

VIRGIL-FLORIN DUMA

Curriculum Vitae

<https://www.webofscience.com/wos/author/record/B-3031-2010>

https://www.researchgate.net/profile/Virgil-Florin_Duma



EDUCATION

- **Habilitation** in Mechanical Engineering, Mechatronics and Robotics (Ministry Order 166/07.04.2014). Thesis: Optomechatronic Modulators: Choppers, Attenuators and Scanners. Analysis and Design-defended Oct. 2013 (following the original LEN 1/2011 standards) at the *Polytechnic Univ. of Bucharest (UPB)*, Romania. Commission: President, Prof. Valentin I. Vlad (President of the Romanian Academy); Members, Prof. Nicolae Puscas (UPB), Prof. Jean-Pierre Huignard (Institute Lavoisier, France), Dr. Giuliano Perrone (Univ. of Turin, Italy);
- **Postdoctoral Fulbright Senior Stage** in Optics (Applied Physics), at *The Institute of Optics, Univ. of Rochester*, NY, USA; Supervisor, Prof. Jannick P. Rolland (USA); 2009-2010;
- **PhD** in Engineering Sciences, *cum laude* (Ministry Order 5285/28.12.2001), *Polytechnic Univ. of Timisoara* (Romania). Thesis: Contributions to the Analysis and Design of Scanning Systems; Supervisor, Prof. Dan Perju; 1994-2001;
- **Diploma Engineer** (equivalent to **M.Sc.**) in Mechanical Engineering (Fine Mechanics & Optics), *valedictorian* (admitted & graduated top of the class - approx. 140 students), major in Measuring and Control Apparatuses (30.07.1991), *Polytechnic Univ. of Timisoara* (Romania), GPA **9.84/10**, with 10/10 for the Diploma thesis: Three-chromatic Colorimeter with Mix Synthesis; Supervisor, Prof. Ioan Mihalca; 1986-1991;
- Military Service: Sept. 1985-June 1986;
- *Moise Nicoara National College for Mathematics and Physics*, Arad (Romania), graduated with the first GPA at the maturity exam per college: **9.66/10**, 1981-1985.

SOCIAL STATUS

Born: July 4, 1967 in Arad, Arad County, Romania;
Nationality and citizenship: Romanian. Religion: Christian Ortodox;
Married: since 1999; two children.

LANGUAGES

- **English:** fluent; 1994 TOEFL Exam Score **627/640**;
- **Romanian:** native; **French:** very good; **Italian:** beginner.

TEACHING & RESEARCH (33.5 years of experience): Measuring Systems; Optomechatronics & Optical Systems; Biomedical Imaging; Mechanisms & Theory of Machines; Quality Engineering.

POSITIONS

- **Professor**, 2025-Present, Dept. of Measurements and Optical Electronics, [Faculty of Electronics, Telecommunications, and Information Technologies](#), *Polytechnic Univ. of Timisoara* (Romania);
- **Researcher**, 2024-Present, Center of Research and Development for Mechatronics (CETTI), *National University of Science and Technology POLITEHNICA Bucharest* (Romania);
- **Adjunct Professor (for Optics Master Courses-in English)**, 2016-Present, Faculty of Dental Medicine, *Victor Babes Univ. of Medicine and Pharmacy Timisoara* (Romania); [Emdola Master](#);
- **Researcher**, 2015-Present, Research Center in Dental Medicine Using Conventional and Alternative Technologies, Department of Prostheses Technology and Dental Materials, Faculty of Dental Medicine, "*Victor Babes*" *University of Medicine and Pharmacy of Timisoara* (Romania);
- **Adjunct Professor (PhD Advisor)**, 2014-Present, *Polytechnic Univ. of Timisoara* (Romania); http://www.upt.ro/2018-2019/admitere/doctorat/2019_Duma_Virgil_Florin.pdf;
- **Adjunct Professor (for Master Courses-in English)**, 2014-2015, Faculty of Physics, *West Univ. of Timisoara* (Romania);

- **Visiting Scientist**, March 1, 2013–Present, **Fulbright Senior Research Fellow**, Sept. 25, 2009–June 20, 2010 (sabbatical year), [ODALab](#), [The Institute of Optics](#) (#1 in Optics and #4 in Applied Physics in the USA), [Univ. of Rochester, NY \(ODALab\)](#), Host: [Prof. Jannick P. Rolland](#) (USA);
- **Ministry Counselor for scientific research**, March–May 2012;
- **Honorary Professor** & member of the Elliot College, 2020–Present, **Visiting Senior Research Fellow**, 2009–2019, at the School of Physical Sciences ([People - Applied Optics Group - Research at Kent](#)), [Univ. of Kent](#), Canterbury, Host: [Prof. Adrian Gh. Podoleanu](#) (UK);
- **Head and founder of the 3OM Research Group** (in *Opto-Mechatronics, Opto-Mechanics and Optical Metrology*), <http://3om-group-optomechatronics.ro/> and of the Laboratories of Optomechatronics and Biomedical Photonics at the *Aurel Vlaicu Univ. Arad*; <https://erris.gov.ro/3OMGroup>, 2008–Present;
- **Adjunct Professor**, 2025–Present, **Professor**, 2006–2025, **Associate Professor**, 2002–2006, **Lecturer**, 1999–2002, Dept. of Product Design, Faculty of Engineering, *Aurel Vlaicu Univ. of Arad* (Romania);
- **Lecturer**, 1997–2001, **Teaching & Research Assistant**, 1991–1997, Dept. of Mechatronics (Chair of Fine Mechanics & Optics), Faculty of Mechanical Engineering, *Polytechnic Univ. of Timisoara* (Romania);

OTHER POSITIONS

- **2024–Present, Editorial Board Member** of *Sensors & Transducers*, IFSA, ISSN: 2306-8515, e-ISSN 1726-5479 (https://sensorsportal.com/st_editorial_board.html);
- **2024–2025, Guest Editor** of a Special Issue (SI) of *J. of Clinical Medicine* (eISSN 2077-0383), **IF 3/2023, Q1**, [Interdisciplinary Approach on the Oral Cavity Management Due to Musculoskeletal Conditions](#);
- **2023–2024, Guest Editor** of a SI of *Sensors* (ISSN 1424-8220), **IF 3.4/2023, Q2**, [Laser Scanning and Applications](#);
- **2021–Present, Editorial Board Member** (<https://www.mdpi.com/materials/editorialboard>) of *Materials* (ISSN 1996-1944), **IF 3.1/2023, Q1**;
- **2021–Present, Editorial Board Member** (<https://www.mdpi.com/photonics/editorialboard>) of *Photonics* (ISSN 2304-6732), **IF 2.1/2023, Q2**; **2020, Section Board Member** of [Optoelectronics and Optical Materials](#);
- **2021–Present, Topical Advisory Panel Member** of *Sensors* (ISSN 1424-8220), **IF 3.9, Q2**;
- **2021, Editorial Board Member** of [Frontiers in Bioscience-Landmark \(imrpess.com\)](#) (ISSN 1093-4715), **IF 3.1, Q2**, <https://www.fbscience.com/Landmark/editorial-board>;
- **2020–Present, Guest Editor** of a Topical Collection of *Medicina-Lithuania* (ISSN 1648-9144), **IF 2.4/2023, Q1**, [New Concepts for Dental Treatments and Evaluations](#);
- **2020–2024, Guest Editor** of SIs of *Applied Sciences* (ISSN 2076-3417), **IF 2.5/2023, Q1**, [Recent Advances in Optomechatronics](#); [Progress in 3OM: Opto-Mechatronics, Opto-Mechanics, and Optical Metrology](#);
- **2020–Present, Guest Editor** of SIs of *Photonics* (ISSN 2304-6732), **IF 2.1/2023, Q2**, [Advances in 3OM: Opto-Mechatronics, Opto-Mechanics, and Optical Metrology](#); [Recent Advances in Optical Coherence Tomography](#); [Advances in 3OM: Opto-Mechatronics, Opto-Mechanics, and Optical Metrology, 2nd Edition](#)
- **2019–Present, Guest Editor** of a Topical Collection of *Materials* (ISSN 1996-1944), **IF 3.1/2023, Q1**: [Materials Investigations in Mechanical Systems](#);
- **2019–Present, Guest Editor** of SIs of *Materials* (ISSN 1996-1944), **IF 3.1/2023, Q1**: [Biocompatible Materials Investigated with Optical Methods](#); [Advanced Optical Methods for Materials Sciences](#); [Biomedical Materials Investigated with Optical Methods](#);
- **2016–Present, Editorial Board Member** of *J of Adhesion Sci and Technology* (Taylor & Francis), **IF 2.3, Q2**;
- **2019–Present, OPTICA Visiting Lecturer** (Optical Society of America, USA, <https://www.optica.org/>);
- **2014–Present, SPIE Visiting Lecturer** (Int. Soc. for Optics and Photonics, USA, <https://spie.org/>);
- **2016–2018, 2020–2024, Member of CNATDCU** (Romanian National Council for the Validation of University Titles, Diplomas, and Certificates)-[Commission of Mechanical Engineering, Mechatronics, and Robotics](#);
- **2016–2017, Member of CNCS** (National Research Council)-<http://www.cncs-nrc.ro/stiinte-ingineresti/>;
- **2013–Present, Director**, *Research Center in Mechanical Engineering, Aurel Vlaicu Univ. Arad*;
- **2008–2011, Vice Dean for Research**, Faculty of Engineering, *Aurel Vlaicu Univ. Arad*;
- **2005–2009, Editor-in-Chief** (and founder), *Sc. and Tech. Bull. of the Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.*, www.uavsb.xhost.ro, recognized by the Romanian National University Research Council since 2006;
- **2004–2006: Scientific Secretary**, Dept. of Product Design, *Aurel Vlaicu Univ. of Arad*;
- **1999–Present, Head of the Mechanisms Laboratory** at the *Aurel Vlaicu Univ. of Arad*;

SCIENTIFIC PAPERS (*h-index*=25, *ISI WoS*) https://www.researchgate.net/profile/Virgil-Florin_Duma

336 published papers (67 as sole author, 59 as first, and 210 as co-author) - from which 196 in ISI WoS:

69 in WoS peer-reviewed journals with impact factor (ΣIF) > 146; 55 in other peer-reviewed journals;
125 proceedings papers indexed in ISI Web of Science; 78 in other conference proceedings.

2 Romanian (OSIM) patents awarded + 2 patents applications under review

<https://www.webofscience.com/wos/author/record/B-3031-2010>

<https://www.scopus.com/authid/detail.uri?authorId=9839230700> (*h-index*=26, *Scopus*)

<https://orcid.org/0000-0001-5558-4777>

<https://scholar.google.com/citations?user=gBRLlfcAAAAJ&hl=en&oi=ao> (*h-index*=28, *GS*)

<https://www.brainmap.ro/virgil-florin-duma>

> 45 Invited Lectures at conferences or universities

+ 110 oral presentations or posters at conferences without published proceedings.

CITATIONS (Mar. 2025): >758 in ISI Web of Science; >790 in Google Scholar (both excluding self-citations).

BOOKS & BOOKS CHAPTERS

2 scientific books / monographs (sole author);

2 university courses (co-author);

9 books as editor (2 laboratory books, 5 ISI Proc., 2 Proc.);

3 laboratory books (sole or co-author);

INVITED LECTURES & PRESENTATIONS

➤ At International Conferences

- Optical Coherence Tomography (OCT)-based beneath-the-surface investigations in ceramics sintering: modeling for the most relevant characteristic parameter, *COST CA21159 PhoBioS WG3 Seminar on-line*, March 7, **2025**; (Invited Presentation);
- A Decade of Laser Galvoscaning Optimization for Optical Coherence Tomography, *16th Int. Symposium on Electronics and Telecommunications* (<https://isetc.upt.ro/>), Timisoara (Romania), Nov. 8-9, **2024**; (Keynote);
- Study of symmetries of scan patterns generated by laser scanners with a pair of rotational Risley prisms, *Proc. SPIE*, Vol. 13144, 131440P, *Infrared Remote Sensing and Instrumentation XXXII (SPIE Optics and Photonics)* [ISI], San Diego, CA (USA), Aug. 18-22, **2024**; <https://doi.org/10.1117/12.3029947>; (Invited Paper);
- Optimization of X-ray radiography (i.e., the gold standard of investigations in Dental Medicine) by using Optical Coherence Tomography (OCT), *COST CA21159 PhoBioS Workshop on-line*, July 5, **2024**; (Invited Presentation);
- Optical Coherence Tomography vs. X-ray imaging for biomedical applications, *10th Int. Conf. on Antennas and Electromagnetic Systems (AES 2024)*, Rome (Italy), June 25-28, **2024**; (Invited Paper, [link](#));
- Analysis, design, and applications of polygon mirror-based laser scanners, *4th Int. Adv. Conf. on Condensed Matter & Low Temp. Phys. (CMLTP 2024)* [ISI], Kharkiv (Ukraine), June 3-7, **2024**; (Plenary, on-line);
- Optical Coherence Tomography (OCT)-seeing beneath the (sample) surface, *COST CA21159 PhoBioS Workshop on Photonic structure in Arctic environment (Training school Spitsbergen – lightbiosurface.com)*, University Centre in Svalbard (UNIS), Denmark, April 23-25, **2024**; (Invited Lecture, on-line);
- Theory, simulations and experiments of laser scanning with rotational Risley prisms, *3rd Int. Adv. Conf. on Condensed Matter & Low Temp. Phys. (CMLTP)* [ISI], Kharkiv (Ukraine), June 5-11, **2023**; (Keynote);
- Symmetry aspects of patterns produced by optical scanners with Risley prisms, *9th Int. Conf. on Antennas and Electromagnetic Systems (AES)*, Torremolinos (Spain), June 5-8, **2023**; (Invited Paper);
- Investigations and Modeling of the Sintering of Ceramic Dental Crowns, *9th Int. Conf. on Lasers in Medicine & 3rd Int. Congress Lasers in Dentistry*, Oradea (Romania), May 25-27, **2023**; (Invited Presentation);
- 1D and 2D galvanometer scanning: Multi-parameter analysis and optimization, *Proc. SPIE* 12233, 122330H, *Infrared Remote Sensing and Instrumentation XXX (SPIE Optics and Photonics)* [ISI], San Diego, CA (USA), Aug. 21–26, **2022**, <https://doi.org/10.1117/12.2634221>; (Invited Presentation);
- Laser scanners with rotational Risley prisms: A graphical method to determine and study exact scan patterns, *8th Int. Conf. on Antennas and Electromagnetic Systems (AES)*, Marrakesh (Morocco), May 24-27, **2022**, (Invited Paper); https://aes22.aesconference.org/files/aes22_proceedings.pdf;
- Optical Coherence Tomography versus Scanning Electron Microscopy in the Assessment of Metallic Fractures, *Mexican Optics and Photonics Meeting*, on-line, Nov. 18-20, **2021**; (Invited Paper);
- A novel, graphical method to analyze optical scanners with Risley prisms, *Infrared Remote Sensing and Instrumentation XXIX (SPIE Optics + Photonics)* [ISI], San Diego, USA, Aug. 1–5, **2021**; (Invited Paper); [doi](#)
- Optical choppers with disks, with an insight in biomedical applications, *2nd Int. Advanced Conf. on Condensed Matter & Low Temp. Physics (CMLTP-Speakers)* [ISI], Kharkiv (Ukraine), June 6-12, **2021**; (Plenary Lecture);
- Advances in laser scanning technology for optical coherence tomography, *X Iberoamerican Optics Meeting/XIII Latinamerican Meeting on Optics, Lasers and Applications/Mexican Optics and Photonics Meeting (RIAO-OPTILAS)*, [link](#), Cancun (México), Sept. 22-27, **2019**; (Invited Paper);
- Optical Choppers: Classical, Eclipse, and with Rotational Shafts, *6th Advanced Electromagnetics Symposium (AES)*, <https://AES19/invited>, Lisbon (Portugal), July 24-26, **2019**; (Invited Paper);

- Scanning systems: from industrial to high-end biomedical applications using OCT, *IX Int. Conf. for Professionals & Young Scientists ICPYS-LTP*, Kharkiv (Ukraine), June 4-8, **2018**; (SPIE Invited Lecture);
- Theoretical and experimental approaches on galvanometer scanners for high-end biomedical imaging applications, *5th Adv. Electromagnetics Symp.*, Incheon (South Korea), July 27, **2017** (Invited Presentation);
- Laser scanning optimization for high-end applications in biomedical imaging, *SPIE-SRLS 7th Int. Conf. on Lasers in Medicine* [ISI], Timisoara (Romania), July 14, **2017**; (Invited Paper);
- Scanning systems: from industrial to high-end biomedical applications (SPIE Invited Lecture – at *Optics & Photonics Applications (OPA) Conf.*), *Univ. of Guanajuato*, Salamanca (Mexico), Sept. 2, **2015**;
- Handheld scanning probes for OCT: Developments, applications and perspectives, *World Federation of Lasers in Dentistry–European Division 5th Congress & SRLS 6th Int. Conf. Lasers in Medicine* [ISI], Bucharest (Romania), May 8, **2015**, in *Proc. SPIE*, [doi](#); (Invited Presentation);
- Scanning in biomedical imaging: from classical devices to handheld heads and micro-systems, *SRLS-SPIE 5th Int. Conf. Lasers in Medicine* [ISI], Timisoara (Romania), Sept. 21, **2013**, [DOI](#); (Invited Paper);
- Laser scanning: from industrial to biomedical applications, *RIAO-OPTILAS (VIII Iberomamerican Opticas Meeting & XI Latinamerican Meeting on Optics, Lasers and Applications)*, Porto (Portugal), July 23, **2013** - *Proc. SPIE*, <http://dx.doi.org/10.1117/12.2025220>; (Invited Paper);
- Mathematical functions of a 2-D scanner with oscillating elements, *9th Conf. on Dynamic Systems Theory and Applications*, Łódź (Poland), Dec. 18, **2007**; [10.1007/978-1-4020-8778-3_22](https://doi.org/10.1007/978-1-4020-8778-3_22); (Invited Paper);
 - **At International Universities**
- Optical Coherence Tomography Investigations in Dental Medicine, *Applied Optics Group, Univ. of Kent, Canterbury* (UK), Feb. 26, **2020**; (Invited Seminar), <https://research.kent.ac.uk/applied-optics/aog-seminars/>;
- Devices and Systems for Biomedical and Industrial Applications of OCT, *Universidad de Guadalajara* (<http://www.cucei.udg.mx/>), Jalisco (México), Nov. 28, **2018**; (Magistral Conference);
- Dental Medicine Applications of Optical Coherence Tomography (OCT); OCT versus SEM in the study of metallic fractures for forensic investigations, *Universidad de Guadalajara* (<http://www.cucei.udg.mx/>), Jalisco (México), Nov. 29-30, **2018**; (Two SPIE Invited Lectures);
- 1D and 2D Galvanometer Scanning and Handheld Probes in OCT; Risley Prisms, Polygon Scanners, and Other Devices for OCT - and More..., *Universidad de Guadalajara* (<http://www.cucei.udg.mx/>), Jalisco (México), Nov. 28-29, **2018**; (Two Tutorials and Workshops, 3h each);
- Scanning patterns in imaging, *Applied Optics Group (School of Physical Sciences), Univ. of Kent, Canterbury* (UK), Aug. 10, **2018**; (Invited Seminar), <https://research.kent.ac.uk/applied-optics/aog-seminars/>;
- Laser scanners for high-end biomedical imaging, *City Univ. of New York, NY* (USA), Oct. 13, **2017**; (Invited Seminar – Dept. of Mechanical Engineering);
- Handheld Probes and Galvoscaning in OCT. On-going Industrial and Biomedical Applications, Applied Optics Group, *Univ. of Kent, Canterbury* (UK), Feb. 20, **2015**; (Invited Seminar);
- Scanning in Optical Coherence Tomography, *National Univ. of Ireland (NUI), Galway*, Nov. 25, **2014**; http://tomi.nuigalway.ie/SPIE_NUIG_UL/spie_events.html (SPIE Invited Lecture);
- 1D and 2D Scanning Systems in Biomedical Imaging, School of Physical Sciences (Applied Optics Group), *Univ. of Kent, Canterbury* (UK), Nov. 7, **2013**; (Invited Presentation);
- Galvanometer-based Scanners in Optical Coherence Tomography (OCT), *City Univ. of New York* (USA), Febr. 14, **2013**; (Invited Seminar-Dept. of Mechanical Engineering);
- Optical Engineering: Scanners, Choppers, Lenses, and Much More. A Mathematical Approach, *Ana G. Mendez Univ. System (AGMUS): Univ. Metropolitana, Univ. del Este, Univ. Turabo*, San Juan (Puerto Rico, USA), March 19-22, **2010**; (3 Invited Lectures, Fulbright OLP);
- Optical Scanners in Medical Imaging. An Optomechanical Perspective, *City Univ. of New York* (USA), Apr. 15, **2010** (Invited Lecture - Dept. of Mechanical Engineering, Fulbright Occasional Lecturer Program - OLP);
- Laser scanners, *Inst. of Optics, Univ. of Rochester* (USA), Mar. 03, **2010**; (Invited Lecture for PhD Students);
- Tutorials, *Hopkins Center for Opt. Metrology, Univ. of Rochester* (NY, USA): 1) Applications & types of scanners (Nov. 03, **2009**); 2) Scanners-fundamentals (Nov. 17, **2009**); 3) Constructive characteristics of scanners (Dec 01, **2009**); 4) Perspectives of opt. scanning in OCT (Jan 20, **2010**);
 - **At National Conferences and Universities**
- Laser Scanners with Industrial and Biomedical Applications, *Maritime University of Constanta* (Romania), July 30, **2024**; (Invited Seminar);
- Optical Coherence Tomography in Dentistry, *Workshop Advanced Research Webinar of the Doctoral Schools of the “Victor Babes” University of Medicine and Pharmacy Timisoara*, May 5–6, **2022**; (Invited Lecture);
- Non-Destructive Testing (NDT) in Industry: Study of Metallic Fractures with Optical Coherence Tomography (OCT) versus Scanning Electron Microscopy (SEM), *6th Int. Conf. Advances in Engineering & Management (ADEM)*, Drobeta-Turnu Severin (Romania), Dec. 10-11, **2020**; (Keynote Lecture, [Program 2020.pdf](#));

- Multi-parameter Analysis and Optimization of 1D Galvanometer-based Laser Scanning with Applications in Optical Coherence Tomography, *IEEE 9th Int. Workshop on Soft Computing Applications (SOFA)*, Arad (Romania), Nov. 27-29, **2020**; (Keynote Lecture, <https://www.sofa-org.eu/2020/prof-virgil-florin-duma/>);
- Biomedical Imaging using Optical Coherence Tomography (OCT). An Insight into Technology, Devices, and Applications, *The 6th Euro-China Conf. on Intelligent Data Analysis and Applications*, <https://www.ecc2019.ro/invited-speaker/>, Arad (Romania), Oct. 15-18, **2019**; (Keynote Lecture);
- Optomechatronics and Biomedical Imaging. Projects at UAV Arad, *21th Int. Students Sc. Comm. Session of the Fac. of Eng. of the Aurel Vlaicu Univ. of Arad*, June 14-15, **2019**; (Keynote Presentation);
- Applications of Optical Coherence Tomography in non-destructive testing, *Biommedd 2018*, Cluj-Napoca (Romania), Sept. 27-29, **2018**; (Invited Presentation);
- 2D scanning systems, patterns, and handheld probes for biomedical imaging, *2nd Int. Congress on Lasers in Dentistry* (<http://lasercongress-srls.com/>), Mamaia (Romania), Sept. 5-7, **2018**; (Plenary Lecture);
- Biomedical imaging with Optical Coherence Tomography. Systems and applications, *2nd Int. Seminar on Biomaterials and Regenerative Medicine (BioRemed)*, Timisoara (Romania), Oct. 5, **2017**; (Invited Lecture);
- Laser scanners with oscillatory mirrors for high-end applications, *TIM Physics Conf.* [ISI], Timisoara (Romania), May 25-27, **2017**; (Keynote Lecture);
- Optical Coherence Tomography in Metallic Materials Characterization, *RoMAT2016*, Bucharest (Romania), Nov. 10, **2016**; (Invited Presentation);
- Optical Coherence Tomography: Handheld scanning probes with galvanometer scanners, *TIM 15-16 Physics Conf.* [ISI], Timisoara (Romania), May 28, **2016**; (Invited Presentation);
- Optimization of biomedical systems for OCT with applications in Dental Medicine, *21th Congress of Dental Medicine*, Timisoara (Romania), May 21, **2016**; (Invited Presentation);
- Biomedical imaging using Optical Coherence Tomography. Devices, systems, and applications, *BioRemed Int. Conf.*, Oradea (Romania), Sept. 19, **2015**; (Invited Presentation);
- Biomedical Imaging and Optical Coherence Tomography: Scanning Systems and Applications, *Academic Days of the Victor Babes Univ. of Medicine and Pharmacy of Timisoara* (Romania), Dec. 12, **2014**; (Invited Lecture);
- Renewable Energies—Two Projects and a Global Perspective, HURO/1101/175/2.1.1 (www.huro-cbc.eu), *Romania-Hungary Program of Trans-frontiers Cooperation*, Arad, Apr. 11, **2014**; (Invited Presentation);
- Achievement of the South-West Axis in Industrial Robots of the EUROP-RO Technological Platform, *2nd EUROP-RO Symp.*, Bucharest (Romania), Apr. 26, **2007**; (Keynote Lecture).

SCHOLARSHIPS & FELLOWSHIPS

- **Visiting Senior Research Fellowship**, at the [Univ. of Kent](#), Canterbury (UK); Host: [Prof. Adrian Gh. Podoleanu](#) (Head of the *Applied Optics Group - AOG*), July **2009**-Present;
- **Fulbright Senior Research Fellowship**, awarded by the US Dept. of State, at [The Institute of Optics](#) (#1 in Optics and #4 in Applied Physics in the US), [Univ. of Rochester, NY](#) (USA); Host: [Prof. Jannick P. Rolland](#) (Brian J. Thomson Chair in Optical Engineering), [ODAlab](#), Sept. **2009**-June **2010**;
- **BEST** (Board of European Students of Technology) **Scholarship**, Summer School, *Eindhoven Univ. of Technology*, The Netherlands: Energy in Its Various Aspects; concluded with the team project: Nuclear Plant – Design and Ecological Aspects, July **1991**;
- **Republican Merit Scholarship** for outstanding results, highest student award in Romania, from the Romanian state (**1990-1991**).

RESEARCH STAGES

1 month research stages:

[Univ. of Kent](#), Canterbury (UK): Aug. **2018**; Aug. **2016**; July-Aug. **2015**; Aug. **2013**; July-Aug. **2011**;
[Univ. of Rochester, NY](#) (USA): Oct. **2016**; Oct. **2015**; June **2010**;

1-2 weeks (Visiting Professor):

Universidad de Guadalajara - <http://www.cucei.udg.mx/> (Mexico), Nov. 26-Dec. 1, **2018**;
[Univ. of Kent](#), Canterbury (UK): Feb. 13-22, **2015**; Feb. 07-21, Aug. 2-20 **2014**; Oct. 27-Nov. 09, **2013**;
[Univ. of Rochester, NY](#) (USA): Oct. 16-23, **2017**; July 17-30, **2014**; Feb. 15-28, **2013**;
Univ. of Guanajuato, Salamanca (Mexico), Aug. 31-Sept. 05, **2015**;
National Univ. of Ireland (NUI) at Galway (Ireland), Nov. 24-27, **2014**;
City Univ. of New York—Nanofabrication Facility (USA): Oct. 11-15, **2017**; Feb. 8-15, **2013**; Apr. 14-20, **2010**;
Ana G. Mendez Univ. System, San Juan (Puerto Rico, USA): Mar. 18-22, **2010**;
RWTH Aachen (Germany): June 25-30, **2007**;
Jacobs Univ. of Bremen (Germany): Oct. 25-30, **2004**;

ERASMUS+ Teaching Stages

[Univ. of Kent](#), Canterbury (UK): Feb. 24-29, 2020;

AWARDS

- Top 2% scientists in the world "Updated science-wide author databases of standardized citation indicators", <https://doi.org/10.17632/btchxktzyw.3>;
- ANCS Award PN-III-P1-1.1-PRECIBVT-2021-3330 for *OSIM Patent* RO129610 (2021); [link](#); (1000€);
- ANCS Award PN-III-P1-1.1-PRECISI-2021-65757 for *Medicina-Lithuania* 57(9), 901 (2021); [doi](#); (400€);
- ANCS Award PN-III-P1-1.1-PRECISI-2021-65233 for *Applied Sciences* 11(18), 8451 (2021); [doi](#); (400€);
- ANCS Award PN-III-P1-1.1-PRECISI-2021-63465 for *Medicina-Lithuania* 57(8), 772 (2021); [doi](#); (400€);
- ANCS Award PN-III-P1-1.1-PRECISI-2021-64972 for *Medicina-Lithuania* 57(2), 145 (2021); [doi](#); (400€);
- ANCS Award PN-III-P1-1.1-PRECISI-2021-64708 for *Applied Sciences* 11(16), 7224 (2021); [doi](#), (400€);
- ANCS Award PN-III-P1-1.1-PRECISI-2021-64704 for *Materials* 13(9), 3908 (2020); [doi](#); (400€);
- ANCS Award PN-III-P1-1.1-PRECISI-2021-59149 for *Materials* 13(21), 4825 (2020); [doi](#); (400€);
- ANCS Award PN-III-P1-1.1-PRECISI-2021-57882 for *Sensors* 21(13), 4554 (2021); [doi](#); (1200€);
- ANCS Award PN-III-P1-1.1-PRECISI-2020-50044 for *QIMS* 9(5), 782-798 (2019); [doi](#); [link](#) (400€);
- ANCS Award PN-III-P1-1.1-PRECISI-2020-49768 for *IJMS* 21(3), 778 (2020); [doi](#); [link](#) (400€);
- **1st Best Oral Presenter Award**-for Luca R.E., Todea C.D., Duma V.-F., *et al.*, Enhancements of Bone Regeneration Techniques using Laser Photobiomodulation: An Ex-vivo Study on Wistar Rats based on OCT and Histology, 24th UAE Int. Dental Conf. & Arab Dental Exhibition, Dubai 2020; <https://aeedc.com/>;
- ANCS Award PN-III-P1-1.1-PRECISI-201939511 for *APM* 67(3), 456-476 (2019); [doi](#); [link](#) (1,250€);
- ANCS Award PN-III-P1-1.1-PRECISI-2019-334883 for *Materials* 12(6), 947 (2019); [link](#) (200€);
- ANCS Award PN-III-P1-1.1-PRECISI-2018-24971 for *Proc. Rom. Acad. A* 19, 53-60 (2018); [link](#) (500€);
- ANCS Award PN-III-P1-1.1-PRECISI-2018-24968 for *Metals* 8(2), 117 (2018); [doi](#) (500€);
- **Top 1% reviewers** in the Field of Physics, 2018 ([link](#)) – <https://publons.com/awards/>;
- ANCS Award [PN-III-P1-1.1-PRECISI-2018-22154](#) for *IJSSD* 17(5), 1740006 (2017); [doi](#) (500€);
- **IOP (Inst. of Physics, UK) Award**: Outstanding reviewer for *Measurement Science and Technology*, 2017;
- ANCS Award [PN-III-P1-1.1-PRECISI-2017-15869](#) for *Proc. Rom. Acad. Series A* 18, 25 (2017) [link](#) (500€);
- ANCS Award [PN-III-P1-1.1-PRECISI-2017-19701](#) for *Opt. Express* 25(19), 23388 (2017); [doi](#) (500€);
- **Top 1% reviewers** in the Field of Physics and Astronomy, 2016 – <https://publons.com/awards/>;
- **2nd Prize for Poster Presentation**: Mitroi F. E., Sinescu C., Negrutiu M. L., Stoica E. T., Duma V.-F., Bradu A., Podoleanu A., Confocal laser scanning microscopy versus digital microscopy in the analysis of the marginal adaptation of Tizian overlays, 7th Int. Conf. Lasers in Medicine (ICLM), Timisoara, July 15, 2017;
- **Excellent Paper Award** - Oral Presentation: Beiu R. *, Mnerie C.A., Duma V.-F., Analysis of Curved Shape Micro-mirrors For On-Chip Communication, *SPIE ATOM-N*, Constanta (Romania), [doi](#), 2016;
- ANCS Award [PN-III-P1-1.1-PRECISI-2016-12189](#) for *Opt. Express* 24(12), 13365-13374 (2016) (1,300€);
- ANCS Award PN-III-P1-1.1-PRECISI-2016-11474 for *R. R. Physics* 67(4), 1346-1358 (2015), [link](#) (500€);
- ANCS Award PN-II-RU-PRECISI-2015-9-8637 for *Applied Optics* 54(17), 5495-5507 (2015), [link](#) (500€);
- ANCS (Romanian Authority for Scientific Research) **Habilitation Award** 3863/2014 (1,200€);
- **1st Award - Implant Poster Competition**, for M.L. Negrutiu, C. Sinescu, V.-F. Duma, A. Manescu, MicroCT Investigation of Bone Graft Biomaterials, *New York Great Dental Meeting*, USA, 2014;
- ANCS Award 6510/2014, for *Applied Optics* 53(26), 5912-5916 (2014) [link](#) (500€);
- **SPIE Senior Membership** (Int. Society for Optics and Photonics, Bellingham, WA, USA) since 2011 ([link](#));
- **Merit Gradation**, granted for 3, respectively for 5 years, on a competitive basis, highest professional recognition and salary bonus (+25%) in a Romanian University, 2008-2010, 2012-2016, and 2017-2021;
- ANCS Award 1257/2011 for *Applied Optics* 50(29), 5735-5749, 2011, [link](#) (500€);
- ANCS Award 1390/2010, for *Applied Optics* 48(32), 6355-6364, 2009, [link](#) (500€);
- ANCS Award 1391/2010, for *Applied Optics* 48(14), 2678-2685, 2009, [link](#) (500€);
- ANCS Award 87/2008, for *J. of Optics A: Pure and Applied Optics* 10(6), 064008, 2008, [link](#) (1 k€);
- **Merit Salary**, granted annually, on a competitive basis (15% salary bonus), by the Univ., 2004-2006;
- **University**, 'Traian Lalescu' National Students' Olympiads:
 - 1989 (3rd year) **National: special award in Mechanics of Fluids**; *local*: 1st award in Mechanics of Fluids, 1st award in Electrotechnics;
 - 1988 (2nd year) **National: 1st award in Physics (Electromagnetism, Optics & Quantum Mech.), special award in Mathematics**; *local*: 1st award for Mathematics, 1st award in Physics;
 - 1987 (1st year) **National: 3rd award in Physics (Mechanics & Thermodynamics)**; *local (Timisoara County Universities Center)*: 1st award in Physics, special award in English; special award for scientific communications in Mathematics;

➤ **High School:** 2nd award in Physics, Arad County, 1982.

RESEARCH GRANTS & CONTRACTS (UEFISCDI ID (UEF-iD): U-1700-029M-1912)¹

1. **Principal Investigator (PI), IDEAS Project** PN-III-P4-ID-PCE-2020-2600 (Contract 55PCE/2021), [Romanian National Authority for Scientific Research \(ANCS-UEFISCDI\)](#): *Laser scanning systems with Risley prisms, with applications in biomedical and industrial imaging using Optical Coherence Tomography (OCT) (RISLEY4OCT)*, (250 k€); Jan. **2021**-Dec. **2023**; 13 researchers. 7 Guest Edited Special Issues of ISI Web of Science (WoS) journals; Chaired 2 ISI Conferences ([2021](#); [2023](#)), 2 Workshops ([2021](#); [2023](#)). *Publications*: 16 Invited Presentations; 18 ISI Proc.; 33 other conf. presentations; 1 patent; 4 books; 3 PhD Theses; 1 Dissertation; **14 WoS journal papers, Σ IF=50.52**; <http://3om-group-optomechatronics.ro/pce2600/>
2. **PI, Project for Experimental Demonstration (PED)** PN-III-P2-2.1-PED-2020-4423 (Contract 418PED/2020), [ANCS-UEFISCDI](#): *Optical Coherence Tomography for Non-Destructive Testing in Industry (OCT4NDT)*, in partnership with [SC Inteliform SRL](#) (145 k€); Oct. **2020**-Oct **2022**; 15 researchers. 4 Guest Edited Special Issues of ISI WoS journals; *Publications*: 4 Invited Presentations, 12 conf. presentations; 1 patent; 2 books; **8 ISI WoS journal papers, Σ IF=25.811**; <http://3om-group-optomechatronics.ro/ped4423/>
3. **Responsible for the Physics Work Package (1/4), Grant** POC-A1-A1.1.3-E-2015, funded by the European Union (through European Regional Development Funds Structural Operational Program “Competitiveness” Priority axis 1, Operation 1.1.4. Contract Number 30/2016): *New nano-ARCHITECTURES OF BIOLOGICAL INSPIRATION OF CELULAR TYPE (NanoArt Bio Cell)*, PI: Prof. V. Beiu (2 M€), Aug. **2016** - Aug. **2020**; **3 journal papers in ISI WoS-from WP1, Σ IF=8.005** (also funded by other grants);
4. **PI, Project for Experimental Demonstration (PED) Grant** PN-III-P2-2.1-PED-2016-1937 (Contract 44PED/2017), [ANCS-UEFISCDI](#): *Micro-Electro-Mechanical Systems (MEMS)-based handheld scanning probes for distortion-free biomedical imaging with Optical Coherence Tomography (OCT) (MEMS-HH-OCT)*, in partnership with [SC Inteliform SRL Timisoara](#) (133 k€); Jan. **2017**-July **2018**; 14 researchers. *Publications*: 6 Invited Presentations, 9 ISI Proc., 15 other conf. presentations; **9 ISI WoS journal papers, Σ IF=21.041**; <http://3om-group-optomechatronics.ro/pedp1937/>
5. **PI, Bridge Grant** PN-III-P2-2.1-BG-2016-0297 (Contract 48BG/2016), [ANCS-UEFISCDI](#): *Optomechatronic choppers with rotational discs and shafts for metrological, biomedical, and laser manufacturing applications (OP-CHOP)* (102 k€), Oct. **2016**-Oct. **2018**; 8 researchers. *Publications*: 5 Invited Presentations, 12 ISI Proc., 13 other conf. presentations; **4 ISI WoS journal papers, Σ IF=9.225**; <http://3om-group-optomechatronics.ro/bg297/>
6. **Responsible for Partner, Transfer to Industry (PTE) Grant** PN-III-P2-2.1-PTE-2016-0181 (Contract 24PTE/2016), [ANCS-UEFISCDI](#): *Handheld scanning probes with 1D and 2D galvoscaners for biomedical and industrial investigations using Optical Coherence Tomography (OCT) (1D2D-GS-OCT)*, PI: M. Vlasici – [SC Inteliform SRL Timisoara](#) (435 k€), Oct. **2016**-Oct. **2018**; 2 institutions, 12 researchers. *Publications*: 1 book, 18 Invited Presentations, 6 ISI Proc., 19 other conf. presentations; **11 ISI WoS journal papers, Σ IF=26.942**; <http://3om-group-optomechatronics.ro/ptep181/>
7. **PI, PARTNERSHIP Grant** PN-II-PT-PCCA-2011-3.2-1682 (Contract 22/2012) [ANCS-UEFISCDI](#): *Optical Coherence Tomography (OCT) systems with handheld and endoscope probes for real-time investigations in material studies and for in vivo medical imaging* (5 institutions, 36 researchers), July **2012**-Dec. **2016** (950k€). *Publications*: 2 books, 1 patent, 1 Habilitation, 1 PhD thesis, 13 Invited Presentations, 47 ISI Proc., 28 other conf. presentations; **17 ISI WoS journal papers, Σ IF=31.633**. <http://3om-group-optomechatronics.ro/pp1682/>
8. **PI, Fulbright Senior Research Grant** 474/July 1, 2009, in Optical Engineering (from the US Department of State): *Scanning in Swept Source Optical Coherence Tomography (OCT)*, at [The Institute of Optics](#) (#1 in Optics and #4 in Applied Physics in the USA), [Univ. of Rochester, NY](#) (USA); Host: [Prof. J. P. Rolland, ODAlab](#), Sept. **2009**-June **2010** (\$26,450). *Publications*: 2 ISI Proc., 3 other conf. presentations; **1 ISI WoS journal paper, IF=1.748** (also funded by IDEAS Grant 1896);
9. **Researcher, NYSTAR** (New York Science and Technology Association for Research) Award 054048-002, PI [Prof. J. P. Rolland, The Institute of Optics, Univ. of Rochester, NY](#) (USA), **2010** (\$1.2 M; support of \$6k);
10. **PI, IDEAS Grant** 1896/2008, [ANCS-UEFISCDI](#): *Analysis and design of some polygonal and galvanometer-based, 1D and 2D scanners*, **2009-2011** (101 k€); 7 researchers. *Publications*: 5 book chapters, 1 patent, 10 ISI Proc., 11 other journal and conf. papers; **6 ISI WoS journal papers, Σ IF=9.931**; [ideas-project-1896/](#)
11. **Researcher, PN II PARTNERSHIPS Grant** 41-084/2007, Romanian Education and Research Ministry - ANCS: *Use of genetic markers for establishing optimal therapies for laryngeal and oropharyngeal human cancer*, Univ. of Bucharest, PI Dr. L. Ghetea, **2007-2010** (600 k€);

¹ Each journal paper, when not specified otherwise, is funded by only one of the grants in the list.

12. **Researcher, Balkan Environmental Association (BENA)–COSMOTE Grant 1428/2007, Remote, computer assisted command and optimize of the use of a solar installation for greenhouses and small consumers**, PI Dr. D. Silaghi, **2007** (750 €);
13. **Researcher, CEEEX Grant**, ANCS code 126/2006, Romanian Education and Research Ministry-ANCS: *EUROP_RO Technology Platform (European Robotics Platform, Romanian branch)*, PI Prof. Adrian Nicolescu, Polytechnic Univ. of Bucharest, **2006–2008** (60 k€);
14. **PI, 3 Research Contracts** (Romanian companies), through Aurel Vlaicu Univ., **2004–2005** (2 k€);
15. **PI, Young Researchers (AT) Grant**, ANCS code 385: *Development of Some New Scanning Equipments*, **2003–2004** (3.5 k€); **2 books (monographs)** [B5, B6];
16. **Researcher, Leonardo da Vinci Program** of the European Union, **Timkars Project**, for conceiving the courses in Precision Mechanics & Optics (simultaneously published in Germany and in Romania); **co-author of the book: Measuring and Control Apparatuses. Metrology** [B4], **1999–2001** (225 k€);
17. **Researcher, Program Ro-4096 with Word Bank, Doctoral Grant**, ANCS code 57: *Methods and means for improvement performances of the equipments for precision mechanics and quality control*, PI Prof. Dan Perju, Polytechnic Univ. Timisoara, **1998–2002** [RO4096](#) (\$30k); **PhD Thesis defended Sept. 2001**.

STRATEGIC & COOPERATION GRANTS

18. **PI, OSA Global Meeting Grant**, to organize the 1st Int. Conf. [Advances in 3OM: Opto-Mechanics, Opto-Mechatronics, and Optical Metrology](#), Timisoara (Romania), **2020** (\$3k);
19. **Co-PI, Erasmus+**, Univ. of Kent, School of Physical Sciences (UK)-Aurel Vlaicu Univ. of Arad, **2018-2021**;
20. **Member, COST Action CA 21159** “Understanding interaction light - biological surfaces: possibility for new electronic materials and devices” (*PhoBios*), <https://www.cost.eu/actions/CA21159/>, **2022-2026**;
21. **Member, COST Action CA17126** “Towards understanding and modelling intense electronic excitation” (TUMIEE), http://www.cost.eu/COST_Actions/ca/CA17126, **2018-2023**;
22. **Member, COST Action CMI405**, ‘Molecules in Motion’, <https://www.molim2018.ethz.ch/2018/>, **2015-2019**;
23. **Consultant** (Expert-Coordinator of the Mechatronics and Mechanical Engineering Domain of the Univ.), **POSDRU/5/1.5/S/2** (EU funding)-UEFISCDI Project: *Doctorate in Schools of Excellence – Evaluation of the Quality in Universities and the Increase of Visibility by Scientific Publishing*, **2009-2011**;
24. **Consultant** (Expert in Education), **POSDRU 2/1.2/S/3** (EU Funding)-UEFISCDI Project code 2684: *Quality and Leadership for Romanian High Education System (QLHE)* (www.edu2025.ro), **2009-2011**;
25. **Consultant** (Expert in Mechatronics & Robotics), **POSDRU 2/1.2/S/2** UEFISCDI: *Development of an operational system of professional qualifications in Romania (DOCIS)*, **2009-2011**;
26. **Consultant** (Expert in Robotics), **CARE** (Coordinated Action for Robotics in Europe), **FP 6** Program of the European Commission, EU (participation at CARE Consensus Meetings: Stuttgart, May 2008; Pisa, Oct. **2008**, for elaboration of SRA 2008-2020 – Strategic Research Agenda for Robotics in Europe);
27. **Co-PI, Erasmus**, RWTH Aachen (IGM) - Aurel Vlaicu Univ. of Arad, **2007-2013**;

TRAVEL GRANTS

28. **PI**, Support from the Hungarian Acad. of Sciences, to participate at the <https://worldscienceforum.org/> 2024, as Fulbright Alumni, Budapest (Hungary), Nov. **2024**, (>300€);
29. **PI**, Support from MDPI to participate at the *10th Int. Conf. on Antennas and Electromagnetic Systems (AES 2024)*, Rome (Italy), June 25-28, **2024**, (400€);
30. **PI**, Support from COST Action CA21159 (PhoBioS) to participate at *SPIE Photonics Europe*, Strasbourg (France), Apr. 7-11, **2024**, (1k€);
31. **PI, Grant** PN-III-P1-1.1-MCD-2021-0058, [ANCS-UEFISCDI](#) to support to support a visit from the [Univ. of Kent](#), Canterbury (UK) to UAV Arad, Nov. **2021**, (1.2k€);
32. **PI**, Support from EU ERASMUS+, to lecture at the Univ. of Kent (UK), 1 week, Feb. **2020**, (>1.1k€);
33. **PI**, Support from the Hungarian Acad. of Sciences, to participate at the <https://worldscienceforum.org/>, as representative of Romania in the Fulbright delegation, Budapest (Hungary), Nov. **2019**, (>300€);
34. **PI, SPIE Lecturer Program Grant** from [SPIE](#) (The Int. Society for Optics & Photonics, USA) and the *Univ. for lecturing at the Universidad de Guadalajara* (Mexico), Nov. 26-30, **2018**, (~\$2k);
35. **PI, Grant** PN-III-P1-1.1-MCD-2018-0230, [ANCS-UEFISCDI](#) to support to support a visit from the [Univ. of Kent](#), Canterbury (UK) to UAV Arad, [link](#), Nov. **2018**, (~1k€);
36. **PI, SPIE Lecturer Program Grant** from [SPIE](#) for lecturing at the *9th Int. Physics Conf. ICPYS-LTP*, Kharkov (Ukraine), June 4-8, **2018**, (~1k€);
37. **PI, SPIE Grant** to support with a booth the participation at the *SPIE Photonics Europe ‘Innovation Village’*, Strasbourg (France), Apr. 22-23, **2018**;

38. **PI**, Support from the Royal Society of Jordan, to participate at the [World Science Forum](#), as representative of Romania in the Fulbright delegation, Jordan, Nov. 7-11, **2017**, (>1k€);
39. **PI**, **Grant** PN-III-P1-1.1-MCD-2016-0077, [ANCS-UEFISCDI](#) to support a visit from the [Univ. of Kent](#), Canterbury (UK) to UAV Arad, [link](#), Nov. **2016**, (~1.3k€);
40. **PI**, Full support from ANCS to participate at the Int. Conference *Diaspora in Scientific Research and Higher Education in Romania*, Timisoara **2016**;
41. **PI**, Support from the Hungarian Acad. of Sciences, to participate at the [Word Science Forum](#), as representative of Romania in the Fulbright delegation, Budapest (Hungary), Nov. **2015**, (>300€);
42. **PI**, **SPIE Lecturer Program Grant** from [SPIE](#) and support from the *Univ. of Guanajuato* for lecturing at this university (Mexico), Sept. **2015**, (~\$1.8k);
43. **PI**, **SPIE Lecturer Program Grant** from [SPIE](#) for lecturing at the *National Univ. of Ireland (NUI)* at Galway, Nov. **2014**, (600€);
44. **PI**, Support from the Brazilian Acad. of Sc. and from the Fulbright Assoc., to participate at the [Word Science Forum](#), as representative of Romania in the Fulbright delegation, Rio de Janeiro (Brazil), Nov. **2013**, (~4k€);
45. **PI**, Support from Fulbright Acad. of Sc. & Tech. and from Hungarian Acad., to participate at the [Word Science Forum](#), as representative of Romania in the Fulbright delegation, Budapest (Hungary), Nov. **2011**, (~1.5k€);
46. **PI**, **Research Foundation** of City Univ. of New York, for Invited Seminar, April **2010**, (\$350);
47. **PI**, **Fulbright Conference** Support-from the US Dept. of State, for participating at the *Fulbright Conference: Linking Campus to Community*, at Georgetown Univ., Washington DC (USA), April **2010**, (~\$1k);
48. **PI**, **Fulbright Occasional Lecturer Program Grant** – from the US Dept. of State, for lecturing in San Juan (Puerto Rico, USA), March **2010** (\$750); in New York City (USA), April **2010**, (\$250);
49. **PI**, Ratiu Family Charitable Foundation (UK) Grant, for participating at the *SPIE 1st Canterbury Workshop on Adaptive Optics and OCT* [ISI], Sept. **2008**, Kent (UK) , (335£);
50. **PI**, **MC ANCS Grant 237/2007**, for participating at *DSTA Conference*, Lodz (Poland), [link](#), (800€);
51. **PI**, **MC ANCS Grant 140/2007**, for *DAAAM Symposium* [ISI], Zadar (Croatia), [link](#), (800€);
52. **PI**, **IEEE & FEDROM** (FEDeration of ROManians in Spain) Support for participation at *IEEE/LEOS ODIMAP V* (2 papers), Oct. **2006**, Madrid (Spain), (~900€).

AFFILIATIONS

- **SPIE – Senior Member** since 2011 ([The Int. Society for Optics and Photonics](#)), member since 2005;
- **Fulbright Association** (<http://fulbright.org/>) – **Life Member** since 2011;
- **OPTICA/OSA** ([Optical Society of America](#)), member since 2007 – **Life Member** since 2014;
- **European Technology Platform Photonics21** (<http://www.photonics21.org/>) - since 2006;
- **EPIC** ([European Photonics Industry Consortium](#)) - since 2014;
- **EUROP-RO**, branch of the **European Robotics Platform EUROP**, vice-president of EUROP-RO (responsible for the South-West Axis), 2006-2010;
- **IEEE** (Institute of Electrical and Electronics Engineers), 2006-2007;
- **IFTtoMM** (International Federation for the Theory of Mechanisms and Machines), 1998-2002;
- **SRR** (Romanian Robotics Society), since 2010; President of the Arad County branch, 2010-2015;
- **SRLS** ([Romanian Society for Lasers in Dentistry](#)) - since 2016;
- **INSTICC** (Institute for Systems and Technologies of Information, Control and Communication) – since 2021;

COMMITTEES, PEER-REVIEWER, EVALUATOR - publons.com/a/1280971/

REVIEWER OF PEER-REVIEWED JOURNALS (of different Publishing Houses):

- **OPTICA (former OSA - Optical Society of America)**: [Optics Express](#) (IF>3.5), [Biomedical Optics Express](#) (IF>3.5), [Optics Letters](#) (IF>3.5), [J. Opt. Soc. Am. A](#) (IF>1.5), [Applied Optics](#) (IF>1.5), [Photonics Research](#) (IF>5.5), [OSA Continuum](#), Optica (IF>7), since 2007;
- **SpringerNature**: [Acta Mechanica Sinica](#) (IF≈0.7), since 2010; [Differential Eqs. and Dynamic Systems](#), since 2012; [J. of Zhejiang University SCIENCE A](#) (IF≈0.5), since 2012; [Meccanica](#) (IF>2), since 2020; [Scientific Reports](#) (IF≈4), since 2020;
- **Elsevier**: [Optics Communications](#) (IF≈1.5), since 2015; [Mechatronics](#) (IF≈1.8), since 2015; [Control Eng. Practice](#) (IF>3), since 2015; [Applied Mathematical Modelling](#) (IF>2), since 2016; [Diabetes Research and Clinical Practice](#) (IF>3.5), since 2018; [Optik](#) (IF≈2); [Optical Fiber Technology](#) (IF≈2), since 2019; [Precision Engineering](#) (IF>2.5); [Saudi Dental Journal](#), since 2020;
- **Wiley**: [Lasers in Surgery & Medicine](#) (IF>2.5), since 2015;
- **IEEE**: [IEEE Access](#) (IF>3), since 2017; [IEEE Transactions on Industrial Electronics](#) (IF>7), since 2015; [IEEE/ASME Transactions on Mechatronics](#) (IF≈3.5), since 2015;
- **ASME**: [J. of Medical Devices](#) (IF>0.5), since 2015;

- **IOP (UK):** [J. of Optics](#) (IF>2), since 2015; [Measurement Science and Technology](#) (IF>1.4), since 2015; [J. of Physics D: Applied Physics](#) (IF>3), since 2018; [Biomed. Phys. & Eng. Express](#) (IF>1), since 2020;
- **SPIE:** [Optical Engineering](#) (IF>1), since 2019;
- **AIP:** [Theoretical & Applied Mechanics Letters](#), since 2012;
- **SAGE:** [J. of Engineering in Medicine](#) (IF>1), since 2014;
- **Taylor & Francis:** [J. of Adhesion Sc. and Tech.](#) (IF>1), since 2015; [Phase Transitions](#) (IF≈1), since 2015;
- **MDPI:** [Applied Sciences](#) (IF>1.7), since 2016; [Sensors](#) (IF>3), [Materials](#) (IF>2.5), since 2017; [Remote Sensing](#) (IF>4), [Mathematics](#) (ISI), [Photonics](#) (IF>2.5), since 2018; [Int. J. of Molecular Sciences](#) (IF>4), since 2019; [J. of Clinical Medicine](#) (IF>5.5), since 2020; [Pharmaceuticals](#) (IF>5.8), since 2021; [Biomedicines](#) (IF>4.5), since 2023; [Bioengineering](#) (IF>5), since 2023;
- **AME:** [Quantitative Imaging in Medicine and Surgery](#) (IF>3), since 2019;
- **Romanian Academy:** [Romanian Reports in Physics](#) (IF>1.5), since 2018;
- [Latin American Journal of Solids and Structures](#) (IF>1), since 2012;
- **Hindawi:** [Advances in Optical Technologies](#), since 2011; [J. of Ophthalmology](#) (IF>1.7), since 2018;
- [J. of Visualized Experiments](#) (JOVE), (IF>1.5), since 2016;
- [Optica Applicata](#) (IF>0.5), since 2016;
- **L&P,** [Discontinuity, Nonlinearity, and Complexity](#), since 2016;

REVIEWER OF GRANTS

- Since **2019:** **Reviewer** of Grants–National R&D Agency of Moldova (<https://ancd.gov.md>);
- Since **2016:** **Reviewer** of Grants–Czech Science Foundation; 1 Proposal evaluated;
- Since **2013:** **Reviewer** of Grants - Foundation for Polish Science; 6 Proposals evaluated;
- Since **2010:** **Reviewer** of Fulbright Grants of the US Department of State; 10 Proposals evaluated;
- Since **2008:** **Reviewer** of Grants with European Union Funding (POS): 16 (2009), 6 (2010), 9 (2011), 8 (2012), 5 (2013), 5 (2015), 3 (2016);
- Since **2007:** **Reviewer** of Grants of the Romanian R&D Plan: 30 (2007), 13 (2008), 4 (2010), 8 (2011), 4 (2014), 15 (2015), 2 (2016), 1 (2017), 17 (2020), 5 (2022), 18 (2024); **UEFISCDI ID: U-1700-029M-1912**

COMMITTEES, CHAIRMAN

- 3rd *Int. Academic Conf. on Optics and Photonics* ([IACOP 2025](#), <https://www.iacop.cn/>), Nanchang (China), Oct. 31-Nov. 2, **2025**;
- **Chair** of Special Session “[COST Action Special Session: Properties, Design, Fabrication, Optical Metrology, and Applications of Nano-/Micro-structured Surfaces](#)”, *SPIE Optical Metrology Conference (LASER Congress)* [ISI], Munich (Germany), June 23-26, **2025**;
- **Chair** of Session 1 “Calibration and Simulation of Remote, in Time and Distance, Processes”, *Conference 12686 “Infrared Remote Sensing and Instrumentation XXXI*”, *SPIE Optics + Photonics* [ISI], San Diego, CA, USA **2023**; <https://spie.org/conferences-and-exhibitions/optics-and-photonics>
- **Chair** of Session “Optoelectronics, Photonic Materials and Devices”, *9th Int. Conf. on Antennas and Electromagnetic Systems (AES)*, Torremolinos (Spain), **2023**;
- **General Chair, Member of Scientific & Organizing Committees**, SPIE-affiliated [ISI] Int. Conf. [Advances in 3OM: Opto-Mechatronics, Opto-Mechanics and Optical Metrology](#), Timisoara (Romania), **2021, 2023**;
- **Conference Board Member**, Int. Conf. on Materials: Advanced and Emerging Materials - Shenzhen Institute of Adv. Tech. Chinese Academy of Science (<https://2021icm-cn.sciforum.net/#ac>), Nov. 21-24, **2021**;
- **Chair**, 3OM Workshop in Optomechatronics and Biomedical Imaging, Arad (Romania) **2019, 2021, 2023**;
- **Chair** of Session, SRLS 8th Int. Conf. Lasers in Medicine, Constanta (Romania) **2018**;
- **Chair, Editor-SPIE Proc.** [ISI], **Member-Scientific & Organizing Committee**, reviewer, and **Chairman** of Session - SRLS 7th Int. Conf. Lasers in Medicine ([ICLM](#)), Timisoara (Romania) **2017**;
- **Member of the Scientific Committee** and reviewer, 2nd Int. Seminar on Biomaterials and Regenerative Medicine ([BioReMed](#)), Timisoara (Romania) **2017**;
- **Chair, Editor-SPIE Proc.** [ISI], **Member-Scientific Committee**, Organizing Committee, reviewer, and **Chairman** of Session - SRLS 6th Congress of the World Federation of Lasers in Dentistry-EU Division (WFLD-ED) & 6th Int. Conf. Lasers in Medicine (ICLM) ([wflld](#)), Bucharest (Romania) **2015**;
- **Chair, Editor-SPIE Proc.** [ISI], **Member-Scientific & Organizing Committee**, **Chairman** of Session-SRLS 5th Int. Conf. Lasers in Medicine (ICLM), Timisoara (Romania) **2013**;
- **Chair** of Session “Applications in high-tech products,” 11th IFToMM Int. Symposium on the Theory of Machines and Mechanisms – SYROM (<http://arotmm.ro/syrom2013/>), Brasov (Romania) **2013** [ISI];
- **Chair** of Session XXIX (BIO): RIAO-OPTILAS (VIII Iberoamerican Conf. Opt. & XI Latinamerican Meeting on Opt., Lasers and Applications) – SPIE [ISI], <http://riao.samura.pt/>, Porto (Portugal) **2013**;
- **Member of the Scientific Committee**, **Chairman** of Session, and reviewer, Int. Conf. on Dynamic Systems Theory and Applications ([DSTA](#)), Lodz (Poland), **2007; 2011; 2013; 2015; 2017; 2019; 2021**;

- **Chair** of Session: Optics in Precision Mechanics and Mechatronics, 8th Int. Conf. on Mechatronics and Fine Mechanics (COMEFIM), Cluj-Napoca (Romania), June 8-10, **2006**;
- **Member, Organizing Committees & reviewer** of the Proc. of ISREIE (Aurel Vlaicu Univ.), Arad (Romania), **2000, 2002, 2004, 2006, 2008, 2010, 2019**; **Editor** of the Engineering Proceedings, **2008, 2010**;

TEACHING ACTIVITY (current topics are bolded)

- **Lectures:** at the *Polytechnic Univ. of Timisoara*-Measuring and Control Apparatuses (1997-2001); at the *Aurel Vlaicu Univ. of Arad*-**Mechanisms** (1999-Present); Mechanical Systems (1999-2006); Mechanisms & Machine Parts (2001-2003); Elements of Mechanical Engineering (2001-2003); Equipments for Precision Mechanics (2002-2004); Tolerances & dimensional control (2004-2006); **Quality Engineering** (2008-Present); Peripheral Equipments of Computers (2010-2019); Instrumentation [Optoelectronics] (2010-2013); Management in Industrial Engineering (2010-Present); **Biomedical Engineering** (2013-Present); **3D Scanning** (2019-Present); **Optimizations** (2019-Present); **Methodology of Scientific Research** (2018-2023); Master Courses–Quality Systems (2015-2016); **Lasers Engineering & Applications** (2018-Present); **Management of Research Projects** (2019-Present); at *School of Physics, West Univ. of Timisoara*-Master Course, Technical and biomedical applications of lasers (in English) (2013-2015); at *School of Dental Medicine, Victor Babes Univ. of Medicine and Pharmacy of Timisoara*-Master Course EMDOLA, **Optics** (in English), (2016-Present);
- **Seminars:** Technical Optics (1991-1993); **Mechanisms** (1999-Present); **Quality Engineering** (2008-Present);
- **Laboratories:** Measuring and Control Apparatuses (1991-2001); Technical Optics (1991-1993); Spectral Apparatuses (1991-1994); Calculus and Construction of Optical Apparatuses (1991-1997); **Mechanisms** (1999-Present); Mechanical Systems (1999-2006); Mechanisms and Machine Parts (2001-2003); Equipments for Precision Mechanics (2002-2004); Tolerances and dimensional control (2004-2006); Peripheral Equipments of Computers (2010-2019); Instrumentation [Opto-electronics] (2010-2013); Technical and biomedical applications of lasers (in English) (2013-Present); Quality Systems (2015-2016); **Lasers Engineering and Applications** (2018-Present); **3D Scanning** (2019-2023); **Optimizations** (2019-2023).

PhD THESES supervised, on-going

- **Atilla Csillag, Eng.:** *Modeling, design and control of laser scanning systems for obtaining different scan patterns, for industrial and biomedical applications* at the Polytechnic Univ. of Timisoara, **2024–2028**. Supervisor: Prof. V.-F. Duma.
- **Atilla Tiberiu Teodorovits, Eng.:** *Contributions to the development of laser scanning systems with applications in Optical Coherence Tomography (OCT) for industrial metrology and biomedical studies* (in Romanian) at the Polytechnic Univ. of Timisoara, **2024–2028**. Supervisor: Prof. V.-F. Duma.
- **Eduard-Sebastian Csukas, Eng.:** *Applications of the Finite Element Analysis (FEA) for the study of optomechatronic modulators* (in Romanian) at the Polytechnic Univ. of Timisoara, **2024–2028**. Supervisor: Prof. V.-F. Duma.
- **Sorina Coroban, Eng.:** *Non-destructive techniques for defect analysis in automotive industry* (in Romanian) at the Polytechnic Univ. of Timisoara, **2023–2027**. Supervisor: Prof. V.-F. Duma.
- **Nicolae Dogaru, Eng.:** *Contributions to the improvement of the manufacturing processes of airbags for automotive using aspects of quality engineering* (in Romanian) at the Polytechnic Univ. of Timisoara, **2023–2027**. Supervisor: Prof. V.-F. Duma.
- **Bogdan-Pavel Negrei, Eng.:** *Machine learning and AI algorithms for inspection of airbags manufacturing processes* (in Romanian) at the Polytechnic Univ. of Timisoara, **2023–2027**. Supervisor: Prof. V.-F. Duma.
- **Yosef Quitt, Eng.:** *Device for measuring the level of water correlated to the ascertainment of the relative levels of characteristic points in the shore areas* (in Romanian) at the Polytechnic Univ. of Timisoara, **2023–2027**. Supervisor: Prof. V.-F. Duma.
- **Andrei Maldar, Eng.:** *Optimal programming and use of galvanometer- Micro-Electro-Mechanical Systems (MEMS)-based laser scanners with oscillatory mirrors* (in Romanian) at the Polytechnic Univ. of Timisoara, **2022–2026**. Supervisor: Prof. V.-F. Duma.
- **Carina Neagu, MD:** *Optimization of some properties of dental adhesives through the inclusion of magnetic nanoparticles* (in Romanian) at the “Victor Babes” Univ. of Medicine and Pharmacy of Timisoara, **2020–2025**. Main supervisor: Prof. C. Sinescu, MD; Cotutelle supervisor: Prof. V.-F. Duma.

Completed

- ✓ **Codruta Andreea Cojocariu (Novac), MD:** *Modern approaches in dental impression technique* (in Romanian) at the “Victor Babes” Univ. of Medicine and Pharmacy of Timisoara, **2018–2024**. Main supervisor: Prof. C. Sinescu, MD; Cotutelle supervisor: Prof. V.-F. Duma.

- ✓ **Alexandru-Lucian Dimb, Eng.:** *Contributions to the study of laser scanners with Risley prisms for Optical Coherence Tomography (OCT), with applications in industrial measurements* (in Romanian) at the Polytechnic Univ. of Timisoara, **2019–2023**. Supervisor: Prof. V.-F. Duma.
- ✓ **Ralph-Alexandru Erdelyi, Phys.:** *Biomedical imaging in dentistry using a range of investigation techniques, with a focus on optical coherence tomography (OCT)*, (in Romanian), at the Polytechnic University of Timisoara, **2018–2023**. Supervisor: Prof. V.-F. Duma.
- ✓ **Alexandra Maroiu, MD:** *Study on the influence of a novel design of dental veneers on the longevity and predictability of modern prosthetic treatment*, “Victor Babes” Univ. of Medicine and Pharmacy of Timisoara, **2017–2023**. Main supervisor: Prof. M. Rominu, MD; Cotutelle supervisor: Prof. V.-F. Duma.
- ✓ **Alin-Gabriel R. Gabor, MD:** *Contributions to methods of bone augmentation* (in Romanian), “Victor Babes” Univ. of Medicine and Pharmacy of Timisoara, Romania, **2015–2020**. Main supervisor: Prof. C. Sinescu, MD; Cotutelle supervisor: Prof. V.-F. Duma.

PostDoc Researchers supervised

- **Dr. Alexandru-Lucian Dimb, Eng.:** at the Polytechnic University of Timisoara, **2024–Present**.
- **Dr. Ralph-Alexandru Erdelyi, Phys.:** at the Polytechnic University of Timisoara, **2024–Present**.
- **Dr. Alexandra Maroiu, MD:** at the “Victor Babes” University of Medicine and Pharmacy of Timisoara, **2024–Present**.
- **Dr. Roxana Mariana Beiu, Eng.:** at the “Aurel Vlaicu” University of Arad, **2016–2021**.
- **Dr. Corina Anca Mnerie, Eng.:** at the “Aurel Vlaicu” University of Arad, **2012–2023**.

Master Dissertations supervised

- **Univ. Aurel Vlaicu Arad:** Andrei Maldar (2022); Atilla Csillag (2023); Atilla Teodorovits (2024).
- **Univ. of Kent, UK:** Philippa Law (co-supervision of Master Thesis, 2014 – 1st award in the year).
- **West Univ. of Timisoara** - co-supervision of Master Thesis: T. Nicola (2015); C. Untea-Mare (2016); R. Erdelyi (2019).

MISCELLANEOUS

2021, Expert in the panel of the domain *Digitalization, Industry and Space*, within Romania’s *Strategic Research Agenda* for 2021-2027, organized by UEFISCDI;

2015-2018, Awards for results in research—from the Polytechnic Univ. of Timisoara (total: 1.8 k€);

2014, Article <http://dx.doi.org/10.1177/0954411914543963> highlighted in OCT News-Feature of the Week 10/5/14: <http://www.octnews.org/articles/5612435/feature-of-the-week-10-5-14-design-and-testing-of/>

2013, Responsible for the *Thank You Fulbright* Program (launched by the Fulbright Association) in Romania;

2010, June, Summer Courses (49th Annual Series), [The Institute of Optics](#), Univ. of Rochester, NY (USA);

2009-2010, Participation at weekly Optics Colloquia, The Institute of Optics, Univ. of Rochester, NY (USA);

2010, Optical Instrumentation (PhD Course attended, 1 sem.), Univ. of Rochester (USA), Prof. J.P. Rolland;

2010, March, COMSOL Multiphysics Modeling Training, Rochester (USA);

2010, April, Visit and Seminars-for Fulbright Fellows, attended at the UN Headquarters, NY;

President of Maturity Exam Commissions (in Romanian High Schools): Drobeta Turnu-Severin 2003, Craiova 2008, Satu Mare 2009, Cugir 2011 (3 weeks, in June-July);

SYMPOSIA PARTICIPATION

International:

- 10th IEEE Electronics System-Integration Technology Conference (ESTC), Berlin (Germany) **2024**;
- The 1st Int’l Online Conference on Photonics, <https://sciforum.net/event/IOCP2024>
- 25th Congress of the Int. Commission for Optics (ICO), <https://www.ico25.org/>, Dresden (Germany) **2022**;
- Int. Conf. [Advances in 3OM: Opto-Mechatronics, Opto-Mechanics and Optical Metrology](#), SPIE-affiliated [ISI], Timisoara (Romania), **2021, 2023, 2025**;
- [Mexican Optics and Photonics Meeting](#) (MOPM), Mexico **2021**;
- [SPIE Optics + Photonics](#), [ISI], San Diego (USA) **2021, 2022, 2023, 2024**;
- SPIE Security + Defence and Remote Sensing [ISI], Berlin (Germany) **2018**, Strasbourg (France) **2019**, Amsterdam (Netherlands) **2023**, Edinburgh (UK) **2024**, Madrid (Spain) **2025**;
- SPIE Nuclear Photonics [ISI], Brasov (Romania) **2018**;
- Annual Conf. of European Prosthodontic Association ([EPA](#)), Bucharest (Romania), **2017**;
- Annual Meeting of the European Society for Biomaterials (ESB), Athens (Greece) **2017**;
- Central & East. European Conf. for Thermal Analysis & Calorimetry (CEEC), Chisinau (Moldova) **2017**;

- SPIE Applied Optics and Photonics (AOP) [ISI], Faro (Portugal) **2017**;
- OSA Frontiers in Optics, Rochester, NY (USA) **2016**;
- Biommedd, Constanta **2016**, Cluj-Napoca (Romania) **2018**;
- SPIE ATOM-N [ISI], Constanta (Romania) **2016**;
- Advanced Electromagnetics Symposium (AES), Malaga (Spain) **2016**, Incheon (Korea) **2017**, Lisbon (Portugal) **2019**, Marrakesh (Morocco) **2022**, Torremolinos (Spain) **2023**, Rome (Italy) **2022**, Tangier (Morocco) **2025**;
- SPIE Optifab [ISI], Rochester, NY (USA) **2015, 2017**;
- Optics & Photonics Applications (OPA) Conf., Univ. of Guanajuato, Salamanca (Mexico), **2015**;
- Int. Seminar on Biomat. and Regenerative Med. ([BioRemed](#)), Oradea **2015**, Timisoara (Romania) **2017**;
- Balkan Stomatological Society (BASS) Congress, Bucharest (Romania) **2015**;
- SPIE Medical Imaging [ISI], Orlando (USA) **2015**;
- SPIE Optics + Optoelectronics [ISI], Prague (Czech Republic) **2015, 2017, 2019, 2023, 2025**;
- SRLS & SPIE Int. Conf. Lasers in Medicine [ISI], Timisoara **2013**, Bucharest **2015**, Timisoara **2017**, Constanta **2018**, Oradea (Romania) **2023**, Timisoara **2025**;
- New York Great Dental Meeting, NY (USA) **2014**;
- SPIE RIAO-OPTILAS (VIII Iberoamerican Conf. on Optics & XI Latinamerican Meeting on Optics, Lasers and Applications) [ISI], Porto (Portugal) **2013**;
- SPIE ISPDI 5th Int. Symposium on Photoelectronic Detection and Imaging [ISI], Beijing (China) **2013**;
- SPIE ETOP (Education and Training in Optics and Photonics) [ISI], Porto (Portugal) **2013**;
- ISEMMS (Int. Symposium on Education in Mechanism & Machine Science) [ISI] Madrid (Spain) **2013**;
- MeTrApp: 1st Workshop on Mechanisms, Transmissions and Applications, Timisoara (Romania) **2011**;
- WSF-Word Science Forum (Member of the Fulbright Alumni delegation), Budapest (Hungary) **2011**, Rio de Janeiro (Brasil) **2013**, Budapest **2015**, Dead Sea Resort (Jordan) **2017**, Budapest **2019, 2024**;
- EUCOMES - European Conf. on Mechanism Science, Cluj-Napoca (Romania) **2010**, Nantes (France) **2016**;
- Fulbright Conf. (CIES): Linking Campus to Community (Georgetown Univ.), Washington DC (USA) **2010**;
- SPIE Photonics West (BIOS, OPTO) [ISI], San Francisco (USA) **2010, 2013-2015, 2017, 2018**;
- IA-Industrial Assoc. Meeting, The Institute of Optics, Univ. of Rochester, NY (USA) **2009, 2010**;
- IBWAP: Int. Balkan Workshop in Applied Physics, Constanta (Romania) **2009, 2014, 2018**;
- ROCAM: Romanian Conf. on Advanced Materials, Brasov (Romania) **2009**;
- SPIE Canterbury OCT and AO Workshop [ISI], Kent (UK) **2008, 2017**;
- SPIE Optical Systems Design [ISI], Glasgow (UK) **2008**, Jena **2015**, Frankfurt (Germany) **2018**, Madrid (Spain) **2021**, Strasbourg (France) **2024**;
- CARE (Coordinated Actions for Robotics in Europe) Consensus Meetings, Stuttgart (Germany) **2008**;
- SPIE Photonics Europe [ISI], Brussels (Belgium) **2012, 2014**; Strasbourg (France) **2008, 2018, 2020, 2022, 2024**;
- DSTA Conf. (Dynamic Systems Theory & Applications) [ISI], Lodz (Poland) - every other year, **2007-2020**;
- Intl. DAAAM Symposia [ISI], Zadar (Croatia) **2007**, Vienna (Austria) **2009**;
- 2nd European Optical Society (EOS) Topical Meeting, Optical Micro-Systems (O μ S), Capri (Italy) **2007**;
- 12th IFToMM Word Congress (Int. Federation for the Promotion of the Theory of Mechanisms and Machines), Besancon (France) **2007**;
- IEEE ODIMAP (5th Topical Meeting on Optoelectronic Dist./Displ. Meas. & Appl.), Madrid (Spain) **2006**;
- SPIE ROMOPTO: Micro-to Nano-Photonics [ISI], Sibiu **2006, 2009**, Bucharest (Romania) **2015**;
- 1st IIW South-East European Welding Congress, Timisoara (Romania) **2006**;
- Int. Conf. VSU, Sofia (Bulgaria) **2006, 2007**;
- LASER–Word of Photonics Congress (at different OSA & SPIE Conferences) [ISI], Munchen (Germany) **2005, 2009, 2011, 2013, 2017, 2023, 2025**;
- PAMM (Pannonian Appl. Math. Meetings), PC 149-150 Timisoara **2004**, PC 154 Ballaton (Hungary) **2007**;
- 5th Int. Conf. of Metrology, Bucharest (Romania) **2001**;
- 1st Int. Symposium of Complementary Medicine of 3rd Millenium, Oradea (Romania) **2000**;
- ETC–Int. Electronics and Communications Symposium, Timisoara (Romania) **1998**;
- Mess Comp. '95 (9 Kongreßmesse für Industrielle Meßtechnik), Wiesbaden (Germany) **1995**;
- Conf. on Fine Mech., Opt. & Mechatronics (COMEFIM), Bucharest **1994, 1998**, Cluj-Napoca **2006**;
- SIOEL–Optoelectronics Int. Conf., Bucharest (Romania) **1993, 2004**;
- IFToMM Int. Symposium on the Theory of Machines and Mechanisms – SYROM, Bucharest **1993, 2001, 2005**, Brasov (Romania) **2009** [ISI], **2013**;
- I Congreso Iberoamericano de Ingenieria Mecanica, Madrid (Spain) **1993**.

National (Romania):

- 3OM Workshop in Optomechatronics and Biomedical Imaging, Arad (Romania) **2019, 2021, 2023**;
- [RoMAT2016](#), Bucharest (Romania), **2016**;
- Int. Conf. *Advances in Engineering & Management* (ADEM), Severin (Romania) **2016, 2020**;
- Diaspora in Scientific Research and Higher Education in Romania, Timisoara **2016**;
- National Seminar on Mechanisms, Craiova **2008**, Timisoara **2009**, Tg. Mures **2010**;
- EUROP-RO Symposia, Bucharest April **2007**, Sept. **2007**;
- Universitaria Simpro, Petrosani **2006**;
- Modeling and Optimization in the Machine Building Field - MOCM 11, Bacau (Romania) **2005**;
- ISREIE (Aurel Vlaicu Univ. of Arad Symposia) - every two years, since **1996**;
- National Industrial Robots Symposia, Timisoara **1992, 1996**, Oradea **2000**;
- Mechanisms and Mechanical Transmissions Symposia (MTM), Timisoara **1992, 1996, 2000**;
- 17th Symposium of the Military Technical Academy, Bucharest **1997**;
- *Nature and Man* Life Science Museum Symposia, Ploiesti **1994, 1995, 1997**;
- *Man and Mountain* Symposia, Voineasa **1993**, Ramnicu Valcea **1994**;
- Univ. of Oradea Symposium, Oradea **1994, 2007**.

List of Publications

<http://www.researcherid.com/rid/B-3031-2010>

h-index = 25 (ISI Web of Science)

https://www.researchgate.net/profile/Virgil-Florin_Duma

Papers in Journals indexed in ISI Web of Science (Σ ISI Impact Factor (IF) = 146.687)²

69. M.C. Langă, D.F. Nica*, V.-F. Duma*, R.E. Heredeia, C. Sinescu, Dentigerous Cysts in Children: Clinical, Radiological, and Healing Aspects, *Medicina-Lithuania* **60**(7), 1133 (2024); ISSN 1648-9144; <https://doi.org/10.3390/medicina60071133>; **IF 2.4/2023**; **Q1**
68. I.-R. Munteanu, R.-E. Luca*, E. Hogeia, R.-A. Erdelyi, **V.-F. Duma***, L. Marsavina, A.-L. Globasu, G.-D. Constantin, D.C. Todea, Microbiological and Imaging-Based Evaluations of Photodynamic Therapy Combined with Er:YAG Laser Therapy in the In Vitro Decontamination of Titanium and Zirconia Surfaces, *Microorganisms* **12**(7), 1345 (2024); eISSN 2076-2607; <https://doi.org/10.3390/microorganisms12071345>; **IF 4.1/2023**; **Q2**
67. L. Popescu, E.L. Crăciunescu*, A.C. Novac, M.L. Negruțiu, **V.-F. Duma**, A Tudor, A. Mostovei, D. Jumanca, C. Sinescu, Nutritional profiling and sensory evaluation of novel hot chocolate recipes: a comparative study with a commercial brand, *Romanian J. of Oral Rehabilitation* **16**(2), 197-203 (2024); ISSN 2066-7000; **IF 0.6/2023**; DOI: 10.6261/RJOR.2024.2.16.19; **Q4**
66. A.C. Novac, A. Tudor*, D.M. Pop, C.S. Neagu, E.L. Craciunescu, M. Rominu, M.L. Negrutiu, **V.-F. Duma***, C. Sinescu, Conventional dental impressions vs. impressions reinforced with rigid mouthguards, *Polymers* **16**(7), 994 (2024); ISSN 2073-4360; <https://doi.org/10.3390/polym16070994>; **IF 4.7/2023**; **Q1**
65. A.C. Novac, D.M. Pop*, A. Tănase, C. Zaharia, E.L. Crăciunescu, M. Romînu, M.L. Negruțiu, **V.-F. Duma**, C. Sinescu, The advantages of the implementation of digital flow in the working time management of dental prostheses restorations, *Romanian J. of Oral Rehabilitation* **15**(4), 75-81 (2023); ISSN 2066-7000; **IF 0.6**; <http://rjor.ro/2023/12pdf>; **Q4**
64. A.C. Novac, V. Filip, D. Negrut, I. Moldovan, D.M. Pop*, A. Tănase, C. Zaharia, E.L. Crăciunescu, M.L. Negruțiu, M. Romînu, **V.-F. Duma**, C. Sinescu, Time assessment in classical vs digital impressions, *Romanian J. of Oral Rehabilitation* **15**(4), 494-500 (2023); ISSN 2066-7000; <http://rjor.ro/2023/12/1.pdf>; **IF 0.6**; **Q4**
63. A.-C. Măroiu[#], A. Jivănescu*, D.-A. Șerban, R.-M. Negru[#], **V.-F. Duma***, C. Sinescu, M. Romînu, The influence of a novel, crenelated design of CAD-CAM ceramic veneers on the debonding strength, *Materials* **16**(10), 3694 (2023); EISSN 1996-1944; <https://doi.org/10.3390/ma16103694>; **IF 3.1**; **Q1**
62. M. Mostovei*, O. Solomon, N. Chele, C. Sinescu, **V.-F. Duma***, A. Mostovei, Electromyographic evaluation of muscle activity in patients rehabilitated with full arch fixed implant-supported prostheses, *Medicina-Lithuania* **59**(2), 299 (2023); ISSN 1648-9144; <https://doi.org/10.3390/medicina59020299>; **IF 2.4**; **Q1**
61. A.-L. Dimb, **V.-F. Duma***, Symmetries of Scan Patterns of Laser Scanners with Rotational Risley Prisms, *Symmetry-Basel* **15**(2), 336 (2023); ISSN 2073-8994; <https://doi.org/10.3390/sym15020336>; **IF 2.2**; **Q2**
60. A. Cioabla, **V.-F. Duma***, C. Mnerie, R.-A. Erdelyi, G.M. Dobre, A. Bradu, A. Podoleanu, Effect of an Anaerobic Fermentation Process on 3D-printed PLA Materials of a Biogas-generating Reactor³, *Materials* **15**(23), 8571 (2022); EISSN 1996-1944; <https://doi.org/10.3390/ma15238571>; **IF 3.4**; **Q2**
59. E.T. Stoica, C. Marcauteanu*, A. Tudor, **V.-F. Duma***, E.C. Amaricai, R. Onofrei, O. Suciuc, M.-L. Negruțiu, C. Sinescu, Influence of the Text Neck Posture on the Static Dental Occlusion, *Medicina-Lithuania* **58**(9), 1303 (2022); ISSN 1648-9144; <https://doi.org/10.3390/medicina58091303>; **IF 2.6**; **Q3**
58. A.G. Gabor, **V.-F. Duma***, M.M.C. Fabricky, L. Marsavina, A. Tudor, C. Vancea, P. Negrea, C. Sinescu*, Ceramic Scaffolds for Bone Augmentation: Design and Characterization with SEM and Confocal Microscopy, *Materials* **15**(14), 4899 (2022); EISSN 1996-1944; <https://doi.org/10.3390/ma15144899>; **IF 3.4**; **Q2**
57. **V.-F. Duma***, M.-A. Duma, Optomechanical Analysis and Design of Polygon Mirror-Based Laser Scanners, *Applied Sciences* **12**(11), 5592 (2022); ISSN 2076-3417; **IF 2.7**; <https://doi.org/10.3390/app12115592>; **Q2**
56. L. Orel, O.-A. Velea-Barta, C. Sinescu, **V.-F. Duma**, L.-M. Nica*, R.M. Horhat, R.D. Chirila, A. Tudor, D.D. Vulcanescu, M.L. Negrutiu, Comparative Assessment of the Shaping Ability of Reciproc Blue, WaveOne Gold, and ProTaper Gold in Simulated Root Canals, *Materials* **15**(9), 3028 (2022); EISSN 1996-1944; <https://doi.org/10.3390/ma15093028>; **IF 3.4**; **Q1**

² The corresponding author of the papers with multiple authors is indicated by the sign *

³ [Materials | Editor's Choice Articles in 2022 in the Section "Optics and Photonics" \(mdpi.com\)](#)

55. C. Serban, D. Lungeanu*, S.-D. Bota, C.C. Cotca, M.L. Negrutiu, **V.-F. Duma**, C. Sinescu, E.L. Craciunescu, Emerging Technologies for Dentin Caries Detection—A Systematic Review and Meta-Analysis. *J. of Clinical Medicine* **11**(3), 674 (2022). EISSN 2077-0383; <https://doi.org/10.3390/jcm11030674>; **IF 3.9**; **Q2**
54. M.-M. Togoe, E.-L. Craciunescu*, F.-I. Topala, C. Sinescu, L.M. Nica, C. Ionita, **V.-F. Duma**, M. Rominu, A. Gh. Podoleanu, M.-L. Negrutiu, Endodontic fillings evaluated using en face OCT, microCT and SEM, *Romanian J. of Morphology and Embryology* **62**(3), 793-780 (2021), ISSN 1220-0522, **IF 0.833**; [DOI: 10.47162/RJME.62.3.17](https://doi.org/10.47162/RJME.62.3.17); **Q4**
53. D.F. Nica, A.G. Gabor, **V.-F. Duma***, V.G. Tudericu, A. Tudor, C. Sinescu, Sinus Lift and Implant Insertion on 3D Printed Polymeric Maxillary Models: Ex vivo training for in vivo surgical procedures, *J. of Clinical Medicine* **10**(20), 4718 (2021); EISSN 2077-0383; <https://doi.org/10.3390/jcm10204718>; **IF 4.964**; **Q2**
52. **V.-F. Duma***, A.-L. Dimb, Exact Scan Patterns of Rotational Risley Prisms Obtained with a Graphical Method: Multi-Parameter Analysis and Design, *Applied Sciences* **11**(18), 8451 (2021); ISSN 2076-3417; **IF 2.838**; <https://doi.org/10.3390/app11188451>; **Q2**
51. L. Orel, O.-A. Velea-Barta*, L.-M. Nica*, A.-S. Boscornea-Puscu, R.M. Horhat, R.-M. Talpos-Niculescu, C. Sinescu, **V.-F. Duma**, D.-D. Vulcanescu, F. Topala, M.-L. Negruțiu, Evaluation of the Shaping Ability of Three Thermally Treated Nickel–Titanium Endodontic Instruments on Standardized 3D-printed Dental Replicas Using Cone-Beam Computed Tomography, *Medicina-Lithuania* **57**(9), 901 (2021); ISSN 1648-9144; <https://doi.org/10.3390/medicina57090901>; **IF 2.948**; **Q3**
50. A.-S. Boscornea-Pușcu, L. Orel, O.-A. Velea-Barta*, R.M. Horhat, M.-L. Negruțiu, L.M. Nica, **V.-F. Duma***, D.I. Stoia, C. Opreș, C. Sinescu, Experimental study on the effects of torsional loading of three Ni-Ti endodontic instruments, *Applied Sciences* **11**(16), 7224 (2021); ISSN 2076-3417; <https://doi.org/10.3390/app11167224>; **IF 2.838**; **Q2**
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- **V.-F. Duma**, Optomechatronics with applications in biomedical and industrial imaging, *COST CA21159 PhoBioS Poster Session MC Meeting*, Higher Polytechnic School of Linares (Spain), Feb. 19-20, **2025**; (Poster);
- C. Sinescu, T. Hajaj, A.C. Novac, D. Negruț, I. Moldovan, D.M. Pop, A. Tănase, C. Zaharia, E.L. Petrescu, M. Rominu, **V.-F. Duma**, L. Kabai, M.L. Negruțiu, News in dental overdentures, *11th Napoca Biodent Symposium 2024*; (Oral Presentation)

- **V.-F. Duma**, Analyses and optimizations of galvanometer laser scanning, Proc. SPIE 13200, Electro-Optical and Infrared Systems: Technology and Applications XXI (*SPIE Sensors + Imaging*), 132000O, Edinburgh (UK), Sept. 16-19, **2024**; <https://doi.org/10.1117/12.3026241>; (Oral Presentation)
- M.-A. Duma, **V.-F. Duma***, Experimental study of laser scanning heads with refractive polygons, *SPIE Optical Systems Design*, Strasbourg (France), Apr. 7-11, **2024**; (Poster)
- M.-S. Duma, D. Drimbe, R.-A. Erdelyi, **V.-F. Duma***, I. Moldovan, A.-M. Heredea, E.R. Heredea, D.M. Pop, C. Sinescu, OCT for studying decontamination techniques of Dental Medicine equipment, *Biomedical Spectroscopy, Microscopy, and Imaging III – COST PhoBioS WS (SPIE Photonics Europe)*, Strasbourg (France), Apr. 7-11, **2024**; (Poster)
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- A. Maldar, **V.-F. Duma***, Programming and experiments of scan patterns performed with a 2D MEMS laser scanner, *2nd Int. Conf. Advances in 3OM: Opto-Mechatronics, Opto-Mechanics, and Optical Metrology*, Timisoara (Romania), Dec. 11-14, **2023**; (Poster)
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- G. Hutiu, **V.-F. Duma***, D. Dorin, A. Bradu. A. Podoleanu, Replacing the gold standard of SEM with OCT for forensic studies regarding metallic fractures, *SPIE Photonics Europe (Unconventional Optical Imaging III)*, Strasbourg (France), Apr. 3-7, **2022**; (Oral Presentation)
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