NAME AND CURRENT CONTACT DETAILS

Ladislau MATEKOVITS

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E-mail: ladislau.matekovits@polito.it

Gender: Male

Date of birth: Nov. 19, 1967

Nationality: Italian, Romanian

QUALIFICATIONS

2014-present

Associate Professor

Politecnico di Torino, Torino, C.so Duca degli Abruzzi nr 24, 10129 Torino, Italy

Type / sector of activity: Education and research

Principal subjects / occupational skills: Education, research, university management

2014-2018

Honorary Fellow (4-year term)

Macquarie University, Sydney, 2109, NSW, Australia

Type / sector of activity: Education and research

Principal subjects / occupational skills: Education, research, university management

2009-2012

Marie Curie Fellow

Macquarie University, Sydney, Australia and Politecnico di Torino, Torino, Italy

Type / sector of activity: Research

Principal subjects / occupational skills: Research project management

1996-2014

Lecturer, researcher, laboratory technician

Politecnico di Torino, Torino, Italy.

Type / sector of activity: Education and research

Principal subjects/ occupational skills: Education, research, university management

EDUCATION AND TRAINING

Date (from - to)

Title of qualification awarded

PhD (Dottore di ricerca) 1992-1995

Politecnico di Torino, Torino, Italy

Electromagnetism

Title of qualification awarded

Electronic and Telecommunication Engineer – 5 years 1986-1992

Institutul Politehnic din Bucureşti (IPB), Romania

General and specific competencies in radiocommunication

Title of qualification awarded

Electronic Engineer

Politecnico di Torino, Torino, Italia

PERSONAL SKILLS

Research, project management and education in Antennas, Electromagnetics and related fields

Mother language: Hungarian

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Other languages	UNDERSTANDING		SPEAKING		WRITINIG
	Listening	Reading	Conversation	Oral speech	
Romanian	C2	C2	C2	C2	C2
Italian	C2	C2	C2	C2	C2
English	C1	C1	C1	C1	C1
France	A1	A1	A1	A1	A1

Legend: C: proficient user, B: independent user, A: Basic user, (2 better than 1)

Communication skills

Good communication skills acquired during the long term experience in delivering classes in various high education institutions and in different languages (Italian, Romanian, English) and by active participation in international research teams in different countries

Organization/managerial skills

- Member of different committees at Department and PhD school level.
- Leadership (I am tutoring various PhD and Master students)

Informatics skills

- Microsoft Office
- Matlab, Fortran
- Simulation Software for electromagnetic analysis (CST; HFSS; FEKO; etc.)

SUPLIMENTARY INFORMATION

Publications (total)

79 (+ 2 accepted) journal papers, 275 conf. papers, 3 books, 3 book chapters.
h-factor: 21 (Scopus), 25 (Google Scholar)

Patents (total)

3 granted patents

Projects (total)

International: responsible (Principal investigator) – 1 (European), 2 other, participant (researcher) – 4;
National: responsible – 2 (Italy): participant – 14 (Italy, Australia, Romania);

Awards (selection)

URSI Young Scientist Award 1998;
Best AP2000 Oral Paper on Antennas, ESA-EUREL Millennium Conf. on Antennas & Propagations, 2000, Davos, Switzerland;
International collaboration award (Australian Research Council - 2013);
Micro Media Grant - Marie Curie Alumni Association (2014);
Associate Editor of the month - IEEE ACCESS Nov. 2015;
American Romanian Academy of Arts and Sciences (ARA) - 2019 ARA Medal of Excellence in Science "*for outstanding contribution to electronics and telecommunications*".
Motohisa Kanda Award 2019: for the most cited paper of the IEEE Transactions on EMC in the past five years.

Conference organizations (selection)

Assistant Chairman of the TPC of the European Microwave Conference 2002 and of the European Microwave Week Local Committee, 23-27 Sept. 2002, Milan, Italy
General Chair 11th International Conference on Body Area Networks (BodyNets 2016), 15-16 Dec., 2016, Torino, Italy

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Memberships	IEEE (Member -1994, Senior Member – 2011 - present) ARA (American Romanian Academy of Arts and Sciences) (Member, 2016-present)
Editor	Associate Editor - IEEE ACCESS (2014 - present); Associate Editor - IET Microwaves, Antennas and Propagation (2016 - present); Associate Editor - IEEE Antennas and Wireless Propagation Letters (AWPL) (2017 - present); Member of the organizing Committee: International Conference on Electromagnetics in Advanced Applications: (2012-present)
Professional qualification	National qualification for Full Professor in Electromagnetic fields, Italy (Abilitazione Scientifica Nazionale, Prima Fascia) 20/7/2017.

ACADEMIC AWARDS: Professional honours, awards, prizes, fellowships etc. (full career):

1. TEMPUS JEP 2736-91/1 ***Scholarship*** - Electronics Department (Polito), student, 03/1992-07/1992.
2. ***Student Researcher Award 1997***-Raj Mittra Travel Grant-. This award partially founds travels and accommodation for participation to 1997 IEEE AP-S Int'l Symp. and URSI North American Science Meeting, July 13–18, 1997 Montreal, Canada.
3. ***URSI Young Scientist Award 1998***, URSI Electromagnetic Theory Symposium, May 1998, Thessaloniki, Greece.
4. ***Young Scientist Award*** (Barzilai Award), XII Riunione Nazionale di Elettromagnetismo, 28 Set.-1 Oct. 1998, Cetraro, (Cs), Italia.
5. ***Young Scientist Award***-10th MICROCOLL, 21-24 March 1999, Budapest, Hungary.
6. ***Best AP2000 Oral Paper*** on Antennas, ESA-EUREL Millenium Conference on Antennas & Propagation, 9-14 April 2000, Davos.
7. ***Marie Curie International Outgoing Fellowship (IOF)*** – 2007. Project title: ***A****nalysis of* ***L****ow-cost* ***O****riginal* ***H****olographic* ***A****ntenna:* ***T****heoretical* ***O****ve****R****v****I****ew,* ***NO****tes,* ***S****tud****Y****,* ***D****esig****N*** *and* ***E****as****Y*** *Implementation* ("ALOHA TORINO-SYDNEY")**.**
8. Australian Research Council-Communication Research Network (ACoRN) ***travel grant*** to attend the European Microwave week 2009 in Rome.
9. ***International collaboration award*** (ICA): Australian Research Council (ARC) Discovery grant (2013-2015). Project ID: DP130102009. *Dual-Band Antennas with Digitally Steerable Beams Made out of Multi-State Electromagnetic Elements*. Total budget: A$ 400.000. International Collaboration Award (ICA) value A$ 4.000.Visiting Academic at Macquarie University, Sydney 1/3/-31/7 2013.
10. ***Micro Media Grant*** - Marie Curie Alumni Association (2014), 250 Euro, for the publication of the paper: L. Matekovits, T. S. Bird "Width-modulated Microstrip-line based Mantle Cloaks for Thin Single- and Multiple Cylinders", *IEEE Trans. Antennas and Propagat.*, Vol. 62, No. 5, pp. 2606 - 2615, May 2014.
11. ***Certificate of Award*** - Marie Curie Fellowship, Brussels, 08/10/2015.
12. ***Associate Editor of the month*** – IEEE ACCESS – Nov. 2015.
13. ***Micro Travel Grant*** - Marie Curie Alumni Association (2017), 400 Euro, to participate at the 2017 IEEE International Symposium on Antennas and Propagation/USNC-URSI National Radio Science Meeting, July 9 - 14, 2017, San Diego, California, U.S.A..
14. 2019 ARA Medal of Excellence in Science "*for outstanding contribution to electronics and telecommunications*", at the 43rd congress of American Romanian Academy of Arts and Sciences, June, 10-13, 2019, Thessaloniki, Greece;
15. ***Kanda Award 2019***: for the most cited paper of the IEEE Transactions on EMC in the past five years.
    "The paper I. Sohail, Y. Ranga, L. Matekovits, K. P. Esselle, S. G. Hay, ``A single-Layer Frequency Selective Surface for Ultra-Wideband Electromagnetic Shielding", *IEEE Trans. Electromagnetic Compatibility*, Vol. 56, No. 6, pp. 1404 - 1411, Dec. 2014 and another one has received the highest citations (51) among all the papers published in the last 5 years (2014-2018)." (e-mail of March 28, 2019 from the EiC of the *IEEE Trans. Electromagnetic Compatibility*)

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COMPETITIVE RESEARCH FUNDING: (SELECTION):

1. ***A**nalysis of **L**ow-cost **O**riginal **H**olographic **A**ntenna: **T**heoretical **O**ve**R**v**I**ew, **NO**tes, **S**tud**Y**, **D**esig**N** and **E**as**Y** Implementation* ("ALOHA TORINO-SYDNEY"). Marie Curie International Outgoing Fellowship (IOF). Role: ***principal investigator***. Period: 1/7/2009-30/6/2011 (outgoing phase 2 years at Macquarie University, Sydney, Australia) and 1/7/2011-30/6/2012 (reintegration - Politecnico di Torino). Results: 1 patent, 12 journal papers, 46 conference papers (including 4 invited papers and 1 invited talk). Value: 327,000 Euro.
2. *Dual-Band Antennas with Digitally Steerable Beams Made out of Multi-State Electromagnetic Elements*. Australian Research Council (ARC) Discovery grant (2013-2015). Project ID: DP130102009. Proponents: Karu Esselle, Michael Heimlich, Trevor S. Bird, Ladislau Matekovits, Stuart G. Hay. Role: ***partner investigator***. Value: AU$ 400,000.
3. *Innovative planar antennas for THz systems*, Progetti di internazionalizzazione della ricerca-2013, funded by Compagnia di San Paolo and Politecnico di Torino. Investigators: P. Pirinoli, L. Matekovits, M. Orefice, from Polito and Prof. F. Yang, A/Prof. S. Xu, Tsinghua University, Beijing, China. Role: ***researcher***. Duration 12 months. Start: 10/13. Value: 40,000 Euro. Follow-on: 6 months. Value: 10,000 Euro
4. *Compact Composite Cavity Resonator Antennas with Wide Bandwidths*, Australian Research Council (ARC) Discovery grant (2015-2018). Project ID: DP150103242. Proponents: Karu Esselle, Trevor S. Bird, Ladislau Matekovits, Stuart G. Hay, Per-Simon Kildal. Role: ***partner investigator***. AU$ 485,100.
5. *Advanced Non-radiating Architectures Scattering Tenuously and Sustaining Invisible Anapoles* (ANASTASIA), Progetti di internazionalizzazione della ricerca-2017, funded by Compagnia di San Paolo and Politecnico di Torino. Investigators: L. Matekovits, L. Lussardi (Polito) and Alexey Basharin, National University of Science and Technology "MISiS", Moscow, Russia. Role: ***principal investigator***. Duration 12 months. Start: 20/9/17. Value: 50,000 Euro. Follow-on: 5 month. Value: 5,000 Euro.
6. Beam Steering of High-Gain Antennas using Metasurfaces, Australian Research Council (ARC) Discovery grant (2019-2022). Project ID: DP190103352. Investigators: Karu Esselle, J(Yiannis) Vardaxoglou, Stefano Maci, David Bulger, Ladislau Matekovits. Total budget: A$ 570.000. Role: ***partner investigator***. Duration 48 months. Start: 1/1/19.
7. Reconfigurable metasurface lens based on graphene split ring resonators (proposal #6167). Assigned Scientist: Dr. Stefano Cabrini. Investigators: Ladislau Matekovits, Vittorino Lanzio, Ildiko Peter, Barbara Cappello. Funding institution: Molecular Foundry, Lawrence Berkeley National Laboratory. Role: ***Project leader***. Duration 12 months. Start: 1/1/20.

PUBLICATIONS: A list of (full career) publications is attached as Supplementary material.

Book Chapters:

1. Y. Ranga, Karu P. Esselle, ***L. Matekovits***, Making UWB Antennas Unidirectional: Phase Coherence, with an Ultra-Wide Band Frequency Selective Surface Reflector, (Ch. 10 in) The World of Applied Electromagnetics: In Appreciation of Magdy Fahmy Iskander, Akhlesh Lakhtakia and Cynthia M. Furse (Editors), Springer, 2017.
2. I. Peter, ***L. Matekovits***, M. Rosso, Up-to-date knowledge and outlooks for the use of metallic biomaterials - review paper in Biomaterials in Regenerative Medicine, Editor Leszek A. Dobrzański, InTech, June 2017.
3. G. Labate, L.Matekovits, A. Alù, "Metamaterial and metasurface cloaking: principles and applications", Chap. 10 in Surface Electromagnetics, June 2019. Edited by Fan Yang (Tsinghua University, Beijing), Yahya Rahmat-Samii (University of California, Los Angeles).

Journal papers: 76 published articles in high-rank journals (*IEEE Tran. APS/MTT/EMC* - 15+, *Scientific Reports* - 3, etc.). The number of journal articles published in the last 5 years is as follows: 2015: 3 articles / 2016: 3 articles / 2017: 11 articles / 2018: 3 articles /2019: 8 articles, and has three accepted paper (in press) in *Optics Express, Scientific Reports, and Nature communications*.

Conference papers: Regularly present at IEEE International Symposium on Antennas and Propagation/USNC-URSI National Radio Science Meeting, European Conference on Antennas and Propagation (EuCAP), International Conference on Electromagnetics in Advanced Applications and other. The number of conference papers for the last 5 years is as follows: 2015: 18 articles / 2016: 16 articles /2017: 10 articles /2018: 15 articles /2019: 18 articles.

Extended information

COORDINATION OF RESEARCH AND TECHNOLOGY TRANSFER GROUPS AND PROJECTS.

From 2011, I am a Coordinator of a research group at Politecnico di Torino on Metamaterials, a topic introduced by myself, and from 2014, I am tutoring PhD students.

- 1 PhD student in Electronic engineering: start date: a.y. 2014-2015 – including a 2-month visit at Heriot-Watt University, Edinburgh (UK) and a second one of 7-months at the University of Texas at Austin, USA and two month in. The National University of Science and Technology "MISiS", Moscow, Russia. The quality of the research has also been recognized by various grants (travel / waive of conference participation fee, etc.) my PhD student received in the last two years of his doctoral study. He is winner for the "Call for PhD students awards" competition, open to PhD students from Politecnico di Torino. He has been granted with the title of "Dottore di ricerca" on July 28, 2018 with the maximum mark, and laude. Today he is full-time researcher at Wave up – Innovation in electromagnetics, via Roma 77, 53100, Siena, Italy a spin-off of the University of Siena.

- a second PhD candidate, resulted winner in the enrolment process with a general mark of 92/100, has chosen to continue the thesis work on cloaking, under the my guidance. In 2017, during the preparation of her Master thesis she spent 3 month in Adelaide University, Australia. The thesis, tutored by the applicant, and co-tutored by Prof. Ch. Fumeaux, has been defended by cum laude. She has already spent a three weeks period at ITMO University in St. Petersburg (Russia) and starting Jan. 2020 she is performing a 5-month visit at KTH Royal Institute of Technology, a public research university in Stockholm, Sweden.

- A third PhD candidate, who has finished her study, and defended her PhD degree on Jan. 13, 2020, has performed her activity in cotutelle with Shiraz University, Shiraz, Iran. She joint the group in 2018 with a governmental fellowship, and considering the excellent work she carried out on the use of Graphene in THz regime, the possibility of the joint degree has been considered. She has been funded for three month by my personal research funds. The collaboration is still continuing after her graduation.

- A fourth PhD student is working on LoRa WAN based networks for monitoring operation of environmental pollution and meteorological parameters. This study is carried out in strong collaboration with the Consorzio Interuniversitario Nazionale per la Fisica delle Atmosfere ed Idrosfere, Italy, who is fully founding the three year period of the Doctoral studies.

In the last 10 years, I mentored students for the completion of their MS theses: 7 graduations in 2016, 4 in 2017 and 1 in 2018 and 3 in 2019. In this moment there are 14 students working toward their Master thesis under my guidance. Additionally to the above-mentioned collaborations, two of these theses were developed in collaboration with Heriot-Watt University, Edinburgh (UK), where two of my students spent a 2-month period, each. Still in 2017 one more thesis has been developed in collaboration with Prof. Takamaro Kikkawa, from Hiroshima University, Japan. In the a.y. 208-19 two of my students have carried out their Master Thesis University of California, Irvine (reference person Prof. Capolino), one in Telecom Italia (Milano), one at Trinity College Dublin, Ireland, one at Technische Universiteit Delft, the Netherlands, and two are currently in progress collaboration with a university consortium in Italy.

International student exchange has also been strongly encouraged. During the last years, I hosted three visiting PhD student (Iran, China) and one visiting post-doc (Iran): each mobility lasted 6 month, and was fully funded by national agencies. I am receiving continuous requests for hosting other researchers.

Some of my Master students have continued their career in research/academy: for example, F. Monticone finished his PhD studies at The University of Texas at Austin, and since January 1, 2017 he is Assistant Professor at the

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Cornell University (USA). When he was my student, he received a student fellowship to participate at the European Microwave Week.

In the timeframe July 1, 2014 June 30 2018, I have been Honorary Fellow at Macquarie University, Sydney, Australia. Such a position also included mentoring Master and PhD students. The efficiency of such activity is clearly demonstrated by the numerous joint publications. Approximately once a year I am receiving one of the students from Macquarie University in my lab for a short research visit. Since 2011 I am also regularly visit (once a year) Macquarie Uni.

Scientific responsibility (Principal Investigator) of competitive National and International research projects, awarded through a peer-review process (last10 years).

1. Analysis of Low-cost Original Holographic Antenna: Theoretical OveRvIew, NOtes, StudY, DesigN and EasY Implementation ("ALOHA TORINO-SYDNEY"). Marie Curie International Outgoing Fellowship (IOF). Role: Principal investigator. Period: 1/7/2009-30/6/2011 (outgoing phase 2 years at Macquarie University, Sydney, Australia) and 1/7/2011-30/6/2012 (reintegration - Politecnico di Torino). Results: 1 patent, 12 journal papers, 46 conference papers (including 4 invited papers and 1 invited talk). Value: 327,000 Euro.

(i) Co-investigator with Proff. M. Heimlich and K. P. Esselle on research contracts with US Air Force AOARD: (i) Electrically tunable EBG structure demonstrator for IC-, thick-, or thin-film processing. Project ID: 104040. Period: 2010; (ii) Follow-up 2011; (iii) Follow-up 2012. Total Value: AU$230,000.

2. Electronically Controllable Integrated Millimetre-Wave Devices Formed by Cascading Multi-State Electromagnetic Element. Macquarie University Safety Net Grants (1 year/project). Role: Partner investigator. year 2011- / year 2012.
3. Dual-Band Antennas with Digitally Steerable Beams Made out of Multi-State Electromagnetic Elements. Australian Research Council (ARC) Discovery grant (2013-2015). Project ID: DP130102009. Proponents: Karu Esselle, Michael Heimlich, Trevor S. Bird, Ladislau Matekovits, Stuart G. Hay. Role: Partner investigator. Value: AU$ 400,000.
4. WIreless SEcurity SOlution for Scuba-diving (WISE-SOS): Multidisciplinary research project in the framework of the Alta Scuola Politecnica (www.asp-poli.it/presentation/), Politecnico di Milano (Polimi) şi Politecnico di Torino. Role: Principal academic tutor. Duration 18 months. Value: 11.500 Euro.
5. Innovative planar antennas for THz systems, Progetti di internazionalizzazione della ricerca-2013, funded by Compagnia di San Paolo and Politecnico di Torino. Investigators: P. Pirinoli, L. Matekovits, M. Orefice, from Polito and Prof. F. Yang, A/Prof. S. Xu, Tsinghua University, Beijing, China. Role: Applicant, 2nd investigator. Duration 12 months. Start: 10/13. Value: 40,000 Euro.
    1. Follow-up: 6 months. Value: 10,000 Euro
6. Compact Composite Cavity Resonator Antennas with Wide Bandwidths, Australian Research Council (ARC) Discovery grant (2015-2018). Project ID: DP150103242. Proponents: Karu Esselle, Trevor S. Bird, Ladislau Matekovits, Stuart G. Hay, Per-Simon Kildal. Rol: Partner investigator. AU$ 485,100.
7. Mobility projects for experienced researchers from diaspora 2016. The Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI). Contract-MCD-0019-Aldo De Sabata - PNCDI III, SP 1.1. Total budget: RON 5,000. Role: Experienced researcher from diaspora. Duration 24/10-2/11 2016.
8. Advanced Non-radiating Architectures Scattering Tenuously And Sustaining Invisible Anapoles (ANASTASIA), Progetti di internazionalizzazione della ricerca-2017, funded by Compagnia di San Paolo and Politecnico di Torino. Investigators: L. Matekovits, L. Lussardi from Polito and Prof. Alexey Basharin, National University of Science and Technology "MISiS", Moscow, Russia. Role: Principal investigator. Duration 12 months. Start: 10/17. Value: 50,000 Euro.
    2. Follow-up: 4 months. Value: 5,000 Euro
9. Mobility projects for experienced researchers from diaspora 2017. The Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI). Ladislau Matekovits. Contract-PN-III-P1-1.1-MCD-2017-0051. Total budget: RON 5.000. Role: Experienced researcher from diaspora. Duration 4-14/12/2017.
10. Mobility projects for experienced researchers from diaspora 2018. The Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI). Ladislau Matekovits.

Contract-PN-III-P1-1.1-MCD-2018-0093. Total budget: RON 5.000. Role: Experienced researcher from diaspora. Duration 3-9/11/2018.

11. Beam Steering of High-Gain Antennas using Metasurfaces, Australian Research Council (ARC) Discovery grant - 2019-2022. Project ID: DP190103352. Investigators: Karu Esselle, J(Yiannis) Vardaxoglou, Stefano Maci, David Bulger, Ladislau Matekovits. Total budget: A$ 570.000. Role: Partner Investigator. Duration 48 months. Start: 1/1/19.

Scientific Responsibility of National and International Research Projects, ruled through Partnership Agreements with Companies and/or Public Private Bodies, which are Leaders in their Own Sector

1. Analisi e misurazioni per la caratterizzazione 3D dei parametri di antenne integrate a satellite, Research contract with ArgoTec S.p.A., 2017. Role: Scientific Responsible.
2. Sviluppo di antenne per test di compatibilitá a radiofrequenza per microsatelliti, e alle attivitá connesse, Consultancy contract with ArgoTec S.p.A., 2019. Role: Scientific Responsible.
3. Reconfigurable metasurface lens based on graphene split ring resonators (proposal #6167). Assigned Scientist Dr. Stefano Cabrini, Investigators: Ladislau Matekovits (project leader), Vittorino Lanzio, Ildiko Peter, Barbara Cappello. Funding institution: Molecular Foundry, Lawrence Berkeley National Laboratory. Role: Project Leader. Start: 1/1/2020 (granted).

Outcomes obtained in the field of technology transfer, in terms of participation in start-ups and spin-offs, development, use and commercialization of patents/licenses.

1. ***L. Matekovits***, G. Vietti Colomé, P. Pirinoli, M. Orefice, Dispositivo con constante dielettrica modulata per la propagazione di onde elettromagnetiche, Nr: RA2006A000064. Data: 3/11/2006.
   1.a) Extension Europe: Device for the propagation of electromagnetic waves with modulated dielectric constant. **Granted:** 02/05/2012, EP1919024 B1.
2. ***L. Matekovits***, M. Orefice, K.P. Esselle, M. C. Heimlich, Metodo di Realizzazione di Una Struttura Accordabile Elettronicamente, e Struttura Accordabile Elettronicamente. Nr: TO2010A000536. Data 22/06/2010. **Granted:** 02/07/2013.
3. G. Dassano, ***L. Matekovits***, M. Orefice, G. Vietti Colomé, An antenna system for transmission and reception of multifrequency wideband signal from and into a tyre Nr: MI2010A000606. Data: 9/04/2010.
   3.a) Extension Europa: ”Tyre sensor device”, Nr: EP20110718306, **Granted:** 22 /01/2014, EP2555930 B1;
   3.b) Extension USA: ”Tyre sensor device”, Nr. 13/639.591, **Granted:** 27/10/2015, US9168795 B2.

NATIONAL AND INTERNATIONAL REPUTATION AND PROFESSIONAL ACTIVITY FOR THE SCIENTIFIC COMMUNITY

Editorship of Journals with international reputation (in the role of Editor in Chief – EIC), editorship of book series, encyclopedias and essays of recognized prestige.

1. IEEE ACCESS: Leading Associate Editor (2014) of a special session entitled “Bio-Compatible Devices and Bio-Electromagnetics for Bio-Medical Applications”, with guest editors from 3 continents.
   For this activity in Nov. 2015 I was awarded with the title of “**Associate Editor of the month**”.

2. IEEE ACCESS: Leading Associate Editor (2017) of a special session entitled “Body Area Networks”, (http://ieeeaccess.ieee.org/special-sections-closed/body-area-networks/), with 5 guest editors (12 papers).

Participation in the Editorial Board of Journals with international reputation (in the role of Associate Editor or equivalent), participation in the Editorial Board of book series, encyclopedias and essays of recognized prestige.

1. Associate Editor - IEEE ACCESS (2014 – present. Second term started in 2017);
2. Associate Editor - IET Microwaves, Antennas and Propagation (2016 - present);

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3. Associate Editor - IEEE Antennas and Wireless Propagation Letters (AWPL) (since 2017);
4. Editor:
   a. Proc. of the 10th EAI International Conference on Body Area Networks (BODYNETS) – 2015 (https://eudl.eu/proceedings/BODYNETS/2015);
   b. Proc. of the 11th EAI International Conference on Body Area Networks (BODYNETS) – 2016 (https://eudl.eu/proceedings/BODYNETS/2016);
5. Meta-reviewer: European Conference on Antennas and Propagation (EuCAP) – since 2017 (role similar to an Associate Editor).

Official research and/or teaching and/or fellowship roles, positions as Scholar/ Visiting Professor in international highly qualified universities and research centres. (Selection)

1. Lecturer in different 2nd level courses at Politecnico di Torino: 2000-present. Electromagnetic Fields I and II, Advanced Antenna Engineering, Guiding electromagnetic systems, etc.;

2. Erasmus teaching mobility (different universities in Romania) - Universitatea Politehnica Timisoara - Romania (from a.y. 2004 to present, interruption for the Marie Curie IOF period), Universitatea Tehnică di Cluj-Napoca - Romania (a.y. 2013-2014, 2017-19), Universitatea Tehnică Gheorghe Asachi din Iaşi - Romania (a.y. 2007-2008), University of California Irvine (a.y. 2018-19) – U.S.A., Peter the Great St. Petersburg Polytechnic University – Russia (a.y. 2018-19); University of Medicine, Pharmacy, Science and Technology of Târgu Mureș (Universitatea de Medicină, Farmacie, Știință și Tehnologie din Târgu Mureș) (a.y. 2019-20).

3. Professor with contract: Aurel Vlaicu University of Arad (Romania): course Electromagnetic Fields and Electromagnetic compatibility: March-April 2005.

4. Lecturer-in-charge for different courses at Politecnico di Torino (from a.y. 2005 to present):
   a. Complementi di Campi Elettromagnetici, (Bachelor)
   b. Radiating Electromagnetic systems, (Master)
   c. Radio Planning, (Master)
   d. Metamaterials: Theory and multiphysics applications (formally: Metamaterials: theory and applications in electromagnetics), 3rd level course

5. Visiting Scientist - Research Institute for High Frequency Physics and Radar Techniques (FGAN-FHR) - now Fraunhofer Institute: 10/2005-12/2005;

6. Marie Curie International Outgoing Fellow (IOF): Macquarie University, Sydney, Australia, July 1, 2009 – June 30, 2011, Politecnico di Torino, from July 1, 2011 to June 30, 2012;

7. Visiting Associate - Macquarie University, Sydney, Australia: from March 3, 2014 to June 16, 2014;

8. Honorary Fellow- Macquarie University, Sydney, Australia: from July 1, 2014 (4-year appointment);

9. Visiting Scientist - Tsinghua University, Beijing, China: from May 12 to July 16 and from Aug. 15 to Sept 1, 2014. Other two weeks in 2015.

10. Visiting scientist - The National University of Science and Technology "MISiS": for a total of 6 month in the 2017-2019 period.

Seminars: (selection):

1. The National University of Science and Technology "MISiS", Russia, Nov. 8, 2017: Width modulated microstrip line as innovative structure for enhanced radar cross section reduction.

2. Seminar concerning spectral problems in wave-guides, Politecnico di Torino, Oct. 19, 2015: "Design of 2D, periodic, width-modulated microstrip line configuration for electromagnetic applications"
3. Fudan University, China, Mai 10, 2016: Design and advanced applications of planar and conformal, periodic width-modulated microstrip line configurations.
4. University of Adelaide, Australia, October 1, 2015: Design and advanced applications of planar and conformal, periodic width modulated microstrip line configurations, IEEE seminars (MTT-S, AP-S).
5. AFRL/Lincoln, Laboratory Massachusetts Institute of Technology (Boston), USA, July 9, 2010. Periodic structures in the field of antennas: a challenging subject.

Offices in the Governing bodies of national and international scientific societies.

1. Institute of Electrical and Electronics Engineers (IEEE): Member -1994, Senior Member – 2011-present.

Participation in Academies with international reputation in the research field of the candidate.

1. American Romanian Academy of Arts and Sciences (ARA): Member, 2016-present.

Prizes and awards awarded to the candidate for his/her scientific activity and project activity in the Academic Fields, where this is appropriate (full career)

1. TEMPUS JEP 2736-91/1 Scholarship - Electronics Department (Polito), student, 03/1992-07/1992;
2. Student Researcher Award 1997-Raj Mittra Travel Grant. This award partially founds travels and accommodation for participation to 1997 IEEE AP-S Int'l Symp. and URSI North American Science Meeting, July 13–18, 1997 Montreal, Canada;
3. URSI Young Scientist Award 1998, URSI Electromagnetic Theory Symposium, May 1998, Thessaloniki, Greece;
4. Young Scientist Award (Barzilai Award), XII Riunione Nazionale di Elettromagnetismo, 28 Set.-1 Oct. 1998, Cetraro, (Cs), Italia;
5. Young Scientist Award -10th MICROCOLL, 21-24 March 1999, Budapest, Hungary;
6. Best AP2000 Oral Paper on Antennas, ESA-EUREL Millenium Conference on Antennas & Propagation, 9-14 April 2000, Davos;
7. Marie Curie International Outgoing Fellowship (IOF) – 2007. Project title: Analysis of Low-cost Original Holographic Antenna: Theoretical OveRvIew, NOtes, StudY, DesigN and EasY Implementation ("ALOHA TORINO-SYDNEY");
8. Australian Research Council-Communication Research Network (ACoRN) travel grant to attend the European Microwave week 2009 in Rome;
9. IEEE Certificate of Appreciation, November 19, 2010;
10. International collaboration award (ICA): Australian Research Council (ARC) Discovery grant (2013-2015). Project ID: DP130102009. Dual-Band Antennas with Digitally Steerable Beams Made out of Multi-State Electromagnetic Elements. Total budget: A$ 400.000. International Collaboration Award (ICA) value A$ 4.000.Visiting Academic at Macquarie University, Sydney 1/3/-31/7 2013;
11. Micro Media Grant - Marie Curie Alumni Association (2014), 250 Euro, for the publication of the paper: L. Matekovits, T. S. Bird "Width-modulated Microstrip-line based Mantle Cloaks for Thin Single- and Multiple Cylinders", IEEE Trans. Antennas and Propagat., Vol. 62, No. 5, pp. 2606 - 2615, May 2014;
12. Certificate of Award - Marie Curie Fellowship, Brussels, 08/10/2015;
13. Associate Editor of the month – IEEE ACCESS – Nov. 2015;
14. Micro Travel Grant - Marie Curie Alumni Association (2017), 400 Euro, for the participation to the 2017 IEEE International Symposium on Antennas and Propagation/USNC-URSI National Radio Science Meeting, July 9 - 14, 2017, San Diego, California, U.S.A.;
15. ANASTASIA - one of the best research project in NUST MISiS in 2018 – "Architects of ultramodern metamaterials develop theory of invisibility and transparent materials" (see above: Advanced Non-radiating Architectures Scattering Tenuously And Sustaining Invisible Anapoles (ANASTASIA))

16. American Romanian Academy of Arts and Sciences (ARA) – 2019 ARA medal of Excellence in Science – “for outstanding contribution to electronics and telecommunications”, at the 43rd ARA congress, June, 10-13, 2019, Thessaloniki, Greece;
17. Motohisa Kanda Award 2019: for the most cited paper of the IEEE Transactions on EMC in the past five years.

    From the mail of the EiC of the IEEE Trans. Electromagnetic Compatibility, of March 28, 2019:

    "The paper I. Sohail, Y. Ranga, L. Matekovits, K. P. Esselle, S. G. Hay, “A single-Layer Frequency Selective Surface for Ultra-Wideband Electromagnetic Shielding", IEEE Trans. Electromagnetic Compatibility, Vol. 56, No. 6, pp. 1404-1411, Dec. 2014 and another one has received the highest citations (51) among all the papers published in the last 5 years (2014-2018)."

Participation in international conferences, as a distinguished invited speaker; participation in the scientific committees of International Conferences (selection).

1. Conference organization: I have been involved in the organization and management of high quality conferences: e.g. Assistant Chair of the European Microwave Conf. 2002 Technical Program Committee and of the European Microwave Week 2002 Local Committee. Publication Chair of the same conference, 23-27 Sept. 2002, Milan, Italy.

2. Member of the judge panel-APMC 2011 Prize at the 2011 Asia-Pacific Microwave Conference (APMC), 5-8 Dec. 2011, Melbourne, Australia.

3. Special track Chair: 10th International Conference on Body Area Networks 28-30 Sept. 2015 Sydney, Australia.

4. General Chair of the 11th International Conference on Body Area Networks (BodyNets16) conference, Torino, Italy.

5. Publicity and Social Media Co-Chair, 13th International Conference on Body Area Networks (BodyNets18) conference, 2 - 3 Oct. 2018 Oulu, Finland.

6. Member of the Technical Program Committees (TPC) of more than 10 conferences, including for example iWAT. Since 2012 I am in the TPC of the International Symposium on Electronics and Telecommunications (ISETC), Timisoara, Romania (conference organized any second year)

7. Meta-Reviewer (equivalent to an Associated Editor in a journal) for the European Conference on Antennas and Propagation (EuCAP), since 2017.

8. Member of the organizing Committee: International Conference on Electromagnetics in Advanced Applications: (2012-present). In the last seven editions, I have co-chaired various sessions organized in collaboration with Prof. K. Esselle.

9. Distinguished invited speaker: L. Matekovits, “On the way to a Contrast Formulation centered Unified Multiphysics Theory for Cloaking", (Plenary talk), The 12th International Symposium on Electronics and Telecommunications 2016, (ISETC 2016), 27 - 28 Oct. 2016 Timisoara, Romania.

10. Invited speaker: “Exploiting graphene tunability in electromagnetic applications”, IVth International Conference on Metamaterials and Nanophotonics (METANANO 2019), July 15-19, 2019, St. Petersburg, Russia.

11. Keynote speaker: International Conference Interdisciplinarity in Engineering - INTER-ENG 2019, 3 - 4 October 2019, University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș, Romania.

TEACHING ACTIVITY

For the full list of courses, see attached file with data downloaded from the Politecnico di Torino website (https://didattica.polito.it/pls/portal30/sviluppo.doc.attivita_per_anni?matricola=2837) – in Italian.

Formal responsibility of Bachelor's and Master of Science's degree courses in Italian and/or foreign universities.

1. Lecturer in different 2nd level courses at Politecnico di Torino: 2000-present. Electromagnetic Fields I and II, Advanced Antenna Engineering, Guiding electromagnetic systems, etc.;

2. Erasmus teaching mobility (different universities in Romania) - Universitatea Politehnica Timisoara (from a.y. 2004 to present, interruption for the Marie Curie IOF period), Universitatea Tehnică di Cluj-Nalpoca (a.y. 2013-2014), Universitatea Tehnică Gheorghe Asachi din Iaşi (a.y. 2007-2008);

3. Professor with contract: Aurel Vlaicu University of Arad (Romania): course Electromagnetic Fields and Electromagnetic compatibility: March-April 2005;

4. Lecturer-in-charge for different courses at Politecnico di Torino (from a.y. 2005 to present): Complementi di Campi Elettromagnetici, Radiating Electromagnetic systems, Radio Planning, etc..

Formal responsibility of PhD courses in Italian and/or foreign universities.

1. Lecturer-in-charge of the 3rd level course, Metamaterials: Theory and multiphysics applications (formally: Metamaterials: theory and applications in electromagnetics), held every second year since a.y. 2013-2014;

2. Lecturer of the 3rd level course, Tecniche innovative per l'ottimizzazione (in English) a.y. 2013-14 and a.y. 2014-15.

Formal responsibility of Specializing Master's courses and Life Learning courses in Italian and/or foreign universities in PhD courses.

1. Lecturer-in-charge of the Master course, Fields and waves in communications (a.y. 2013-2014). Master in Future Broadband Networks (second level master).
2. Lecturer - PhD school, Universitatea Politehnica Timisoara, Sept. 3, 2014;
3. Lecturer - Summer school, Peter the Great St. Petersburg Polytechnic University, St. Petersburg, Russia, July 15-26, 2019.

INSTITUTIONAL OFFICES AND ROLES IN ITALIAN AND FOREIGN UNIVERSITIES AND/OR PUBLIC AND PRIVATE INSTITUTIONS WITH SCIENTIFIC AND/OR TECHNOLOGY TRANSFER AIMS

Institutional offices and roles in the Governing bodies (Academic Senate, Board of Governors) of Italian and/or foreign universities.

1. Reference lecturer for the Master's Degree Course in Electronic Engineering (Electronic Engineering) for the academic year 2018/19 and 2019/20 (Politecnico di Torino). (https://didattica.polito.it/pls/portal30/sviluppo.vis_aiq_2013.visualizza?sducds=37013&tab=0&p_a_acc=2020)
2. Reference professor for the Master's Degree in Electronic engineering for the academic year 2019/20. The position represents one of the requirements for the accreditation of the CdS and may be interviewed by the evaluators during national and international accreditation visits (mail of June 26 2019 from the Vice Rector for Education, Politecnico di Torino).

Ladislau Matekovits

3. Non-IEEE Signatory Name for Politecnico di Torino for the 2020 IEEE-APS Topical Conference on Antennas and Propagation in Wireless Communications (APWC)

Institutional offices in teaching and research structures of Italian and Foreign Universities.

1. Full Member (Membro effettivo) of Collegio di Ingegneria Elettronica, delle Telecomunicazioni e Fisica (ETF) – Politecnico di Torino (2012-present);

2. Invited Member (Membro invitato) of Collegio di Ingegneria Biomedica – Politecnico di Torino - a.y. 2016-2017;

3. Full member of Collegio di Dottorato di ricerca in Ingegneria Elettrica, Elettronica e Delle Comunicazioni – Politecnico di Torino;

4. Honorary Fellow- Macquarie University, Sydney, Australia: from July 1, 2014 to June 30 2018 (4-year appointment).

5. Appointed alternate member of the Examining Commission for the State exams (Esame di Stato) for the qualification to practice the profession of Information Engineer for the sessions of the year 2019 (n. 970 of 21/05/2019 - MIUR).

Management roles in Universities, as part of Faculty duties.

1. Honorary Fellow- Macquarie University, Sydney, Australia: from July 1, 2014 to June 30 2018 (4-year appointment).
2. Responsible of PhD student funds – (for which acting as tutor) Politecnico di Torino

Offices in the Governing bodies, Board of Governors, Scientific Advisory Boards of public and private institutions, with scientific and technology transfer aims.

1. Person in charge from Politecnico di Torino side for the Memorandum of Understanding with the Research Institute for Nanodevice and Bio Systems, Hiroshima University, Higashi-Hiroshima, Japan (start: May 1, 2016, valid for 5 years).

2. Project assessor (selection):
    1. The Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI);
    2. Ministero dell'istruzione, università (Italy): Fondo per gli Investimenti della Ricerca di Base (FIRB), Scientific Independence of young Researchers (SIR)
    3. Croatian Science Foundation (2018).

Ladislau Matekovits (M'94–SM'11) received the degree in electronic engineering from Institutul Politehnic din Bucureşti, Bucureşti, Romania, and the Ph.D. degree (Dottorato di Ricerca) in electronic engineering from Politecnico di Torino, Torino, Italy, in 1992 and 1995, respectively. Since 1995, he has been with the Department of Electronics and Telecommunications, Politecnico di Torino, first with a post-doctoral fellowship, then as a Research Assistant. He joined the same Department as Assistant Professor in 2002 and was appointed as Senior Assistant Professor in 2005 and as Associate Professor in 2014 respectively. In February 2017 he obtained the Full Professor national qualification (Italy). In late 2005, he was Visiting Scientist at the Antennas and Scattering Department, FGAN-FHR (now Fraunhofer Institute), Wachtberg, Germany. Beginning July 1, 2009, for two years he has been a Marie Curie Fellow at Macquarie University, Sydney, NSW, Australia, where in 2013 he also held a Visiting Academic position and in 2014 has been appointed as Honorary Fellow.

His main research activities concern numerical analysis of printed antennas and in particular development of new, numerically efficient full-wave techniques to analyze large arrays, optimization techniques and active and passive metamaterials for cloaking applications. Material parameter retrieval of these structures by inverse methods and different optimization techniques have also been considered. In the last years, bio-electromagnetic aspects have also been contemplated, as for example design of implantable antennas or development of nano-antennas for example for drug delivery applications.

He has published 350+ papers, including 76 journal contributions, and delivered seminars on these topics all around the world: Europe, USA (AFRL/MIT-Boston), Australia, China and Russia. Prof. Matekovits has been invited to serve as Research Grant Assessor for government funding calls (Romania, Italy, Croatia) and as International Expert in PhD thesis evaluation by several Universities from Australia, India, Pakistan, Spain, etc..

Prof. Matekovits has been a recipient of various awards in international conferences, including the 1998 URSI Young Scientist Award (Thessaloniki, Greece), the Barzilai Award 1998 (young Scientist Award, granted every two years by the Italian National Electromagnetic Group), and the Best AP2000 Oral Paper on Antennas, ESA-EUREL Millennium Conference on Antennas and Propagation (Davos, Switzerland) and more recently he has been awarded with the 2019 American Romanian Academy of Arts and Sciences (ARA) Medal of Excellence in Science. He is recipient of the Motohisa Kanda Award 2019, for the most cited paper of the IEEE Transactions on EMC in the past five years.

He has been Assistant Chairman and Publication Chairman of the European Microwave Week 2002 (Milan, Italy), and General Chair of the 11th International Conference on Body Area Networks (BodyNets) 2016. Since 2010 he is member of the organizing committee of the International Conference on Electromagnetics in Advanced Applications (ICEAA) and he is member of the Technical Program Committees of several conferences. He serves as Associated Editor of the IEEE ACCESS, IEEE Antennas and Wireless Propagation Letters and IET MAP and reviewer for different journals.

List of publications and projects
Ladislau Matekovits
March 21, 2020

Contents

1 Patents

1. L. Matekovits, G. Vietti Colomé, P. Pirinoli, M. Orefice, Dispositivo con constante dielettrica modulata per la propagazione di onde elettromagnetiche. Application number: RA2006A000064. Date of filling: 3/11/2006.

   1.a) L. Matekovits, G. Vietti Colomé, P. Pirinoli, M. Orefice, Device for the propagation of electromagnetic waves with modulated dielectric constant. Extension to Europe of the patent No. RA2006A000064. Application No.: 07021125.5 - 2220. Date of filling: 29/10/2007.
   Granted on 02/05/2012.

   1.b) L. Matekovits, G. Vietti Colomé, P. Pirinoli, M. Orefice, Device for the propagation of electromagnetic waves with modulated dielectric constant. Extension to the United States of America of the patent No. RA2006A000064. Application No.: 11/981,942. Date of filling: 01/11/2007.

2. L. Matekovits, M. Orefice, K. P. Esselle, M. C. Heimlich, Metodo di Realizzazione di Una Struttura Accordabile Elettronicamente, e Struttura Accordabile Elettronicamente.
   Application number: TO2010A000536. Date of filling: 22/06/2010.
   Granted on 02/07/2013 with nr. 1400864.

   - extension to USA: Method for implementing an electronically tunable structure, and electronically tunable structure. (US20120109338), date of filling: 22/06/2011.

3. G. Dassano, L. Matekovits, M. Orefice, G. Vietti Colomé, An antenna system for transmission and reception of multifrequency wideband signal from and into a tyre. Application number: MI2010A000606. Date of filling: 9/04/2010.

   - extension to USA: "Tyre sensor device", Application No. 13/639.591, **Granted**, Date of publication: Oct., 27, 2015, US9168795 B2
   - extension - international: PCT/EP2011/055410, date of filling: Apr. 7, 2011, EP25555930

2 Articles in International Journals

2.1 Published papers

1. G. Vecchi, L. Matekovits, P. Pirinoli, and M. Orefice, "Hybrid spectral – spatial method for the analysis of printed antennas", *Radio Science*, - Special Section on "Computational electromagnetics", Vol. 31, No. 5, Sep. - Oct., 1996, pp. 1263 - 1270.

2. G. Vecchi, L. Matekovits, P. Pirinoli, M. Orefice, "Application of Numerical Regularization Options to the Integral-Equation Analysis of Printed Antennas", *IEEE Trans. Antennas and Propagat.*, - Special issue on "Advanced Numerical Techniques in Electromagnetics", Vol. 45, No. 3, March 1997, pp. 570 - 572.

3. G. Vecchi, L. Matekovits, P. Pirinoli, M. Orefice, "A Numerical Regularization of the EFIE for Three −Dimensional Planar Structures in Layered Media", **(Invited Article)**, *Int. J. of Microwave and Millimeter wave Computer-Aided Engineering* - Special issue on "Frequency-Domain Modeling of Printed Circuits and Antennas: Part II", Vol. 7, No. 6, Nov. 1997, pp. 410 - 431.

4. G. Vecchi, P. Pirinoli, L. Matekovits, M. Orefice, "A Reduced Representation of the Frequency-Response of Printed Antennas", *Int. J. of Microwave and Millimeter wave Computer-Aided Engineering* - Special issue on "Frequency-Domain Modeling of Planar Circuits and Antennas: Part II", Vol. 7, No. 6, Nov. 1997, pp. 432 - 441.

5. P. Pirinoli, L. Matekovits, M. Sereno Garino "A novel multiresolution approach to the EFIE analysis of printed antennas", *Microwave and Optical Technology Letters*, Vol. 23, No. 1, Oct. 5, 1999, pp 49 - 51.

6. P. Pirinoli, G. Vecchi, L. Matekovits, "Multiresolution analysis of printed antennas and circuits: a dual−isoscalar approach", *IEEE Trans. Antennas and Propagat.*, Vol. 49, No. 6, June 2001, pp. 858 - 874.

7. S. Selleri, M. Mussetta, P. Pirinoli, R. E. Zich, L. Matekovits, "Some Insight over New Variations of the Particle Swarm Optimization Method", *IEEE Antennas and Wireless Propagat. Letters*, Vol. 5, 2006, pp. 235 - 238.

8. L. Matekovits, G. C. Vietti Colomé, M. Orefice, "Propagation of electromagnetic waves in a sinusoidally modulated dielectric substrate", *IEEE Antennas and Wireless Propagat. Letters*, Vol. 6, pp. 207 - 210, 2007.

9. L. Matekovits, V. A. Laza, G. Vecchi, "Analysis of Large Complex Structures with the Synthetic-Functions Approach", *IEEE Trans. Antennas and Propagat.*, Vol. 55, No. 9, pp. 2509 - 2521, Sept. 2007.

10. S. Selleri, M. Mussetta, P. Pirinoli, R. E. Zich, L. Matekovits, "Differentiated Meta-PSO Methods for Array Optimization", *IEEE Trans. Antennas and Propagat.*, Vol. 56, No. 1, pp. 67 - 75, Jan. 2008.

11. M. Mussetta, S. Selleri, P. Pirinoli, R. E. Zich, L. Matekovits, "Improved Particle Swarm Optimization Algorithms for Electromagnetic Optimization", *Journal of Intelligent and Fuzzy Systems* (JIFS), Special Issue on Soft Computing and Applications, Vol. 19, No. 1/ 2008, pp. 75 - 84.

12. L. Matekovits, G. Vietti Colomé, M. Orefice, "Controlling the Bandlimits of TE-Surface Wave Propagation Along a Modulated Microstrip-Line-Based High Impedance Surface", *IEEE Trans. Antennas and Propagat.*, Vol. 56, No. 8, Part 2, pp. 2555 - 2562, Aug. 2008.

13. L. Matekovits, G. Vecchi, F. Vico, "Physics-based aggregate-functions approaches to large MoM problems", *Applied Computational Electromagnetics Society Journal*, Vol. 24 No. 2, pp. 143 - 160, April 2009. Special Issue on Innovative Approaches to the Solution of Large and Multiscale Electromagnetic Radiation and Scattering Problems (Guest editor Raj Mittra).

14. L. Matekovits, G. Vecchi, M. Bercigli, M. Bandinelli, "Synthetic-Functions Analysis of Large Aperture-Coupled Antennas", *IEEE Trans. Antennas and Propagat.*, Vol. 57, No. 7, pp. 1936 - 1943, July, 2009.

15. L. Matekovits, G. Vecchi, M. Bercigli, M. Bandinelli, "Efficient Numerical Analysis of Large Planar High Impedance Surface by the Synthetic Function eXpansion (SFX) technique", *Microwave and Optical Technology Letters* (MOTL), Vol. 51, No. 11, pp. 2763 - 2769, Nov., 2009.

16. L. Matekovits, M. Heimlich, K. Esselle, "Tunable periodic microstrip structure on GaAs wafer", *Progress in Electromagnetic Research* (PIER), Vol. 97, pp. 1 - 10, 2009.

17. A. De Sabata, L. Matekovits, "A New High Impedance Surface Featuring Several Electromagnetic Band-Gaps", Buletinul Ştiinţific al Universităţii "Politehnica" din Timişoara, Seria Electronică şi Telecomunicaţii, Transaction on Electronics and Communications, Tom 55(69), Faşcicola 2, pp. 3 - 6, 2010.

18. L. Matekovits, "Analytically Expressed Dispersion Diagram of Unit Cells for a Novel Type of Holographic Surface", *IEEE Antennas and Wireless Propagat. Letters*, Vol. 9, pp. 1251 - 1254, 2010.

19. L. Matekovits, M. Heimlich, K. Esselle, "Numerical analysis of 2D tunable HIS on GaAs support", *Applied Physics A: Materials Science & Processing*, Vol. 103, No. 3, pp. 779 - 782, 2011. (Online publication date: 29/12/10, Print publication date: 5/13/11.)

20. L. Matekovits, M. Heimlich, K. P. Esselle, "Metamaterial-based millimeter-wave switchable leaky wave antennas for on-chip implementation in GaAs technology", *Journal of Electromagnetic Waves and Applications* (JEMWA), Vol. 25, No. 1, pp. 49 - 61, Jan. 2011.

21. L. Matekovits, A. De Sabata, "Analysis on the gap bandwidth of some high impedance surfaces in the microwave range", *Journal of "Materials Science Forum" - Applied Electromagnetic Engineering*, Vol. 670 (2011), pp. 497 - 503.

22. Y. Ranga, L. Matekovits, K. P. Esselle, A. R. Weily, "Multi-Octave Frequency Selective Surface Reflector for Ultrawideband Antennas", *IEEE Antennas and Wireless Propagat. Letters*, Vol. 10, pp. 219 - 222, 2011.

23. D. N. P. Thalakotuna, L. Matekovits, M. Heimlich, K. P. Esselle, S. G. Hay, "Active Switching Devices in a Tunable EBG Structure: Placement Strategies and Modelling", *Journal of Electromagnetic Waves and Applications* (JEMWA), Vol. 25, No. 11/12, pp. 1740 - 1751, 2011.

24. L. Matekovits, A. De Sabata, K. P. Esselle, "Effects of a co-planar waveguide biasing network built into the ground plane on the dispersion characteristics of a tunable unit cell with an elliptical patch and multiple vias", *IEEE Antennas and Wireless Propagat. Letters*, Vol. 10, pp. 1088 - 1091, 2011.

25. A. Freni, P. De Vita, P. Pirinoli, L. Matekovits, G. Vecchi, "Fast-factorization acceleration of MoM Domain-Decomposition", *IEEE Trans. Antennas and Propagat.*, Vol. 59, No. 12, pp. 4588 - 4599, Dec., 2011.

26. A. De Sabata, L. Matekovits, "Parallel-Plate Waveguides Based on Metamaterials, with Fixed and Electronically Reconfigurable Geometry", *Buletinul Ştiinţific al Universităţii "Politehnica" din Timişoara, Seria Automatică şi Calculatoare, Scientific Bulletin of the "Politehnica" University of Timişoara, Romania, Trans. on Automatic Control and Computer Science*, Vol. 56 (70), No. 4, pp. 161 - 166, Dec. 2011.

27. A. De Sabata, L. Matekovits, "Unit Cell Geometry in Strip-line Technology Featuring Sequential Bandgaps Between Every Two Consecutive Modes", *IEEE Antennas and Wireless Propagat. Letters*, Vol. 11, pp. 97 - 100, 2012.

28. A. De Sabata, L. Matekovits, "Electromagnetic Band-Gap Solution for Mitigation of Parallel-Plate Noise in Power Distribution Networks", *Microwave and Optical Technology Letters* (MOTL), Vol. 54, No. 7, pp. 1689 - 1692, July, 2012.

29. A. De Sabata, L. Matekovits, I. Peter, U. L. Rohde, A. M. Silaghi, "Metamaterial based high impedance surface with band-pass frequency response", *Journal of "Materials Science Forum" - Applied Electromagnetic Engineering for Magnetic, Superconducting and Nano Materials*, Vol. 721 (2012), pp. 59 - 64.

30. A. De Sabata, L. Matekovits, "Band Structure of a Multi-Via Periodic Strip-line Surface Devised for Multiple Band Rejection Applications", *Buletinul Ştiinţific al Universităţii "Politehnica" din Timişoara, Seria Automatică şi Calculatoare, Scientific Bulletin of the "Politehnica" University of Timişoara, Romania, Trans. on Automatic Control and Computer Science*, Vol. 57 (71), No. 3, pp. 141 - 146, Sept. 2012.

31. A. De Sabata, L. Matekovits, "Reduced Complexity Biasing Solution for Switched Parallel Plate Waveguide with Embedded Active Metamaterial Layer", *Journal of Electromagnetic Waves and Applications* (JEMWA), Vol. 26, No. 14/15, pp. 1828 - 1836, Oct. 2012.

32. D. Mortazavi, A. Z. Kouzani, L. Matekovits, "Evolutions towards a new LSPR particle: Nano-sinusoid", *Progress in Electromagnetic Research* (PIER), Vol. 132, pp. 199 - 213, 2012.

33. Y. Ranga, L. Matekovits, A. R. Weily, K. P. Esselle, "A Constant Gain Ultra-Wideband Antenna with a Multi-Layer Frequency Selective Surface", *Progress in Electromagnetic Research Letters* (PIER L), Vol. 38, pp. 119 - 125, 2013.

34. D. Mortazavi, A. Z. Kouzani, L. Matekovits, W. Duan, "Localized Surface Plasmon Resonance: Nano-sinusoid Arrays", *Journal of Electromagnetic Waves and Applications* (JEMWA), Vol. 27, No. 5, pp. 638 - 648, 2013.

35. Y. Ranga, L. Matekovits, A. R. Weily, K. P. Esselle, "A Low-Profile Dual-Layer Ultra-Wideband Frequency Selective Surface Reflector", *Microwave and Optical Technology Letters* (MOTL), Vol. 55, No. 6, pp. 1223 - 1227, June 2013.

36. L. Matekovits, Y. Ranga, "Controlling the Phase of the Scattered and/or Radiated Field from a High Impedance Surface of Quasi-Periodic Sequences", *IEEE Antennas and Wireless Propagation Letters*, Vol. 12, No. 1, pp. 321 - 324, (Dec. 2013).

37. R. D. Graglia, A. Peterson, L. Matekovits, "Singular, Hierarchical Scalar Basis Functions for Triangular Cells", *IEEE Trans. Antennas and Propagat.*, Vol. 61, No. 7, pp. 3674 - 3692, July, 2013.

38. D. N. P. Thalakotuna, K. P. Esselle, L. Matekovits, M. Heimlich, S. G. Hay, "Changing the electromagnetic bandgap and stopbands in a multistate periodic circuit", *Microwave and Optical Technology Letters* (MOTL), Vol. 55, No. 8, pp. 1871 - 1874, Aug. 2013.

39. S. K. Podilchak, L. Matekovits, Al. P. Freundorfer, Y. M. M. Antar, M. Orefice, "Controlled Leaky Wave Radiation from a Planar Configuration of Width-Modulated Microstrip Lines", *IEEE Trans. Antennas and Propagat.*, Vol. 61, No. 10, pp. 4957 - 4972, Oct. 2013.

40. L. Matekovits, Y. Ranga, "Width-Modulated Microstrip Line Unit Cell: A Basic Element for Dispersion Engineered Surfaces for Reflectarray and Holographic Applications", *Forum for Electromagnetic Research Methods and Application Technologies* (FERMAT), Vol. 1, No. 1, (7 pages), March 2014.

41. L. Matekovits, K. P. Esselle, M. Bercigli, R. Guidi, "Efficient Numerical Analysis of a Periodic Structure of Multi-State Unit Cells", *International Journal of Antennas and Propagation* (IJAP), Article ID 148486, 6 pages, 2014. doi:10.1155/2014/148486.

42. R. D. Graglia, A. F. Peterson, L. Matekovits, P. Petrini, "Hierarchical Additive Basis Functions for the Finite Element Treatment of Corner Singularities", *Electromagnetics*, Vol. 34, No. 3, pp. 171 - 198, March 2014.

43. L. Matekovits, T. S. Bird "Width-modulated Microstrip-line based Mantle Cloaks for Thin Single- and Multiple Cylinders", *IEEE Trans. Antennas and Propagat.*, Vol. 62, No. 5, pp. 2606 - 2615, May 2014.

44. R. D. Graglia, A. Peterson, L. Matekovits, P. Petrini, "Singular Hierarchical Curl-Conforming Vector Bases for Triangular Cells", *IEEE Trans. Antennas and Propagat.*, Vol. 62, No. 7, pp. 3632 - 3644, July 2014.

45. A. K. Verma, P. Singh, L. Matekovits, "Strip-Width and Slot-Gap Dependent Equivalent Isotropic Substrate and Dispersion Characteristics of Asymmetric Coplanar Waveguide, Symmetric Coplanar Waveguide and Micro-Coplanar Strip Line on Anisotropic Substrates", *IEEE Trans. Microwave Theory and Techniques*, Vol. 62, No. 10, pp. 2232 - 2241, Oct. 2014.

46. I. Sohail, Y. Ranga, L. Matekovits, K. P. Esselle, S. G. Hay, "A single-Layer Frequency Selective Surface for Ultra-Wideband Electromagnetic Shielding", *IEEE Trans. Electromagnetic Compatibility*, Vol. 56, No. 6, pp. 1404 - 1411, Dec. 2014.

47. R. D. Graglia, P. Petrini, A. Peterson, L. Matekovits, "Full-Wave Analysis of Inhomogeneous Waveguiding Structures Containing Corners With Singular Hierarchical Curl-Conforming Vector Bases", *IEEE Antennas and Wireless Propagation Letters*, Vol. 13, No. 1, pp. 1701 - 1704, (Dec. 2014).

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229. G. Labate, L. Matekovits, "Invisible Structures as Particular Solutions of Devaney-Wolf Theorem on Non-Radiating Sources', in Frontiers in Optics 2016, OSA Technical Digest (online) (Optical Society of America, 2016), paper JTh2A.83 (17 - 21 Oct. 2016, Rochester, New York, U.S.A.).

230. L. Matekovits, "On the way to a Contrast Formulation centered Unified Multiphysics Theory for Cloaking", **(Invited talk)**, The 12$^{\text{th}}$ International Symposium on Electronics and Telecommunications 2016, (ISETC 2016), 27 - 28 Oct. 2016 Timişoara, Romania.

231. J. Huang, I. Peter, L. Matekovits, "Reduction of the mutual coupling between implanted microstrip antennas on a cylindrical biocompatible metallic ground plane", *Proceedings of the 11*$^{\text{th}}$ *International Conference on Body Area Networks* (BODYNETS 2016), Special track on *Body Area NanoNetworks: Electromagnetic, Materials and Communications* (BAN2-EMC), pp. 70 - 74, 15 - 16 Dec. 2016, Torino, Italy.

232. V. Loscrí, L. Matekovits, I. Peter, A. M. Vegni, "Recent Advances in Body Area NanoNetworks: Electromagnetic, Materials and Communications", *Proceedings of the 11*$^{\text{th}}$ *International Conference on Body Area Networks* (BODYNETS 2016), Special track on *Body Area NanoNetworks: Electromagnetic, Materials and Communications* (BAN2-EMC), pp. 75 - 79, 15 - 16 Dec. 2016, Torino, Italy.

2017:

233. J. Li, I. Peter, L. Matekovits, "Circularly Polarized Implanted Antenna with Conical Bio-Metallic Ground Plane", *Proceedings of IASTED 13th International Conference on Biomedical Engineering* (BioMed 2017), pp. 265 - 269, Feb. 20 - 22, 2017, Innsbruck, Austria.

234. L. Matekovits, "Comparison between Radiation Characteristics of Different Conformal, Printed Implanted Antennas with Bio-metallic Bone as Ground Plane", *Proceedings of International Workshop on Nanodevice Technologies* (IWNT 2017), (**Invited talk**), pp. 8 - 9, March 2, 2017, Higashi-Hiroshima, Japan.

235. F. Latino, T. Kikkawa, L. Matekovits, "Ultra-WideBand Square-Slot Antennas with Dual-layer Frequency Selective Surface for Breast Cancer Detection", *Proceedings of International Workshop on Nanodevice Technologies* (IWNT 2017), pp. 32 - 33, March 2, 2017, Higashi-Hiroshima, Japan.

236. I. Peter, L. Matekovits, M. Rosso, "Titanium Based Conformal Profile for Printed Implanted Antennas", *Proceedings of 10*$^{\text{th}}$ *International Conference on Materials Science & Engineering* (BraMat 2017), 8 - 11 March 2017, Brasov, Romania.

237. G. Labate, L. Matekovits, M. Orefice, "Re-consideration of Kirchhoff's Current Law for Electromagnetic Cloaking and Invisibility with Plasmonic Materials or Impedance Metasurfaces", *Proceedings of 11th European Conference on Antennas and Propagation* (EuCAP 2017, USB edition), pp. 3811 - 3814, 19 - 24 March 2017, Paris, France.

238. P. Maria Gallo, S. Podilchak, L. Matekovits, "A Planar Leaky-Wave Antenna Offering Well Designed Leakage on the 2D Aperture Using Printed Width Modulated Microstrip Lines", *Proceedings of 2017 IEEE International Symposium on Antennas and Propagation/USNC-URSI National Radio Science Meeting*, pp. 2779 - 278, July 9 - 14, 2017, San Diego, California, U.S.A..

239. G. Labate, L. Di Donato, L. Matekovits, T. Isernia, "Dielectric Cloaks as Analytical or Numerical Solutions of Inverse Scattering Problems", *Proceedings of 2017 IEEE International Symposium on Antennas and Propagation/USNC-URSI National Radio Science Meeting*, pp. 1857 - 1858, July 9 - 14, 2017, San Diego, California, U.S.A..

240. G. Labate, A. Alù, L. Matekovits, "The Surface Admittance Equivalence Principle for Cloaking Problems", *Proceedings of the 11th International Congress on Engineered Material Platforms for Novel Wave Phenomena* - Metamaterials 2017, pp. 196 - 198, Aug. 28 - Sept. 2 2017, Marseille, France.

241. B. Cappello, G. Labate, L. Matekovits, "A Surface Impedance Model for a Microstrip-line based Metasurface", *Proceedings of the 19th International Conference on Electromagnetics in Advanced Applications* (ICEAA17), **(special session)**, pp. 429 - 432, 11 - 15 Sept. 2017, Verona, Italy.

242. G. Labate, L. Matekovits,"The Volume Electric Field Integral Equation for Dielectric Cloaking at Any Frequency Regime", *Proceedings of the 19th International Conference on Electromagnetics in Advanced Applications* (ICEAA17), **(special session)**, pp. 460 - 463, 11 - 15 Sept. 2017, Verona, Italy.

2018:

243. G. Labate, N.A. Nemkov, A.A. Basharin, L. Matekovits "Nonradiating Sources, Cloaking Devices and Related Anapole Modes", Proceedings of *12th European Conference on Antennas and Propagation* (EuCAP 2018, USB edition), 3 pages, 9 - 13 April 2018 London, UK.

244. G. Labate, B. Cappello, L. Matekovits, "A Radial Transmission Line Model for Mantle Cloaking with Impedance Metasurfaces", Proceedings of *12th European Conference on Antennas and Propagation* (EuCAP 2018, USB edition), 3 pages, 9 - 13 April 2018 London, UK.

245. B. Cappello, L. Matekovits, "Effect of Geometry Parameters of a Width Modulated Microstrip Line based Mantle-Cloak", *Proceedings of 2018 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting*, pp. *** - ***, July 8 - 13, 2018, Boston, Massachusetts, U.S.A..

246. P. A. Buta, A. De Sabata, C. Iftode, A. M. Silaghi, L. Matekovits, "Applications of a Frequency Selective Surface based on a Combination of the Jerusalem Cross and a Circular Ring", Proceedings of *12th International Conference on Communications* (COMM 2018), pp. 239 - 242, 14 - 16 June 2018, Bucharest, Romania.

247. B. Cappello, L. Matekovits, "Spectral Composition of the Scattered Field from a Large Metallic Cloaked Cylinder", *Proceedings of the 20th International Conference on Electromagnetics in Advanced Applications* (ICEAA 2018), **(special session)**, pp. 240 - 243, 10 - 14 Sept. 2018, Cartagena de Indias, Colombia.

248. A. A. Baba, R. M. Hashmi, K. P. Esselle, A. R. Wiley, L. Matekovits, "Sidelobe suppression in Resonant Cavity Antennas through Near-field Analysis", *Proceedings of the 20th International Conference on Electromagnetics in Advanced Applications* (ICEAA 2018), **(special session)**, pp. 359 - 361, 10 - 14 Sept. 2018, Cartagena de Indias, Colombia.

249. K. Naishadham, L. Matekovits, "Wave Propagation in Cylindrically Stratified Dielectric Media and Application to RCS Characterization", *Proceedings of the 20th International Conference on Electromagnetics in Advanced Applications* (ICEAA 2018), **(special session)**, pp. 648 - 651, 10 - 14 Sept. 2018, Cartagena de Indias, Colombia.

250. A. De Sabata, L. Matekovits, A.M. Silaghi, "Frequency Selective Surface with two Notch Frequencies and Good Incidence Angle Stability for Screening Applications", *Proceedings of the 20th International Conference on Electromagnetics in Advanced Applications* (ICEAA 2018), **(special session)**, pp. 679 - 682, 10 - 14 Sept. 2018, Cartagena de Indias, Colombia.

251. Z. Hamzavi-Zarghani, A. Yahaghi, L. Matekovits, "Tunable Lens Based on Graphene Metasurface for Circular Polarization", *Proceedings of the 20th International Conference on Electromagnetics in Advanced Applications* (ICEAA 2018), **(special session)**, pp. 644 - 647, 10 - 14 Sept. 2018, Cartagena de Indias, Colombia.

252. A. K. Ospanova, G. Labate, L. Matekovits, A.A. Basharin, "Subwavelength cloaking device due to anapole mode excitation", *Proceedings of the 20th International Conference on Electromagnetics in Advanced Applications* (ICEAA 2018), **(special session)**, pp. 633 - 635, 10 - 14 Sept. 2018, Cartagena de Indias, Colombia.

253. A. Kiyani, M.U. Afzal, R.M. Hashmi, K.P. Esselle, L. Matekovits, "A Low-Profile Phase Correcting Solution to Improve Directivity of Horn Antenna", *Proceedings of the 20th International Conference on Electromagnetics in Advanced Applications* (ICEAA 2018), **(special session)**, pp. 332 - 333, 10 - 14 Sept. 2018, Cartagena de Indias, Colombia.

4.2 Submitted papers

1. I. Peter, L. Matekovits, "Biometallic orthopedic implant with printed antenna", *Proceedings of the 13$^{\text{th}}$ International Conference on Body Area Networks* (BODYNETS 2018), pp. ** - **, 2 - 3 Oct. 2018, Oulu, Finland.

   SpringerBook:48143, 13$^{\text{th}}$ EAI International Conference on Body Area Networks, Chapter 34 (5 pages). Sugimoto Chika, Farhadi Hamed, Matti Hämäläinen (Eds.), Dec. 2019. ISBN 978-3-030-29896-8

2. Z. Hamzavi-Zarghani, A. Yahaghi, L. Matekovits, I. Peter, "Tunable Polarization Converter Based on Graphene Metasurfaces", *Proceedings of the 2018 IEEE Radio and Antenna Days of the Indian Ocean* (RADIO 2018), 2 pages, 15 - 18 Oct. 2018, Flic-en-Flac, Mauritius.

3. A.A. Basharin, L. Matekovits, "Multipoles contributions in electromagnetics", **(Invited talk)**, The 13$^{\text{th}}$ International Symposium on Electronics and Telecommunications 2018, (ISETC 2018), 8 - 9 Nov. 2018 Timişoara, Romania.

4. Z. Hamzavi-Zarghani, A. Yahaghi, L. Matekovits, "Analytical Design of a Metasurface Based Mantle Cloak for Dielectric Cylinder Under Oblique Incidence", *Proceedings of the 9$^{\text{th}}$ International Symposium on Telecommunications* (IST 2018), pp. 65 - 68, 17 - 19 Dec. 2018, Tehran, Iran.

2019:

5. Z. Hamzavi-Zarghani, L. Matekovits, A. Yahaghi, "Improved Gain Graphene Based Leaky Wave Antenna Loaded by Dielectric Slab in THz Regime", Proceedings of *13th European Conference on Antennas and Propagation* (EuCAP 2019, USB edition), pp. *** - ***, 31 March - 5 April 2019 Krakow, Poland (3 pages).

6. A. A. Baba, R. M. Hashmi, K. P. Esselle, L. Matekovits, "All-Dielectric Compact Superstrates for High-Gain Resonant-Cavity Antennas: Designs & Measurements", *Proceedings of the 2019 URSI Commission B, International Symposium on Electromagnetic Theory* (EMTS 2019), **(special session)**, pp. *** - ***, 27 - 31 May 2019, San Diego, CA USA.

7. N. A. Olekhno, E. I. Kretov, D. S. Filonov, A. A. Stepanenko, B. Cappello, L. Matekovits, M. A. Gorlach, "Engineering topological states of interacting photons with LC circuits", *Proceedings of the 2019 URSI Commission B, International Symposium on Electromagnetic Theory* (EMTS 2019), **(special session)**, pp. *** - ***, 27 - 31 May 2019, San Diego, CA USA.

8. Z. Hamzavi-Zarghani, A. Yahaghi, L. Matekovits, "Mantle cloaking of a dielectric cylinder under oblique incidence with metasurfaces", *Proceedings of 2019 PhotonIcs & Electromagnetics Research Symposium - also known as Progress In Electromagnetics Research Symposium* (PIERS), pp. *** - ***, June 17 - 20, 2019, Rome, Italy.

9. A. M. Silaghi, A. De Sabata, L. Matekovits, "Parametric Analysis of a Dual Band Polarized Frequency Selective Surface", *Proceedings of 2019 IEEE International Symposium on Antennas and Propagation and 2019 USNC-URSI Radio Science Meeting*, pp. *** - ***, July 7 - 12, 2019, Atlanta, Georgia, U.S.A..

10. C. Rizza, L. Matekovits, "Numerical Investigation on Graphene Based Mantle Cloaking of a PEC Cylinder", *Proceedings of 2019 IEEE International Symposium on Antennas and Propagation and 2019 USNC-URSI Radio Science Meeting*, pp. *** - ***, July 7 - 12, 2019, Atlanta, Georgia, U.S.A..

11. B. Cappello, K. Naishadham, L. Matekovits, "Preliminary Study of a Cylindrical Microstrip Metasurface Using the State Space Method", *Proceedings of 2019 IEEE International Symposium on Antennas and Propagation and 2019 USNC-URSI Radio Science Meeting*, pp. *** - ***, July 7 - 12, 2019, Atlanta, Georgia, U.S.A..

12. H. Zahra, S. M. Abbas, R. M. Hashmi, L. Matekovits, K. P. Esselle, "Bending Analysis of Switchable Frequency Selective Surface Based on Flexible Composite Substrate", *Proceedings of 2019 IEEE International Symposium on Antennas and Propagation and 2019 USNC-URSI Radio Science Meeting*, pp. *** - ***, July 7 - 12, 2019, Atlanta, Georgia, U.S.A..

13. P. A. Buta, A. M. Silaghi, L. Matekovits, A. De Sabata, "Fractal Based Frequency Selective Surface with Broadband Characteristics", Proceedings of the *14^{th} International Symposium on Signals, Circuits and Systems* (ISSCS 2019), 11 - 12 July 2019, Iasi, Romania.

14. L. Matekovits, "Exploiting graphene tunability in electromagnetic applications", *Proceedings of IV International Conference on Metamaterials and Nanophotonics* (METANANO 2019), **(Invited talk)**, pp. *** - ***, July 15 - 19, 2019, St. Petersburg, Russia.

15. N. A. Olekhno, E. I. Kretov, D. S. Filonov, A. A. Stepanenko, B. Cappello, L. Matekovits, M. A. Gorlach, "Observation of interaction-induced topological two-photon states", *Proceedings of the the 10^{th} International Conference on Metamaterials, Photonic Crystals and Plasmonics* (META19) **(Invited talk)**, pp. *** - ***, July 23 - 26, 2019, Lisbon, Portugal.

16. A.M. Silaghi, A. De Sabata, L. Matekovits, "Application of a Near Field Method to Reducing Conducted Emissions", *Proceedings of the 21^{st} International Conference on Electromagnetics in Advanced Applications* (ICEAA 2019), **(special session)**, pp. **** - ***, 9 - 13 Sept. 2019, Granada, Spain.

17. B. Cappello, Y. Shestopalov, L. Matekovits, "Analysis of the Surface Impedance of a Sinusoidally Modulated Metasurface", *Proceedings of the 21^{st} International Conference on Electromagnetics in Advanced Applications* (ICEAA 2019), **(special session)**, pp. **** - ***, 9 - 13 Sept. 2019, Granada, Spain.

18. Z. Hamzavi-Zarghani, A. Yahaghi, L. Matekovits, "Vertical strips as mantle cloak of a dielectric cylinder under oblique incidence", *Proceedings of the 21^{st} International Conference on Electromagnetics in Advanced Applications* (ICEAA 2019), **(special session)**, pp. **** - ***, 9 - 13 Sept. 2019, Granada, Spain.

19. L. Matekovits, "Smart Mantles for Advanced Electromagnetic Cloaking Applications", *13^{th} International Conference, Interdisciplinarity in Engineering* (INTER-ENG 2019), **(Plenary Talk)**, 3 - 4 Oct. 2019, Târgu Mureş, Romania.

20. I. Peter, L. Matekovits, "Multidisciplinary investigations on the use of TiNb alloy orthopedic device equipped with low profile antenna as smart sensor", *13^{th} International Conference, Interdisciplinarity in Engineering* (INTER-ENG 2019), **(Plenary Talk)**, 3 - 4 Oct. 2019, Târgu Mureş, Romania.

21. B. Cappello, A. K. Ospanova, Al. A. Basharin, L. Matekovits, "Ideal magnetic dipole scattering and mantle cloaking effect", *Proceedings of the 21^{st} International Conference on Electromagnetics in Advanced Applications* (ICEAA 2019), **(special session)**, pp. **** - ***, 9 - 13 Sept. 2019, Granada, Spain.

22. N. A. Olekhno, E. I. Kretov, A. A. Stepanenko, D. S. Filonov, V. V. Yaroshenco, B. Cappello, L. Matekovits, M. A. Gorlach, "Topological States of Interacting Photon Pairs Emulated in a Topolectrical Circuit", *Proceedings of 2019 PhotonIcs & Electromagnetics Research Symposium - also known as Progress In*

Electromagnetics Research Symposium (PIERS) - Fall (PIERS - Fall), pp. 1082 - 1086, Dec. 17 - 20, 2019, Xiamen, China.

2020:

23. A. I. Dumitru, G. Velciu, D. Pătroi, J. Pintea, V. Marinescu, F. Clicinschi, L. Matekovits, I. Peter, "Investigations on the doping effects on the properties of piezoelectric ceramics", *Proceedings of 2020 International Conference on Processing & Manufacturing of Advanced Materials Processing, Fabrication, Properties, Applications* (THERMEC'2020), pp. *** - ***, May 31 - June 5, 2020, Vienna, Austria.

24. P. A. Buta, A. M. Silaghi, A. De Sabata, L. Matekovits, "Multiple-Notch Frequency Selective Surface for Automotive Applications", Proceedings of *13th Conference on Communications* (COMM 2020), pp. **** - ****, 18 - 20 June 2020, Bucharest, Romania.

25. A. M. Silaghi, A. De Sabata, L. Matekovits, "Multi Wide-Band Frequency Selective Surface for Automotive Applications", *Proceedings of 2020 IEEE International Symposium on Antennas and Propagation and 2020 USNC-URSI Radio Science Meeting*, pp. *** - ***, July 5 - 10, 2020, Montréal, Québec, Canada.

26. E. M. Renzi, A. F. Abdelshafy, T. Mealy, L. Matekovits, F. Capolino, "A Concept for a Leaky Wave Antenna Oscillator With Second Order Degeneracy", *Proceedings of 2020 IEEE International Symposium on Antennas and Propagation and 2020 USNC-URSI Radio Science Meeting*, pp. *** - ***, July 5 - 10, 2020, Montréal, Québec, Canada.

27. B. Cappello, L. Matekovits, "Inhomogeneous metasurface to enlarge cloaking bandwidth", *Proceedings of 2020 IEEE International Symposium on Antennas and Propagation and 2020 USNC-URSI Radio Science Meeting*, pp. *** - ***, July 5 - 10, 2020, Montréal, Québec, Canada.

28. A. Berto, A. Y. Almutawa, L. Matekovits, F. Capolino, "Fabry-Perot cavity antenna generating multi frequency overlapping apertures", *Proceedings of 2020 IEEE International Symposium on Antennas and Propagation and 2020 USNC-URSI Radio Science Meeting*, pp. *** - ***, July 5 - 10, 2020, Montréal, Québec, Canada.

29. A. De Sabata, L. Matekovits, A. M. Silaghi, A. Buta "AWide-Band Linear Polarizer Based on a Frequency Selective Surface", *Abstracts of XXXIII General Assembly and Scientific Symposium (GASS) of the International Union of Radio Science (Union Radio Scientifique Internationale-URSI)*, pag. ***, 29 Aug. - 5 Sept. 2020, Rome, Italy.

30. B. Cappello, L. Matekovits, "Manipulation of the Scattering from Metallic Cylinders Beyond the Quasi-Static limit", *Proceedings of the 22nd International Conference on Electromagnetics in Advanced Applications* (ICEAA 2020), **(special session)**, pp. **** - ***, 10 - 14 Aug. 2020, Honolulu, Hawaii, USA.

31. B. Cappello, A. K. Ospanova, L. Matekovits, Al. A. Basharin, "Multipolar Analysis of Cloaked Metallic Cylinders ", *Proceedings of the 22nd International Conference on Electromagnetics in Advanced Applications* (ICEAA 2020), **(special session)**, pp. **** - ***, 10 - 14 Aug. 2020, Honolulu, Hawaii, USA.

32. A. De Sabata, L. Matekovits, A.M. Silaghi, "Angularly Stable Absorber Stand on a Frequency Selective Surface", *Proceedings of the 22nd International Conference on Electromagnetics in Advanced Applications* (ICEAA 2020), **(special session)**, pp. **** - ***, 10 - 14 Aug. 2020, Honolulu, Hawaii, USA.

33. D. N. P. Thalakotuna, D. K. Karmokar, Zh. Hu, K. P. Esselle, M. Heimlich, L. Matekovits, "Improving Cross-Band Isolation in Multi-Band Antennas", *Proceedings of the 22nd International Conference on Electromagnetics in Advanced Applications* (ICEAA 2020), **(special session)**, pp. **** - ***, 10 - 14 Aug. 2020, Honolulu, Hawaii, USA.

34. Z. Hamzavi-Zarghani, A. Yahaghi, L. Matekovits, "Dual-Polarized Tunable Mantle Cloaking with a Metasurface Based on graphene Strips", *Proceedings of the 22nd International Conference on Electromagnetics in Advanced Applications* (ICEAA 2020), **(special session)**, pp. **** - ***, 10 - 14 Aug. 2020, Honolulu, Hawaii, USA.

35. D. K. Karmokar, D. N. P. Thalakotuna, L. Matekovits, K. P. Esselle, "One Dimensional Leaky-Wave Antennas with Continuous Scan of Radiating Beam", *Proceedings of the 22nd International Conference on Electromagnetics in Advanced Applications* (ICEAA 2020), **(special session)**, pp. **** - ***, 10 - 14 Aug. 2020, Honolulu, Hawaii, USA.

5 Editorials

1. L. Matekovits, T. Kikkawa, I. Peter, K.P. Esselle, "IEEE Access Special Section Editorial: Bio-Compatible Devices and Bio-Electromagnetics for Bio-Medical Applications," *IEEE Access*, vol. 3, pp. 3119-3121, 2015.

2. L. Matekovits, G. Fortino, Zh. Wang, H. Ghasemzadeh, V. Loscrí, I. Peter, M. Hämäläinen, "IEEE Access Special Section Editorial: Body Area Networks," *IEEE Access*, vol. 6, pp. 30990-30995, 2018.

6 Projects

6.1 Granted Projects

1. Phase A: Gravity Field and Steady-State Ocean Circulation Explorer (GOCE), European Space Agency (ESA) Project, 1999.

2. Multiporpose Antenna Design Simulator (MADS), ESPRIT Project No. 28363, 1999 - 2001.

3. Antenna Design Framework ElectroMagnetic Satellite (ADF/EMS) Progetto ESA (Agenzia Spaziale Europea) C.No. 15538/01/NL/JSC (2001 - 2003)

4. Reconfigurable low-profile antennas for multimedia networks: Programmi di Ricerca scientifica di rilevante Interesse Nazionale (PRIN) 2003, coord. Prof. Orefice Mario - Politecnico di Torino, Italy.

5. Network of Excellence in Wireless communications - NEWCOM, finanziato dalla Commissione Europea nell'ambito del VI Programma Quadro - Information Society Technologies

6. Antenna Network of Excellence (ACE): Contract FP6-IST 508009

7. "ACE - Antenna Center of Excellence (2006-2007)" - Contract No. 026957

8. Reconfigurable Platforms for Wideband Wireless Comunications (PRIMO) (Piattaforme Riconfigurabili per sistemi cellulari), coordinatore Prof. S. Benedetto, (Prot. n. RBNE018RFY), Italian Ministry of Education.

9. Enabling technologies for Wireless Reconfigurable Terminals (FIRB research project - Prot. n. RBNE01F582), Italian Ministry of Education.

10. Electromagnetic Satellite Analysis Tool, European Space Agency. AO/1-5616/08/NL/GLC. Value: 250.650,24 Euro., (41.303,47 for POLITO - Sub-contractor).

11. Cyber Tyre, Pirelli

12. Elementi irradianti a larga banda per reflectarray. Programmi di Ricerca scientifica di rilevante Interesse Nazionale (PRIN) 2008, coord. Prof. Orefice Mario - Politecnico di Torino, Italy, (4+2 MM). Co-fund 148.859 Euro.

13. Analysis of Low-cost Original Holographic Antenna: Theoretical OveRvIew, NOtes, StudY, DesigN and EasY Implementation (ALOHA TORINO-SYDNEY). Marie Curie International Outgoing Fellowship (IOF) Value: 327.000 Euro. Role: research fellow. Period: 1/7/2009-30/6/2011 (outgoing phase of 2 years at the Macquarie University, Sydney, Australia) and, 1/7/2011-30/6/2012 (reintegration at Politecnico di Torino).

14. 2010, US Air Force Research Laboratory grant, Basic research: Electrically tunable EBG structure demonstrator for IC-, thick-, or thin-film processing, M. Heimlich, K.P. Esselle, L. Matekovits, Role: co-proponent/Researcher. Value: A$30.000.

15. 2011, US Air Force Research Laboratory grant, Basic research: Dynamically Tuneable EBG Structure Demonstrator, M. Heimlich, K.P. Esselle, L. Matekovits, Role: co-proponent/Researcher. Value: A$100.000.

16. 2012, US Air Force Research Laboratory grant, Basic research: 2D Electrically Tuneable EBG Integrated Circuits, M. Heimlich, K.P. Esselle, L. Matekovits, Role: co-proponent/Researcher. Value: A$100.000.

17. WIreless SEcurity SOlution for Scuba-diving (WISE-SOS): Multidisciplinary research project in the framework of the Alta Scuola Politecnica (www.asp-poli.it/presentation/), jointly funded by the Politecnico di Milano and Politecnico di Torino, the largest and oldest technical universities in Italy. Role: principal academic tutor. Value: 11.500 Euro. Duration 18 months. Start: 04/12.

18. Dual-Band Antennas with Digitally Steerable Beams Made out of Multi-State Electromagnetic Elements, Australian Research Council (ARC) Discovery grant - 2013-2015. Project ID: DP130102009. Investigators: Karu P. Esselle, Michael Heimlich, Trevor S. Bird, Ladislau Matekovits, Stuart G. Hay. Total budget: A$ 400.000. Duration 36 months. Start: 1/13. Role: Partner Investigator. International Collaboration Award (ICA) A$ 4.000. Visiting Academic at Macquarie University: 1/3/-31/7 2013.

19. Innovative planar antennas for THz systems, Progetti di internazionalizzazione della ricerca-2013, funded by Compagnia di San Paolo and Politecnico di Torino. Investigators: Paola Pirinoli, Ladislau Matekovits, Mario Orefice, Bui Van Ha (PhD student) from Polito and Prof. Fan Yang, A/Prof. Shenheng Xu, Wenxing An (Post-Doc), Ruyuan Deng (Ph.D. student) from Tsinghua University, Beijing, China. Role: Researcher. Value: 40.000 Euro. Duration 12 months. Start: 10/13.

    - 6 months follow-on granted in Dec. 2014. Value: 7.000 Euro.

20. Wideband Strongly-Truncated Composite Cavity-Resonator Antennas, Australian Research Council (ARC) Discovery grant - 2015-2018. Project ID: DP150103242. Investigators: Karu Esselle, Trevor S. Bird, Ladislau Matekovits, Stuart G. Hay, Per-Simon Kildal. Total budget: A$ 485.100. Role: Partner Investigator. Duration 48 months. Start: 1/15.

21. Mobility projects for experienced researchers from diaspora 2016. The Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI). Ladislau Matekovits. Contract-PN-III-P1-1.1-MCD-2016-0019. Total budget: RON 5.000. Role: Experienced researcher from diaspora. Duration 24/10-2/11 - 2016.

22. Erasmus+ Staff Mobility for Training. Ladislau Matekovits. Bando di concorso per il conferimento di contributi di mobilitá ERASMUS+ per attivitá formative (Staff Training) in Paesi Partner - Anno 2016. Flinders University of Adelaide SA. Contact person: Dr Sherry Randhawa, Director of Study (Course coordinator). Role: the Staff member. Value: 3.340 Euro. period: 31/1/2017-13/2/2017.

23. Advanced Non-radiating Architectures Scattering Tenuously and Sustaining Invisible Anapoles (ANASTASIA), Progetti di internazionalizzazione della ricerca-2017, funded by Compagnia di San Paolo and Politecnico di Torino. Investigators: Ladislau Matekovits, Mario Rosso (Polito) and Prof. Alexey Basharin, National University of Science and Technology "MISiS". Role: Principal investigator. Duration 12 months. Value: 50.000 Euro. Start: 20/9/17.

24. Analisi e misurazioni per la caratterizzazione 3D dei parametri di antenne integrate a satellite, Research contract with ArgoTec S.p.A., 2017. Role: Scientific Responsible. Value: 2.700 Euro.

25. Mobility projects for experienced researchers from diaspora 2017. The Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI). Ladislau Matekovits. Contract-PN-III-P1-1.1-MCD-2017-0051. Total budget: RON 5.000. Role: Experienced researcher from diaspora. Duration 4-14/12/2017.

26. Mobility projects for experienced researchers from diaspora 2018. The Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI). Ladislau Matekovits. Contract-PN-III-P1-1.1-MCD-2018-0093. Total budget: RON 5.000. Role: Experienced researcher from diaspora. Duration 3-9/11/2018.

27. Beam Steering of High-Gain Antennas using Metasurfaces, Australian Research Council (ARC) Discovery grant - 2019-2022. Project ID: DP190103352.

    Investigators: Karu Esselle, J(Yiannis) Vardaxoglou, Stefano Maci, David Bulger, Ladislau Matekovits. Total budget: A$ 570.000. Role: Partner Investigator. Duration 48 months. Start: 1/1/19.

28. Sviluppo di antenne per test di compatibilitá a radiofrequenza per microsatelliti, e alle attivitá connesse, Consultancy contract with ArgoTec S.p.A., 2019. Role: Scientific Responsible. Value: 1.000 Euro.

29. Reconfigurable metasurface lens based on graphene split ring resonators (proposal #6167). Assigned Scientist Dr. Stefano Cabrini, Investigators: Ladislau Matekovits (project leader), Vittorino Lanzio, Ildiko Peter, Barbara Cappello. Funding institution: Molecular Foundry, Lawrence Berkeley National Laboratory. Role: Project leader.

30. Mobility projects for experienced researchers from diaspora 2019. The Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI). Ladislau Matekovits. Contract-PN-III-P1-1.1-MCD-2019-0108. Total budget: RON 5.000. Role: Experienced researcher from diaspora. Duration 16-22/09/2019.

6.2 Submitted Projects

1. Ultrawideband radar-based early stage breast cancer detection system, Joint Research Projects within the Executive Programme of Cooperation in the Field of Science and Technology between Italy and Japan for the Years 2020-2022. Project ID: PGR07079. Proponents: Ladislau Matekovits and Takamaro Kikkawa (Director Research Institute for Nanodevice and Bio Systems), Hiroshima University, Hiroshima, Japan. Total budget: Euro 50.500. Role: Scientific Director for the Italian part (Responsabile scientifico italiano). Duration 36 months. Start: ****.

2. Radiotelescopio a bassa frequenza interconnesso (I-LOFAR), Responsabile scientifico dell'iniziativa: Prof. Attilio Ferrari.

   Fondo Integrativo Speciale Per La Ricerca (FISR), D.D. 18 giugno 2019 n. 1179
   DOMANDO FISR2019_05516
   Partners: Main contractor (Capofila) - CIFS - Consorzio Interuniversitario per la Fisica Spaziale; INAF - Istituto Nazionale di AstroFisica, Politecnico di Torino - Dipartimento di Elettronica e Telecomunicazioni (DET).
   Value: Costo preventivato dell'iniziativa: 3.200.000,00 Euro Contributo richiesto: 2.560.000,00 Euro
   of which for Polito: Costo preventivato dell'iniziativa: 1.000.000,00 Euro Contributo richiesto: 800.000,00 Euro
   Role: Scientific responsible of the local group (Politecnico di Torino). Duration: 06/2020-06/2022 (24 month).

7 Books and book chapters

7.1 Published Books

1. L. Matekovits, G. Perrone, P. Pirinoli, D. Trinchero, *Campi Elettromagnetici - Linee di Trasmissione e guide d'onda. Esercizi svolti*, ISBN 88-86524-30-7, Giugno, 1999, Soc. editrice Esculapio, Bologna (in Italian).

2. L. Matekovits, *Câmpuri Electromagnetice şi circuite în microunde: Culegere de probleme*, ISBN 973-9389-93-7, 2001, Editura Politehnica, Timişoara, România (in Romanian).

3. L. Matekovits, *Câmpuri Electromagnetice şi compatibilitate electromagnetică*, ISBN 973-625-214-0, 2005, Editura Politehnica, Timişoara, România (in Romanian).

7.2 Published book chapters

1. I. Peter, L. Matekovits, M. Rosso, Up-to-date knowledge and outlooks for the use of metallic biomaterials - review paper (Ch. 2, pp. 45 - 63, in) Biomaterials in Regenerative Medicine, Editor Leszek A. Dobrzański, InTech, June 2017.

2. Y. Ranga, Karu P. Esselle, L. Matekovits, "Making UWB Antennas Unidirectional: Phase Coherence with an Ultra-Wide Band Frequency Selective Surface Reflector", (Ch. 10, pp. 227 - 258, in) *The World of Applied Electromagnetics: In Appreciation of Magdy Fahmy Iskander*, Akhlesh Lakhtakia and Cynthia M. Furse (Editors), Springer, 2017.

3. G. Labate, L. Matekovits, A. Alù, "Metamaterial and metasurface cloaking: principles and applications", Chap. 10 in *Surface Electromagnetics*, Cambridge University Press, June, 2019. Edited by Fan Yang (Tsinghua University, Beijing), Yahya Rahmat-Samii (University of California, Los Angeles).

8 Theses

1. L. Matekovits, *Determination of scattering parameters of printed radiating structures*, Dissertation, July 1992, Institutul Politehnic Bucureşti.

2. L. Matekovits, *Full-wave analysis of arbitrarily shaped electromagnetically coupled microstrip antennas*, Doctoral Dissertation, Feb. 1996, Politecnico di Torino, Italy.

9 Awards

1. TEMPUS - 1992 - student mobilities in Europe (6 month).

2. Raj Mittra Travel Grant - Student Researcher Award 1997. This travel grant provided partial support for travel to the *1997 IEEE AP-S International Symposium and URSI North American Science Meeting* held July 13–18, 1997 in Montréal, Canada.

3. URSI Young Scientist Award 1998, *URSI Electromagnetic Theory Symposium*, 25 - 28 May 1998, Thessaloniki, Greece.

4. Premio Barzilai, *XII Riunione Nazionale di Elettromagnetismo*, 28 Set. - 1 Ott. 1998, Cetraro, (Cs), Italia.

5. 10^{th} MICROCOLL Young Scientist Award - 10^{th} *MICROCOLL*, 21 - 24 March 1999, Budapest, Hungary.

6. Best AP2000 Oral Paper on Antennas, *ESA-EUREL Millenium Conference on Antennas & Propagation*, 9 - 14 April 2000, Davos, Switzerland.

7. Student Grant to attend the 39^{th} *European Microwave Conference* (EuMC) 2009 in Rome (for F. Monticone, student)

8. International collaboration award (Australian Research Council - 2013) within the project: Dual-Band Antennas with Digitally Steerable Beams Made out of Multi-State Electromagnetic Elements, Australian Research Council (ARC) Discovery grant - 2015-2013. Project ID: DP130102009.

9. Micro Media Grant - Marie Curie Alumni Association (2014), 250 Euro, for the publication of the paper: L. Matekovits, T. S. Bird "Width-modulated Microstrip-line based Mantle Cloaks for Thin Single- and Multiple Cylinders", *IEEE Trans. Antennas and Propagat.*, Vol. 62, No. 5, pp. 2606 - 2615, May 2014.

10. Certificate of Award - Marie Curie Fellowship, Brussels, 08/10/2015.

11. Associate Editor of the month - IEEE ACCESS Nov. 2015.

12. The paper "Equivalent-Circuit Models for Efficient Transmission and Dispersion Analyses of Multi-State Periodic Structures" published by Ladislau Matekovits, Dushmantha N. Thalakotuna, Karu P. Esselle, Stuart G. Hay, and Michael Heimlich in PIERS journal has been shortlisted for the 2016 Best Published Paper Award of the Institute of Engineers Sri Lanka NSW Chapter.

13. Micro Travel Grant - Marie Curie Alumni Association (2017), 400 Euro, to participate at the *2017 IEEE International Symposium on Antennas and Propagation/USNC-URSI National Radio Science Meeting*, July 9 - 14, 2017, San Diego, California, U.S.A..

14. American Romanian Academy of Arts and Sciences (ARA) - 2019 ARA Medal of Excellence in Science *"for outstanding contribution to electronics and telecommunications"*, at the 43rd ARA congress, June, 10-13, 2019, Thessaloniki, Greece;

15. Motohisa Kanda Award 2019: for the most cited paper of the IEEE Transactions on EMC in the past five years.

    From the mail of the EiC of the *IEEE Trans. Electromagnetic Compatibility* of March 28, 2019:

    "The paper I. Sohail, Y. Ranga, L. Matekovits, K. P. Esselle, S. G. Hay, "A single-Layer Frequency Selective Surface for Ultra-Wideband Electromagnetic Shielding", *IEEE Trans. Electromagnetic Compatibility*, Vol. 56, No. 6, pp. 1404 - 1411, Dec. 2014 and another one has received the highest citations (51) among all the papers published in the last 5 years (2014-2018)."