PERSONAL INFORMATION

Mihai DIMIAN

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Sex Male | Date of birth 09/02/1975 | Nationality Romanian

WORK EXPERIENCE

2012 - present — Vice-Rector for Scientific Activities and Professor (*Interim Rector, Feb. – Oct. 2018*)

Stefan cel Mare University, Suceava, Romania (www.usv.ro)

- Service in University Scientific Research Strategy and Coordination, Grants Management, Community Services, International Cooperation, Accreditation and Evaluation
- Teaching in Optoelectronics, Nanoelectronics, Microwave Engineering, Data Management & Analysis, Technical Research Writing and Communications
- Research in Optoelectronics, Wireless Communications, Spintronics, Nanotechnology, Semiconductor Devices, Electromagnetism, Stochastic Modeling & Simulation,

2006 – 2016 — Assistant Professor (tenure-track); Associate Professor (tenured)

Howard University, Washington DC, USA (www.howard.edu)

- Teaching Optoelectronics, Wireless Communications, Electromagnetics, Principles of Electronics
- Research in Electromagnetics, Optoelectronics, Computational Nanotechnology
- Service in Program Assessment, Faculty Search, ABET accreditation, Curriculum Development

2005 - 2006 — Post-doctoral Research Fellow

Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany (www.mis.mpg.de)

- Research in Multi-sale Modeling, Noise-assisted Phenomena

2001 - 2005 — Research Assistant

University of Maryland, College Park, USA (www.umd.edu)

- Research in Magnetic Recording Nanotechnology, Semiconductor Devices, Hysteresis Modeling
- Study in Electro-physics and Communications

2001 — Research Assistant

University of Paris - Saclay, CNRS Laboratory of Magnetism and Optics Versailles, France

- Research in Magnetic Nanostructures

EDUCATION AND TRAINING

2001 - 2005 — Doctor of Philosophy in Electrical - Electronics Engineering — ICSED 6
University of Maryland, College Park, USA

1997 - 2001 — Bachelor of Science in Physics — ICSED 5
Alexandru Ioan Cuza University, Iasi, Romania

1998 - 2000 — Master of Science in Dynamical Systems and Theoretical Mechanics — ICSED 6
Alexandru Ioan Cuza University, Iasi, Romania

1993 - 1997 — Bachelor of Science in Mathematics — ICSED 5
Alexandru Ioan Cuza University, Iasi, Romania

RESEARCH GRANT DIRECTOR

2018 - 2021 — Hybrid platform of visible light communications and augmented reality for the development of intelligent systems for active driver assistance and vehicle safety.
Romanian National Research Contract – Complex Projects for R&D Consortia, Budget: ~ 1 million Euro

2018 - 2020 — Excellence in advanced research, leadership in innovation and patenting for university and region development
Romanian National Research Contract – Projects for funding R&D Excellence, Budget: ~ 675,000 Euro,

2019 - 2020 — Development of adaptive automotive communication systems with rangefinder capabilities based on visible light technology
France – Romania Bilateral Program (Brâncuși Integrated Actions) , Budget: ~ 5000 Euro,

2017 - 2018 **Vehicle visible light communication system adaptive to different environment conditions,**
Romanian National Research Contract – Experimental Demonstrative Projects, Budget: ~ 135,000 Euro

2011 - 2014 **Analysis of noise and fluctuations induced phenomena in spintronic and semiconductor nanodevices**
Romanian National Research Contract – Romanian Young Research Teams, Budget: ~ 125,000 Euros

2008 - 2012 **Constructive and disruptive effects of noise in nonlinear systems with hysteresis**
European Framework 7 – Marie Curie Actions, Budget: 100,000 Euro,

2007 - 2009 **Dynamic and stochastic analysis of nonlinear hysteretic systems with application in data storage nanotechnology and smart nanomaterial design**
Romanian National Research Contract – Romanian Reintegration Grants, Budget: ~ 125,000 Euros

2007 **Analysis of magnetization dynamics and relaxation in magnetic memories**
Howard University Grant for Academic Excellence, Budget: $ 24,000

2005 - 2006 **Mathematical models for magnetism**
Max Planck Institute – Research Fellowship Grant, Budget: ~ 50,000 Euros

RESEARCH & DEVELOPMENT GRANT RESPONSIBLE (CO-PI)

2020 - 2021 **LHCb, forward particle production, decays of the heavy hadrons and the detector upgrade**
European Organization for Nuclear Research (CERN) - Romania research collaborations,
Partner Responsible, Coordinated Budget: ~ 100,000 Euros

2016 - 2020 **The analysis of interrelationship between gut microbiota and the host with applications in the prevention and control of type 2 diabetes**
European Regional Development Fund through Competitiveness Operational Programme,
Adjunct Director, Budget: ~ 2 million Euros

2017 - 2020 **National electronic access to scientific literature for the support Romanian research and education**
European Regional Development Fund through Competitiveness Operational Programme,
Partner Responsible, Coordinated Budget: ~ 700,000 Euros

2016 - 2019 **LHCb – studies of hadron production, heavy flavour physics and the upgrade program**
European Organization for Nuclear Research (CERN) - Romania research collaborations,
Partner Responsible, Coordinated Budget: ~ 200,000 Euros

2015 **Integrated Center for research, development and innovation in Advanced Materials, Nanotechnologies, and Distributed Systems for fabrication and control**
European Regional Development Fund through Increase of Economic Competitiveness Programme,
Scientific Director, Budget: ~ 7 million Euros

2015 **LHCb – from strangeness to b hadron physics and beyond**
European Organization for Nuclear Research (CERN) - Romania research collaborations,
Partner Responsible, Coordinated Budget: ~ 45,000 Euros

2014 - 2015 **Flexible and competitive IT&C programmes for the development of North-East region**
European Regional Development Fund through Increase of Economic Competitiveness Programme,
EURONEST Innovative Cluster, Research Project Coordinator, Budget: ~ 100,000 Euros

2014 - 2015 **Development of reconfigurable system for smart building control and management of energy sources generated by renewable sources**
European Regional Development Fund through Development of Human Resourse Programme,
Partner Responsible, Coordinated Budget: ~ 100,000 Euros

2013 - 2015 **Continuation of national electronic access to scientific literature and new ways to support and promote Romanian research system**
Romanian National R&D Contract, *Partner Responsible*, Coordinated Budget: ~ 350,000 Euros

2011 - 2016 **Bayesian Imaging and Advanced Signal Processing for Landmine and IED Detection Using GPR**
US Army Research Office, *Electromagnetics Group Coordinator*, Total Project Budget: ~ $ 2,5 million

RESEARCH & DEVELOPMENT GRANT MEMBER

2001 - present **Involved in additional 20 research and development grants**
Funded by various national and international agencies for USA, EU, France and Romania

COMMUNICATION SKILLS

Languages: Romanian (*native*), English (*fluent*), French (*intermediate*)

Experience: Director of *Communications and Public Relations Department* at University of Suceava (2011 – 2012)

Books and articles writer, Journals editing and reviewing, Teaching and Public presentations

PROFESSIONAL SERVICE

2016 - 2020 *President* of Electronics, Telecommunications, and Nanotechnology Commission

Romanian Ministry of Education, National Council for Attestation of Academic Titles, Diplomas and Certificates

2017 - 2019 *Member* of National Research Council and *President* of Publisher Accreditation Commission

Romanian Ministry of Research, National Research Council

2016 - 2018 *Member of National Council for Statistics and Prognoses in Higher Education*

Romanian Ministry of Education

2009 - present *Editorial activities*

Associate Editor – Advances in Electrical and Computer Engineering (since 2009), *JCR Impact factor = 0.699*

Lead Guest Editor – Journal of Advanced Transportation (2018), *JCR Impact factor = 1.102*

Lead Guest Editor – Physica B: Condensed Matter, vol. 486 (2016), *JCR Impact factor* = 1.453

Lead Guest Editor – Journal of Physics: Conference Series, Volume 585 (2015) *indexed Web of Science*

Guest Editor – Journal of Physics: Conference Series, Volume 727 (2016) *indexed Web of Science*

SELECTED PUBLICATIONS

Scholarly Books

[1] **M. Dimian** and P. Andrei, "Noise-driven phenomena in hysteretic systems," Springer Publisher, New York, U.S.A., 233 pages, 2014, ISBN 978-1-4614-1373-8

[2] **M. Dimian**, "Stochastic Aspects of Hysteresis" (in Romanian), Mediamira Publisher, Cluj Napoca, Romania, 170 pages, 2010, ISBN 978-973-713-281-9

[3] **M. Dimian**, "Nonlinear spin dynamics and ultra-fast precessional switching," ProQuest Information and Learning, Ann Arbor, U.S.A., 141 pages, 2005, ISBN: 0-542-18364-1

Journal Publications

[1] **M. Dimian**, L. Chassagne, P. Andrei, P. Li, "Smart Technologies for Vehicle Safety and Driver Assistance", Journal of Advanced Transportation, vol. 2019, article ID: 1980363, *editorial*, (2019), ISI impact factor 1.983

[2] **M. Dimian**, A. Căilean, A. Done. S. Vlad, P. Andrei, "Visible light communication sensors with adaptive hysteretic circuits for automotive applications", Physica B – Condensed Matter, col. 549, pg. 31-34 (2018), ISI impact factor 1.874

[3] A. Cailean, **M. Dimian**, Current Challenges for Visible Light Communications Usage in Vehicle Applications: A Survey, IEEE Communications Surveys and Tutorials, vol 19 (4), pg. 2681-2703 (2017), ISI impact factor 22.973

[4] A. Cailean, **M. Dimian**, Impact of IEEE 802.15.7 Standard on Visible Light Communications Usage in Automotive Applications, IEEE Communications Magazine, vol. 55 (4), pg: 169-175 (2017), ISI Impact factor: 10.435

[5] A. Cailean, **M. Dimian**, "Towards Environmental-Adaptive Visible Light Communications Receivers for Automotive Applications: A Review," IEEE Sensors Journal, vol. 16, no. 9, pp. 2803-2811, 2016, ISI Impact factor: 1.762.

[6] A. Cailean, **M. Dimian,** L. Chassagne, B. Cagneau, V. Popa, "Novel DSP Receiver Architecture for Multi-Channel Visible Light Communications in Automotive Applications," IEEE Sensors Journal, vol. 16, no. 10, pp. 3597-3602, 2016, ISI Impact factor: 1.762

[7] I. Gudyma, V. Ivashko, **M. Dimian**, "Pressure effect on hysteresis in spin-crossover solid materials," Physica B – Condensed Matter, vol. 486, pp. 40-43, 2016. ISI Impact factor: 1.319

[8] I. Gudyma, A. Maksymov, **M. Dimian**, "Hysteretic behavior of spin-crossover noise driven system," Physica B – Condensed Matter, vol. 486, pp. 44-47, 2016. ISI Impact factor: 1.319

[9] A. Cailean, B. Cagneau; L. Chassagne; **M. Dimian**; V. Popa, "Novel Receiver Sensor for Visible Light Communications in Automotive Applications," IEEE Sensors Journal, vol.15, no.8, pp.4632-4639, 2015, ISI Impact factor: 1.762.

[10] **M. Dimian**, Andrei, P.; Mehta, M.; Idubor, OA, "Thermal relaxation in magnetic multi-layer materials with mixed hysteretic behaviour," Journal of applied physics, vol. 117 (17), art. no.: 17A745, 2015, ISI Impact factor: 2.183

[11] D. Chiruta, C. M. Jureschi, J. Linares, A. Graur, **M. Dimian**, A. Rotaru, "Analysis of Architecture Effect on Hysteretic Behavior of 3-D Spin Crossover Nanostructures," IEEE Transactions onf Magnetics, vol. 50, no. 11, pp. 1-4, 2014, ISI Impact factor: 1.386

[12] **M. Dimian**, P. Andrei, M. Grayson, "Hybrid models of hysteresis for mixed hysteretic loops in heterogeneous magnetic materials"", Journal of Applied Physics, 115, 2014, art. no. 17D103. ISI Impact factor: 2.21

Journal Publications (continued)

[13] I. Gudyma, A. Maksymov, **M. Dimian**, "Stochastic resonance in bistable spin-crossover compounds with light-induced transitions," Physical Review E, vol. 90 (5), art. no. 052135, 2014, ISI Impact Factor: 2.313

[14] D. Chiruţă, J. Linares, Y. Garcia, **M. Dimian**, P.R. Dahoo, "Analysis of multi-step transitions in spin crossover nanochains", Physica B: Condensed Matter, vol. 434, pp. 134-138, 2014. ISI Impact Factor: 1.327.

[15] P. Andrei, M. Mehta, **M. Dimian**, "Modeling mixed clockwise and counter-clockwise hysteresis in multi-layer materials by using a generalized Jiles-Atherton model", Physica B: Condensed Matter, vol. 435, pg. 156-159, 2014. ISI Impact factor: 1.327.

[16] D. Chiruţă, J. Linares, P.R. Dahoo, **M. Dimian**, "Influence of pressure and interactions strength on hysteretic behavior in two-dimensional polymeric spin crossover compounds", Physica B: Condensed Matter, vol. 435, pg. 76-79, 2014. ISI Impact factor: 1.327

[17] D. Chiruţă, **M. Dimian**, Y. Alayli, J. Linares, Y. Garcia – "Role of Edge Atoms in the Hysteretic Behaviour of 3D Spin Crossover Nanoparticles Revealed by an Ising-Like Model", European Journal of Inorganic Chemistry, no. 29, pp. 5086-5093, 2013. ISI Impact Factor: 3.12.

[18] I. Gudyma, A. Maksymov, **M. Dimian**, "Stochastic kinetics of photoinduced phase transitions in spin-crossover solids"", Physical Review E, vol. 88, 2013, art. 042111. ISI Impact Factor: 2.313.

[19] P. Andrei, **M. Dimian**, "Clockwise Jiles-Atherton hysteresis model", IEEE Transactions on Magnetics, 49, 7, 2013, ISI impact Factor: 1.363.

[20] D. Chiruţă, J. Linares, Y. Garcia, P.R Dahoo, **M. Dimian** – "Analysis of 3D Spin Crossover Compounds hysteretic behavior using an Ising like model", European Journal of Inorganic Chemistry 21, 3601-3608, 2013, ISI Impact Factor: 3.12.

[21] **M. Dimian**, C. Lefter, "Analysis of Magnetization Switching via Vortex Formation in Soft Magnetic Nanoparticles," *Advances in Electrical and Computer Engineering*, vol. 13, no. 1, pg. 53-58, 2013, ISI Impact Factor: 0.555.

[22] D. Chiruta; J. Linares, **M. Dimian**, *et al.,* "Size Effect and Role of Short- and Long-Range Interactions on 1D Spin-Crossover Systems within the Framework of an Ising-Like Model," *European Journal of Inorganic Chemistry*, 951-957, Feb 2013, ISI impact factor: 3.045

[23] **M. Dimian**, O. Manu, P. Andrei, "Influence of noise color on stochastic resonance in hysteretic systems" *Journal of Applied Physics* 111, 07D132 (2012), ISI impact factor: 2.072.

[24] D. Chiruţă, J. Linares, P.R. Dahoo and **M. Dimian** – "Analysis of long-range interaction effects on phase transitions in two-step spin-crossover chains by using Ising-type systems and Monte Carlo entropic sampling technique", *Journal of Applied Physics*, vol. 112, art. no. 074906, pg. 1-7 (2012), ISI impact factor: 2.072.

[25] O. Manu, **M. Dimian**, A. Graur, "Radiation Pattern Analysis and Advanced Phase Shifter Development for designing Phased Smart Antenna Arrays", *Elektronika ir elektrotechnika*, vol. 17 (1) , p.: 105-110 (2012), ISI impact factor: 0.913

[26] A. Gindulescu, A. Rotaru, J. Linares, **M. Dimian**, J. Nasser, "Metastable states at low temperature in spin crossover compounds in the framework of the atom-phonon coupling model", Polyhedron, vol. 30, issue: 18, pg.: 3186-3188 (2011), ISI impact factor: 2.067

[27] **M. Dimian**, P. Andrei, O. Manu, V. Popa, "Comparison of Noise-Induced Resonance Characteristics for Different Models of Hysteresis," IEEE Transactions on Magnetics, Vol. 47, Issue: 10, pg. 3825-3828 (2011) ISI impact factor: 1.467

[28] I.M. Ciurus, **M. Dimian**, A. Graur, "LED-photoresistor mechanical-electrical optoisolator transducers," Journal of Optoelectronics and Advanced Materials, Vol. 13, Issue: 7-8, pg. 1037-1044 (2011) ISI impact factor: 0.39

[29] **M. Dimian**, P. Andrei, "Noise induced resonance phenomena in stochastically driven hysteretic systems," Journal of Applied Physics, Vol. 109 (7), Art. No. 07D330 (2011) ISI impact factor: 2.176

[30] M. Paez Espejo, A. Gîndulescu, J. Linares, J. Nassser, and **M. Dimian**, "Phase diagram of 2D spin crossover systems using the atom – phonon coupling model", Journal of Applied Physics, vol. 109, no. 07B102 (2011), ISI impact factor: 2.072

[31] **M. Dimian**, A. Gîndulescu, and P. Andrei, "Influence of noise temporal correlation on magnetization spectra and thermal relaxations in soft magnetic materials", IEEE Transactions on Magnetics, vol. 46 (2), pg. 266-269 (2010), ISI impact factor: 1.061.

[32] A. Gîndulescu, A. Rotaru, J. Linares, **M. Dimian** and J. Nasser, "Excited metastables electronic spin states in spin crossover compounds studies by atom-phonon coupling model", Journal of Applied Physics, vol. 107, art. no. 09A959 (2010), ISI impact factor: 2.072.

[33] I.M. Ciurus, **M. Dimian** and A. Graur, "LED-phototransistor linear mechanical-electrical optoisolator transducer", Optoelectronics and advanced materials – Rapid communications, vol. 4, no. 9, pg. 1366-1374 (2010), ISI impact factor: 0.451.

[34] I.M. Ciurus, **M. Dimian** and A. Graur, "The Analysis of the Polaroid Optocoupler Mechanical-electrical Sensor", Advances in Electrical and Computer Engineering, vol. 10, no. 4, pg. 29-34 (2010), ISI impact factor: 0.501

[35] **M. Dimian**, A. Adedoyin, A. Gîndulescu, P. Andrei "Modeling and simulation of noise induced phenomena in complex hysteretic systems," IEEE Transactions on Magnetics, vol. 45, no. 11, pg. 5231-5234 (2009); ISI impact factor: 1.061.

[36] A. Adedoyin, **M. Dimian**, P. Andrei, "Analysis of Noise Spectral Density for Phenomenological Models of Hysteresis, IEEE Transactions on Magnetics, vol. 45, no. 10, pg. 3934-3937 (2009); ISI impact factor: 1.061.

Journal Publications (continued)

[37] **M. Dimian**, A Gîndulescu, C. Acholo, "Minimum field requirements for spin-polarized current assisted switching of magnetization in nanostructure with uniaxial anisotropy," Advances in Electrical and Computer Engineering, vol. 9, no. 1, pp. 3-7 (2009), ISI impact factor: 0.501

[38] **M. Dimian**, E. Coca, V. Popa, Analytical and experimental analysis of noise passage through hysteretic systems, Journal of Applied Physics, vol. 105, no. 7, art. no. 07D515 (2009), ISI impact factor: 2.072.

[39] **M. Dimian**, "Extracting energy from noise: noise benefits in hysteretic systems," NANO, vol. 3, no. 5, pp. 391-397 (2008), ISI impact factor: 1.1.

[40] **M. Dimian**, I. Mayergoyz, G. Bertotti, si C. Serpico "Multiple scale analysis of magnetization dynamics driven by external fields" Journal of Applied Physics, vol. 99 (8), art. nr. 08G104 (2006), ISI impact factor: 2.316.

[41] **M. Dimian**, I. Mayergoyz, "Influence of surface anisotropy on magnetization precessional switching in nanoparticles," Journal of Applied Physics, vol. 97 (10), art. nr. 10J302 (2005), ISI impact factor: 2.316

[42] I. Mayergoyz, **M. Dimian**, G. Bertotti, si C. Serpico, "Critical fields and pulse durations for precessional switching of perpendicular media," Journal of Applied Physics, vol. 97 (10), art. nr. 10E509 (2005), ISI impact factor: 2.498

[43] I. Mayergoyz, **M. Dimian**, G. Bertotti, si C. Serpico, "Inverse problem approach to precessional switching in perpendicular media," Journal of Applied Physics, vol. 97 (10), art. nr. 10A703 (2005), ISI impact factor: 2.498

[44] **M. Dimian**, I. Mayergoyz, "Spectral density analysis of nonlinear hysteretic systems," Physical Review E, vol. 70 (4), art. nr. 046124 (2004), ISI impact factor: 2.352

[45] **M. Dimian**, I. Mayergoyz, "Spectral noise density of the Preisach model," IEEE Transactions on Magnetics, vol. 40 (4), pp. 2134 (2004), ISI impact factor: 0.837

[46] I. Mayergoyz, **M. Dimian**, G. Bertotti si C. Serpico, "Inverse problem approach to the design of magnetic field pulses forprecessional switching," Journal of Applied Physics, vol. 95 (11), pp. 7004 (2004), ISI impact factor: 2.255

[47] P. Andrei, **M. Dimian**, C. Krafft, I. D. Mayergoyz, D. I. Mircea, R. Rojas, "Anisotropy characterization of garnet films by using VSM measurements," Journal of Applied Physics, vol. 93 (10), pp. 7065 (2003), ISI impact factor: 2.171

[48] I. Mayergoyz, P. Andrei, **M. Dimian**, "Nonlinear magnetostatic calculations based on fast multipole method," IEEE Transactions on Magnetics, vol. 39 (3), pp. 1103 (2003), ISI impact factor: 1.006

[49] I. Mayergoyz, **M. Dimian**, "Analysis of spectral noise density of hysteretic systems driven by stochastic processes," Journal of Applied Physics, vol. 93 (10), pp. 6826 (2003), ISI impact factor: 2.171

[50] G. Bertotti, I. Mayergoyz, C. Serpico, **M. Dimian**, "Comparison of analytical solutions of Landau-Lifshitz equation for damping and precessional switching," Journal of Applied Physics, vol. 93 (10), pp. 6811 (2003), ISI impact factor: 2.171

[51] H. Kachkachi, **M. Dimian**, "Hysteretic properties of a magnetic particle with strong surface anisotropy," Physical Review B, vol. 66 (17), art. nr. 174419 (2002), ISI impact factor: 3.327

[52] **M. Dimian**, H. Kachkachi, "Effect of surface anisotropy on the hysteretic properties of a magnetic particle" Journal of Applied Physics, vol. 91 (10), pp. 7625 (2002), ISI impact factor: 2.281

Patent Requests

[1] A. Cailean, **M Dimian**, A. Done, E.D. Olariu, L.N. Cojocariu, "Smart traffic lights with data transmission capacity" IPC: G08G1/095, Publication info: RO132689 (A0), 2018, Priority date: November 28, 2017

[2] G. Gutt, V. Popa, **M. Dimian**, "Automatic focusing system for Raman spectro-microsope", *European Patent Office* Request, nr. A2017/00771 Priority date: September 28, 2017

[3] G. Gutt, V. Popa, **M. Dimian**, "Microscope objective with automatic focusing", *European Patent Office* Request, nr. A2017/00661, Priority date: September 15, 2017

[4] D. Cernușca, **M. Dimian**, M. Poienar, M. Milici, D.S: Pata, "Electromechanical vacuum and pressure micropump", IPC: F04B9/00, Publication info: RO132827 (A2), 2018, Priority date: March 14, 2017

[5] E. Olariu, **M. Dimian**, M. Prelipceanu, "Solar actuator," IPC F03G6/00, F24J2/54, Publication info: RO131745 (A2), 2017, Priority date: September 24, 2015

Statistical Data

Database	*Number of Publications*	*Number of Citations*	*Hirsch Index*
Google Scholar	**103**	**1106**	**17**
Web of Science	**86**	**554**	**13**
Scopus	**99**	**760**	**15**

SELECTED AWARDS

"Bologna Professor" Award – National Association of Student Organization from Romania (2016 & 2007)
"Person of the Time" Award for Education and Research (2015) - Romanian "The Time" Magazine
"Constantin Miculescu" Prize of Romanian Academy (2014)
Romanian Researcher of the Year - 3rd Prize, Dinu Patriciu Foundation (2009)
Faculty of the Year, Student Council, College of Engineering and Architecture, Howard University (2008)
Service Award, ECE Department, Howard University (2008)
Distinguished Research Assistant, University of Maryland, College Park (2002, 2003, 2004)