and Propagation*, Paris, France, Mar. 19-24, 2017.
- C73.** D. Cavallo and C. Felita, "Analysis of artificial dielectrics composed of non-aligned layers," *11th European Conference on Antennas and Propagation*, Paris, France, Mar. 19-24, 2017. **(Best paper award in Electromagnetics and Antenna Theory)**
- C74.** Z. Hu, M. Alonso-delPino, D. Cavallo, H. Thippur-Shivamurthy and M. Spirito, "Integrated waveguide power combiners with artificial dielectrics for mm-wave systems," *IEEE MTT International Microwave Symposium*, Honolulu, Hawaii, Jun. 4-9, 2017.
- C75.** D. Cavallo and C. Felita, "Analytical models for artificial dielectrics with non-aligned layers," *IEEE Antennas and Propagation Society International Symposium*, San Diego, California, USA, Jul. 9-14, 2017.
- C76.** D. Cavallo, W. H. Syed, and A. Neto, "A 7- to 15-GHz Wide-Scan Dual-Polarized Array of Connected Slots with Artificial Dielectrics," *USNC-URSI Radio Science Meeting*, San Diego, California, USA, Jul. 9-14, 2017.
- C77.** C. Yepes, D. Cavallo, A. Neto, E. Gandini, S. Monni, and F. van Vliet, "Frequency selective surface for spatial filtering of wide-angle scanning phased arrays," *IEEE Antennas and Propagation Society International Symposium*, San Diego, California, USA, Jul. 9-14, 2017. **(special session)**
- C78.** C. Yepes, D. Cavallo, A. Neto, E. Gandini, S. Monni, and F. van Vliet, "Spatial filtering frequency selective surface for wide-angle scanning phased arrays," *European Microwave Week 2017*, Nuremberg, Germany, Oct. 8-13, 2017.
- C79.** S. L. van Berkel, E.S. Malotau, D. Cavallo, M. Spirito, A. Neto, and N. Llombart, "Wideband single pixel radiometer in CMOS," *42nd International Conference on Infrared, Millimeter and Terahertz Waves*, Cancún, México, Aug. 27 - Sep. 1, 2017.
- C80.** C. Yepes, D. Cavallo, A. Neto, E. Gandini, S. Monni, and F. van Vliet, "Frequency selective surface combined with wide-scanning connected array of dipoles," presented at *15 Years of the Netherlands National Radar Platform*, Den Helder, the Netherlands, Nov. 8, 2017.
- C81.** D. Cavallo, "Analytical equivalent models of artificial dielectric layers with arbitrary inter-layer shifts," *12th European Conference on Antennas and Propagation*, London, UK, Apr. 9-13, 2018. **(convended paper)**

- C82.** S. L. van Berkel, E. S. Malotau, D. Cavallo, M. Spirito, A. Neto, and N. Llombart, "Wideband single pixel radiometer in 28 nm CMOS technology for low-cost imaging applications," *12th European Conference on Antennas and Propagation*, London, U.K., Apr. 9-13, 2018.
- C83.** C. Yepes, R. van Schelven, D. Cavallo, E. Gandini, and A. Neto, "Radiation characteristics of skewed loaded dipole arrays," *12th European Conference on Antennas and Propagation*, London, U.K., Apr. 9-13, 2018.
- C84.** A. P. Laguna, D. Cavallo, N. Llombart, J. A. Baselmans, and A. Neto, "Focused superconducting connected array for wideband sub-mm spectrometers," *12th European Conference on Antennas and Propagation*, London, U.K., Apr. 9-13, 2018.
- C85.** D. Cavallo, W. H. Syed, and A. Neto, "6-15 GHz wide scanning connected array," *IEEE Antennas and Propagation Society International Symposium*, Boston, Massachusetts, USA, Jul. 8-13, 2018.
- C86.** D. Cavallo, "Analysis of artificial dielectric layers with finite conductivity," *IEEE Antennas and Propagation Society International Symposium*, Boston, Massachusetts, USA, Jul. 8-13, 2018.
- C87.** C. Yepes, R. van Schelven, D. Cavallo, E. Gandini, S. Monni, F. E. van Vliet, and A. Neto, "On the radiation properties of array of skewed stacked dipoles," *USNC-URSI Radio Science Meeting*, Boston, Massachusetts, USA, Jul. 8-13, 2018.
- C88.** S. L. van Berkel, E. S. Malotau, D. Cavallo, M. Spirito, A. Neto, and N. Llombart, "Optical performance of a wideband 28nm CMOS double bow-tie slot antenna for imaging applications," *43rd International Conference on Infrared, Millimeter and Terahertz Waves (IRMMW THz-2018)*, Nagoya, Japan, Sep. 9-14, 2018.
- C89.** D. Cavallo, W.H. Syed, and A. Neto, "A Planar 6-15 GHz Connected Slot Array with Very Wide Scan Capability," *39th ESA Antenna Workshop on Multibeam and Reconfigurable Antennas for Space Applications*, Noordwijk, The Netherlands, Oct. 2-5, 2018 **(invited paper)**.
- C90.** C. Yepes, R. van Schelven, D. Cavallo, E. Gandini, S. Monni, F. E. van Vliet, and A. Neto, "On the radiation properties of skewed stacked dipoles arrays," *39th ESA Antenna Workshop on Multibeam and Reconfigurable Antennas for Space Applications*, Noordwijk, The Netherlands, Oct. 2-5, 2018 **(invited paper)**.
- C91.** D. Cavallo, H. Thippur Shivamurthy, and A. Neto, "Dual-polarized wide-scan wideband phased arrays with improved polarization purity," *13th European Conference on Antennas and Propagation*, Krakow, Poland, Mar. 31 - Apr. 5, 2019 **(convened paper)**.
- C92.** D. Cavallo, "On the nature of Ohmic dissipation in glide symmetric artificial dielectric layers with finite conductivity," *13th European Conference on Antennas and Propagation*, Krakow, Poland, Mar. 31 - Apr. 5, 2019 **(convened paper)**.
- C93.** C. Yepes, D. Cavallo, E. Gandini, F. van Vliet, S. Monni, and A. Neto, "3D array element design for pattern shaping," *13th European Conference on Antennas and Propagation*, Krakow, Poland, Mar. 31 - Apr. 5, 2019 **(convened paper)**.