



Curriculum vitae Europass

Informații personale

Nume / Prenume

Adrese

Telefon

E-mail

Naționalitate

Data nașterii

Sex



Duma Virgil-Florin

Locul de muncă / Domeniul ocupațional

Profesor universitar Dr.-habil. inginer

Învățământ superior și cercetare științifică

(plus management în învățământul superior și în cercetare)

Experiența profesională

Perioada

2016 - Prezent

Funcția sau postul ocupat

Activități și responsabilități principale

Numele și adresa angajatorului

Tipul activității sau Sector de activitate

Perioada

2014 - Prezent

Funcția sau postul ocupat

Activități și responsabilități principale

Numele și adresa angajatorului

Tipul activității sau Sector de activitate

Perioada

2014 - Prezent

Funcția sau postul ocupat

Activități și responsabilități principale

Numele și adresa angajatorului

Perioada

2014 – Prezent

Funcția sau postul ocupat

SPIE Visiting Lecturer

Numele și adresa angajatorului

Perioada

2013 - Prezent

Funcția sau postul ocupat

Visiting Scientist, The Institute of Optics, Univ. of Rochester, NY, SUA (#1 in Optics in SUA)
<http://www.odalab-spectrum.org/Rochester/People.html>

| | |
|--|--|
| Perioada | 2012 |
| Funcția sau postul ocupat | Consilier ministerial |
| Perioada | 2009-2010 |
| Funcția sau postul ocupat | Senior Fulbright Research Fellow |
| Activități și responsabilități principale | Cercetare științifică (Predare – în secundar) |
| Numele si adresa angajatorului | US Dept. of State – Grant, The Institute of Optics, <i>Univ. of Rochester</i> , NY, SUA (#1 in Optics in SUA) |
| Tipul activitatii sau Sector de activitate | Cercetare științifică în Optomecatronică și Optică Biomedicală-OCT (Optical Coherence Tomography) |
| Perioada | 2009 - Prezent |
| Funcția sau postul ocupat | Visiting Senior Research Fellow și membru al Elliot College |
| Activități și responsabilități principale | Cercetare științifică |
| Numele si adresa angajatorului | School of Physical Sciences (Applied Optics Group), <i>University of Kent, Canterbury</i> (UK) http://www.kent.ac.uk/physical-sciences/research/aog/ |
| Tipul activitatii sau Sector de activitate | Cercetare științifică - Applied Optics și Biomedical Optics in OCT (Optical Coherence Tomography) |
| Perioada | 2006 - Prezent |
| Funcția sau postul ocupat | Profesor universitar |
| Activități și responsabilități principale | Cursuri, seminarii, lucrări de laborator, coordonare lucrări de diplomă; Cercetare științifică, conducere Proiecte de cercetare naționale și internaționale |
| Numele si adresa angajatorului | Dept. Design de Produs (DP) & AAMR, Facultatea de Inginerie, Univ. "Aurel Vlaicu" din Arad, Romania |
| Tipul activitatii sau Sector de activitate | Cursuri, seminarii și lucrări de laborator la Mecanisme, Instrumentație [optoelectronică], Ingineria calității, Inginerie biomedicală, Periferice de calculator, Management în inginerie industrială; Sisteme de calitate - Master Cercetare științifică (inclusiv management granturi științifice), coordonare proiecte de diplomă; Invățământ superior |
| Perioada | 2002 - 2006 |
| Funcția sau postul ocupat | Conferențiar universitar |
| Activități și responsabilități principale | Cursuri, seminarii, lucrări de laborator, coordonare lucrări de diplomă; Cercetare științifică |
| Numele si adresa angajatorului | Catedra DP & AAMR, Facultatea de Inginerie, Univ. "Aurel Vlaicu" din Arad, Romania |
| Tipul activitatii sau Sector de activitate | Cursuri, seminarii și lucrări de laborator la Mecanisme și Sisteme mecanice [de măsurare], Cercetare științifică (inclusiv management granturi științifice), conducere proiecte de diplomă; coordonare practică productivă, decan de an; Invățământ superior |
| Perioada | 1999 - 2002 |
| Funcția sau postul ocupat | Șef de lucrări |
| Activități și responsabilități principale | Cursuri, seminarii, lucrări de laborator, coordonare lucrări de diplomă; Cercetare științifică |
| Numele si adresa angajatorului | Catedra DP & AAMR, Facultatea de Inginerie, Univ. "Aurel Vlaicu" din Arad, Romania |
| Tipul activitatii sau Sector de activitate | Cursuri, seminarii și lucrări de laborator la Mecanisme; Cercetare științifică; coordonare practică productivă; Invățământ superior |
| Perioada | 1997 - 2001 |
| Funcția sau postul ocupat | Șef de lucrări |
| Activități și responsabilități principale | Cursuri, seminarii, lucrări de laborator, proiecte; Cercetare științifică |
| Numele si adresa angajatorului | Catedra de Organe de Mașini și Mecanisme, Facultatea de Mecanică, Univ. "Politehnica" din Timișoara |
| Tipul activitatii sau Sector de activitate | Cursuri, seminarii și lucrări de laborator la Mecanisme, Aparate de măsură și control; Cercetare științifică, conducere proiecte de diplomă, coordonare practică productivă; Invățământ superior |
| Perioada | 1994 - 1997 |
| Funcția sau postul ocupat | Asistent universitar |
| Activități și responsabilități principale | Seminarii, lucrări de laborator, proiecte; Cercetare științifică |
| Numele si adresa angajatorului | Catedra de Organe de Mașini și Mecanisme, Facultatea de Mecanică, Univ. "Politehnica" Timișoara |

| | |
|--|---|
| Tipul activitatii sau Sector de activitate | Seminarii, lucrări de laborator și proiecte la Aparate și sisteme de măsurare, Calculul și construcția aparatelor optice; Cercetare științifică, conducere proiecte de diplomă, coordonare practică productivă; Învățământ superior |
| Perioada | 1991 - 1994 |
| Funcția sau postul ocupat | Preparator universitar |
| Activități și responsabilități principale | Seminarii, lucrări de laborator, proiecte; Cercetare științifică |
| Numele și adresa angajatorului | Catedra de Organe de Mașini și Mecanisme, Facultatea de Mecanică, Univ. "Politehnica" Timișoara |
| Tipul activitatii sau Sector de activitate | Cursuri, seminarii și lucrări de laborator la Aparate și sisteme de măsurare, Calculul și construcția aparatelor optice, Optică tehnică, Aparate spectro-fotometrice; Cercetare științifică, coordonare practică productivă; Învățământ superior |
| Educație și formare | |
| Perioada | 2013 |
| Calificarea / diploma obținută | Abilitare / Conducere doctorat – domeniul Inginerie mecanică, mecatronică și robotică |
| Disciplinele principale studiate / competențe profesionale dobândite | Titlul tezei de abilitare: "Optomechatronic Modulators: Choppers, Attenuators and Scanners. Analysis and Design" Președinte Comisie de abilitare: Acad. Dr. Fiz. Valentin Vlad (Președinte Academia Română); Membrii: Prof. N. Puscas (UPB), Prof. J.P. Huignard (Institute Lavoisier, France), Dr. G. Perrone (Univ. Torino, Italy). |
| Numele și tipul instituției de învățământ | Univ. "Politehnica" din București, România |
| Perioada | 1994 - 2001 |
| Calificarea / diploma obținută | Doctor în Științe Inginerești |
| Disciplinele principale studiate / competențe profesionale dobândite | Titlul tezei de doctorat: " <i>Contribuții la analiza și sinteza sistemelor de scanare</i> ", coordonator științific Prof. Dr. ing. Dan Perju |
| Numele și tipul instituției de învățământ | Univ. "Politehnica" din Timisoara, Facultatea de Mecanică, România |
| Nivelul în clasificarea națională sau internațională | Nivel superior, calificativul cum laude |
| Perioada | 1986-1991 |
| Calificarea / diploma obținută | Inginer diplomat (1985-1986 efectuat stagiul militar, Termen redus) |
| Disciplinele principale studiate / competențe profesionale dobândite | Mecanică fină și optică Media generală 9,84, cu nota 10 la lucrarea de diplomă: " <i>Colorimetru tricromatic cu sinteză mixtă</i> "; coordonator științific Prof. Dr. Fiz. Ioan Mihalca |
| Numele și tipul instituției de învățământ | Univ. "Politehnica" din Timisoara, România, Facultatea de Mecanică |
| Nivelul în clasificarea națională sau internațională | Nivel superior, calificativul summa cum laude (valedictorian) șef de promoție (din aprox. 140 studenți) |
| Premii | Olimpiadele studențești Traian Lalescu: 1989 (anul 3) National: premiul special - Mecanica fluidelor ; <i>local</i> : premiul 1 - Mecanica fluidelor, premiul 1 - Electrotehnică; 1988 (anul 2) National: premiul 1 – Fizică (electromagnetism, optică, mecanică cuantică) ; premiul special - Matematică ; <i>local</i> : premiul 1 - Matematică, premiul 1 - Fizică; 1987 (anul 1) National: premiul 3 – Fizică (mecanică & termodinamică) ; <i>local (Centrul Universitar Timisoara)</i> : premiul 1 - Fizică, mențiune - Engleză; Premiul special comunicări științifice studențești - Matematică; |
| Perioada | 1981 - 1985 |
| Calificarea / diploma obținută | Diploma de Bacalaureat, medie bacalaureat 9,66 (prima medie pe liceu) |
| Numele și tipul instituției de învățământ | Liceul de Matematică-Fizică "Ioan Slavici" Arad, România (în prezent Colegiul Național „Moise Nicoară” Arad) |
| Premii | Premiul 2 Olimpiada de Fizică, jud. Arad, 1982. |
| Aptitudini și competențe personale | |
| Limba maternă | Română |

Limbi străine cunoscute

Autoevaluare

Nivel european (*)

Engleză

Franceză

1994 TOEFL Exam – Lb. Engleză: Score 627 din 640

| Înțelegere | | Vorbire | | Sciere |
|------------|--------|-------------|--------------|------------------|
| Ascultare | Citire | Conversație | Discurs oral | Exprimare scrisă |
| C2 | C2 | C2 | C2 | C2 |
| C2 | C2 | C1 | C1 | C1 |

(*) [Nivelul Cadrului European Comun de Referință Pentru Limbi Străine](#)

Management echipe de cercetare de peste 30 de persoane (de exemplu 36 de cercetători angajați în Proiectul Parteneriate 2012-2016, <http://3om-group-optomechatronics.ro/>);
 Coordonarea activității științifice instituțional - **Secretar Științific Catedră** (2004-2006) și **Facultate de Inginerie** (2008-2011); **Director Centru de Cercetare în Inginerie Mecanică** (UAV Arad) – din 2013;
 Coordonarea activității studenților la cercurile științifice și la proiectele de diplomă. Mentorat.

Prelegeri invitate la Universități internaționale și Simpozioane științifice:

Duma V.-F., Biomedical Imaging using Optical Coherence Tomography (OCT). An Insight into Technology, Devices, and Applications, *The 6th Euro-China Conference on Intelligent Data Analysis and Applications*, <https://www.ecc2019.ro/invited-speaker/>, Arad (Romania), Oct. 15-18, **2019**;

Duma V.-F., 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 (RIO-OPTILAS)*, [link](#), Cancun (México), Sept. 23-27, **2019**;

Duma V.-F., Optical Choppers: Classical, Eclipse, and with Rotational Shafts, *6th Advanced Electromagnetics Symposium (AES)*, <https://AES19/invited>, Lisbon (Portugal), July 24-26, **2019**;

Duma V.-F., Optomechatronics and Biomedical Imaging. Projects at UAV Arad, *21th Intl. Students Sc. Comm. Session of the Fac. of Eng. of the Aurel Vlaicu Univ. of Arad*, June 14-15, **2019**;

Duma V.-F., Devices and Systems for Biomedical and Industrial Applications of Optical Coherence Tomography (OCT), *Universidad de Guadalajara* (<http://www.cucei.udg.mx/>), Jalisco (México), Nov. 28, **2018** (Magistral Conference);

Duma V.-F., 2 SPIE Invited Lectures: 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/>) (México), Nov. 29-30, **2018**;

Duma V.-F., 2 Tutorials and Workshops (3h each): 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**;

Duma V.-F.*, C. Sinescu, Gh. Hutiu, A. Bradu, A. Podoleanu, Applications of Optical Coherence Tomography in non-destructive testing, *Biommedd 2018*, Cluj-Napoca (Romania), Sept. 27-29, **2018**;

Duma V.-F., 2D scanning systems, patterns, and handheld probes for biomedical imaging, *2nd Intl Congress on Lasers in Dentistry* (<http://lasercongress-srls.com/>), Mamaia, Sept. 5-7, **2018** (Plenary);

Duma V.-F., Scanning patterns in imaging, at the School of Physical Sciences (Applied Optics Group), *Univ. of Kent, Canterbury* (UK), Aug. 10, **2018**;

Duma V.-F., Scanning systems: from industrial to high-end biomedical applications using optical coherence tomography, *IX Int'l Conference for Professionals & Young Scientists "Low Temperature Physics" ICPYS-LTP-2018*, Kharkiv (Ukraine), June 4-8, **2018** (SPIE Invited Lecture);

Duma V.-F., Laser scanners for high-end biomedical imaging, *City Univ. of New York, NY* (USA), Oct. 13, **2017** (Invited Seminar – Dept. of Mechanical Engineering);

Duma V.-F., Sinescu C., Demian D., Hutiu Gh., Dobre G., Bradu A., Podoleanu A. Gh., Biomedical imaging with Optical Coherence Tomography. Systems and applications, *2nd Intl Seminar on Biomaterials and Regenerative Medicine (BioRemed)*, Timisoara (Romania), Oct. 5, **2017**;

Duma V.-F., Theoretical and experimental approaches on galvanometer scanners for high-end biomedical imaging applications, *5th Advanced Electromagnetics Symposium*, Incheon-Seoul (South Korea), July 27, **2017**;

Duma V.-F., Demian D., Dobre G., Sinescu C., Hutiu Gh., Bradu A., Podoleanu A. Gh., Laser scanning optimization for high-end applications in biomedical imaging, *SPIE-SRLS 7th International Conference on Lasers in Medicine* [ISI], Timisoara (Romania), July 14, **2017**;

Duma V.-F., Laser scanners with oscillatory mirrors for high-end applications, *TIM Physics Conference* [ISI], Timisoara (Romania), May 25-27, **2017** (Keynote Lecture);

Duma V.-F.*, Hutiu Gh., Demian D., Bradu A., and Podoleanu A. Gh., Optical Coherence Tomography in Metallic Materials Characterization, *RoMAT2016*, Bucharest (Romania), Nov. 10-12, **2016**;

Sinescu C.*, **Duma V.-F.**, Negrutiu M. L., Rominu M., Ionel R.C., and Podoleanu A. Gh., Evaluation of dental applications by Non-Invasive Methods, *RoMAT2016*, Bucharest (Romania), Nov. 10-12, **2016**;

Duma V.-F.*, Demian D., Dobre G., Cernat R., Sinescu C., Topala F., Hutiu Gh., Negrutiu M., Bradu A., and Podoleanu A. Gh., Optical Coherence Tomography: Handheld scanning probes with galvanometer scanners, *TIM 15-16 Physics Conference*, Timisoara (Romania), May 26-28, **2016**;

Duma V.-F., Optimization of biomedical systems for OCT with applications in Dental Medicine, *21th Congress of Dental Medicine – Banat Dentistry Days*, Timisoara (Romania), May 21, **2016**;

Duma V.-F.*, Demian D., Hutiu Gh., Sinescu C., Topala F., Negrutiu M. L., Dobre G., Bradu A., Podoleanu A. Gh., Biomedical imaging using Optical Coherence Tomography. Devices, systems, and applications, *BioRemed Intl Conference*, Oradea (Romania), Sept. 19, **2015**, [BioRemed International Conference](#);

Duma V.F., Handheld scanning probes for OCT: Developments, applications and perspectives, *World Federation of Lasers in Dentistry – European Division (WFLD-ED) 5th Congress & SRLS-SPIE 6th Intl Conference Lasers in Medicine* [ISI], Timisoara (Romania), May 8, **2015**, published in *Proc. SPIE*;

Duma V.-F., Scanning systems: from industrial to high-end biomedical applications (SPIE Invited Lecture – at *Optics & Photonics Applications (OPA) Conference*), *Univ. of Guanajuato, Salamanca* (Mexico), Sept. 2, **2015**; http://spie.org/StudentChapterReports/Guanajuato_Report_201509.pdf

Duma V.-F., Biomedical imaging using Optical Coherence Tomography. Devices, systems, and applications (Invited Lecture), *BioRemed International Conference*, Oradea (Romania), Sept. 19, **2015**; <http://bioremed2015.srb.ro/7/programme>

Duma V.-F., Handheld Probes and Galvoscaning in OCT. On-going Industrial and Biomedical Applications (Invited Seminar), School of Physical Sciences (Applied Optics Group), *Univ. of Kent, Canterbury* (UK), Feb. 20, **2015**;

Duma V.-F., Biomedical Imaging and Optical Coherence Tomography: Scanning Systems and Applications (Invited Presentation), *Academic Days of the Victor Babes Univ. of Medicine and Pharmacy of Timisoara* (Romania), Dec. 12, **2014**;

Duma V.F., Scanning in Optical Coherence Tomography (Invited Lecture), *National Univ. of Ireland (NUI) at Galway* (Ireland), Nov. 24, **2014**; http://tomi.nuigalway.ie/SPIE_NUIG_UL/spie_events.html

Duma V.F., Renewable Energies – Two Projects and a Global Perspective (Invited Presentation), BHB–Sustainable development business center HURO/1101/175/2.1.1, *Romania-Hungary 2007-2013 Program of Trans-frontiers Cooperation* (www.huro-cbc.eu), Arad (Romania), Apr. 11, **2014**

Duma V.F., 1-D and 2-D Scanning Systems in Biomedical Imaging (Invited Seminar), at the School of Physical Sciences (Applied Optics Group), *Univ. of Kent, Canterbury* (UK), Nov. 7, **2013**;

Duma V.F., Scanning in biomedical imaging: from classical devices to handheld heads and micro-systems, *SRLS-SPIE 5th Intl Conference Lasers in Medicine* [ISI], Timisoara (Romania), Sept. 19-21, **2013**, published in *Proc. SPIE*, <http://dx.doi.org/10.1117/12.2042733>

Duma V.F., Galvanometer-based Scanners in Optical Coherence Tomography (OCT) (Invited Seminar), *City Univ. of New York* (USA), Febr. 14, **2013**;

Duma V.F., Optical Engineering: Scanners, Choppers, Lenses, and Much More. A Mathematical Approach (3 Invited Lectures, Fulbright OLP), *Ana G. Mendez University System (AGMUS): Univ. Metropolitana, Univ. del Este, and Univ. Turabo*, San Juan (Puerto Rico, USA), March 19-22, **2010**;

Duma V.F., Optic al Scanners in Medical Imaging. An Optomechanical Perspective (Invited Seminar, Fulbright OLP - Occasional Lecturer Program), *City University of New York* (USA), April 15, **2010**;

Duma V.F., Optical scanners (Invited Lecture - for PhD Students), *The Institute of Optics, University of Rochester* (NY, USA), Mar. 03, **2010**;

Duma V.F., Invited Presentations (Tutorials), *Hopkins Center for Optical Metrology, Institute of Optics, University of Rochester*, Rochester (NY, USA): 1) Applications and types of scanners (Nov. 03, **2009**); 2) Scanners – fundamentals (Nov. 17, **2009**); 3) Constructive characteristics of scanners (Dec. 01, **2009**); 4) Perspectives of optical scanning in OCT (Jan. 20, **2010**);

Duma V.F., Mathematical functions of a 2-D scanner with oscillating elements, *9th Conference on Dynamic Systems Theory and Applications*, Łódź (Poland), Dec. 17-20, **2007** (Invited Paper); published as chapter in Springer; doi.org/10.1007/978-1-4020-8778-3_22;

Duma V.F., Kaposta I., Tusz F., Achievement of the South-West Axis in Industrial Robots, Arad zone, of the EUROP-RO Technology Platform, *2nd EUROP-RO Symposium*, Bucharest (Romania), April 26, **2007**, C D-ROM (Plenary Presentation), <http://www.europ-ro.ro/v1/ro/documente/58>;

Duma V.F., Contributions on the Design of the Optical Systems (Laser Scanning Devices) (Invited Presentation), Dept. of Physics, *Jacobs University of Bremen*, Bremen (Germany), Oct. **2004**;

Competențe și aptitudini
organizatorice

Sef și fondator **3OM Research Group** (in Opto-Mechatronics, Optics & Mechanics, and Optical Metrology), <http://3om-group-optomechatronics.ro/> - si al **Laboratorului de Opto-Mecatronică si Fonică Biomedicală** la *Aurel Vlaicu Univ. of Arad* – din 2008,
Secretar științific Facultatea de Inginerie (2008-2011), Secretar științific catedră (2004-2006).
Organizator al Secțiunii de Inginerie a Simpozionului „Research and Education in the Innovation Era,” Arad; 2008, 2010 - editor al cărții de Proceedings.
Organizator al Sesiunilor anuale de comunicări științifice studențești Inginerie UAVA (2008, 2009, 2011).
Sef al Laboratorului de Mecanisme la *Aurel Vlaicu Univ. of Arad* – din 1999.

Competențe și aptitudini tehnice

Managementul proiectelor de cercetare științifică; Membru și Director în peste 16 granturi de cercetare câștigate prin competiție. Director Proiecte IDEI, PARTENERIATE, FULBRIGHT, PED, BG, responsabil partener proiect PTE; elaborare brevete.

Competențe și aptitudini de utilizare
a calculatorului

Utilizator calculator și internet;
Competențe de modelare și simulare în programe specializate

| | |
|--|--|
| Rezultate obținute în cercetarea științifică | http://scholar.google.ro/citations?hl=ro&user=gBRLlfcAAAAJ&view_op=list_works http://www.researcherid.com/rid/B-3031-2010 Scopus Author ID 9839230700 |
| Publicații | <p>263 lucrări științifice publicate sau/și prezentate (66 ca unic autor, 55 ca prim, 142 ca și co-autor): 39 în reviste ISI cu factor de impact; 53 în alte reviste cu peer-review; 108 în proceedings indexate ISI; 63 în proceedings-urile altor conferințe. 1 brevet național – OSIM 2 cereri de brevet național – OSIM. https://www.researchgate.net/profile/Virgil-Florin_Duma 40 Prezentări invitate la conferințe sau universități internaționale; 100 prezentări orale și poster la conferințe (fără proceedings, cu rezultate publicate).</p> |
| Cărți | <p>2 capitole în cărți internaționale (Springer); 2 cursuri universitare (co-autor); 2 monografii științifice (unic author); 3 îndrumare de laborator (co-autor); 7 cărți ca editor (2 îndrumare de laborator, 3 ISI Proc., 2 Proc.);</p> |
| Citări în reviste ISI (exemple) | <p><i>Scientific Reports – Nature Group</i> (IF>5), <i>Optics Express</i> (IF>3.4), <i>Biomedical Optics Express</i> (IF>3.4), <i>Physics in Medicine and Biology</i> (IF>3), <i>Applied Optics</i> (IF>1.5), <i>J of Optics</i> (IF>2), <i>Optics & Laser Technology</i> (IF>1.5), <i>Revista de Chimie</i> (IF>0.5), <i>Materiale Plastice</i>, <i>J. Opt. Soc. Am. A</i> (IF>1.5), <i>J Multimedia Tools and Applications</i> (IF>1), <i>Lasers in Surgery and Medicine</i> (IF>5), <i>Applied Science</i> (IF>1.3), <i>J. Micro/Nanolith. MEMS MOEMS</i> (IF>1), etc.</p> |
| Citări în alte reviste, conferințe, etc | <p><i>Chinese J. of Optics and Applied Optics</i>, <i>Brazilian Journal of Instrumentation and Control</i>, <i>Proceedings of SPIE</i>, <i>Proceedings of IEEE</i>, <i>dizertatii de Master si teze de doctorat</i>, etc. - v. <i>Google Academic</i></p> |
| Indicatori bibliometrici personali | <p>Indicele Hirsch 18, suma citărilor în ISI Web of Science (fără autocitări): 301; în Google Academic (fără autocitări): > 320 http://scholar.google.ro/citations?hl=ro&user=gBRLlfcAAAAJ&view_op=list_works http://orcid.org/0000-0001-5558-4777 http://www.researcherid.com/rid/B-3031-2010 Scopus Author ID 9839230700 (<i>h-index</i>=19, <i>Scopus</i>) http://orcid.org/0000-0001-5558-4777 http://scholar.google.ro/citations (<i>h-index</i>=21, <i>Google Scholar</i>) https://www.brainmap.ro/virgil-florin-duma Conform criteriilor MECS 2011, domeniul inginerie mecanică, mecatronică și robotică, respectiv inginerie electrică, sunt îndeplinite condițiile pentru Profesor universitar abilitat / conducător de doctorat – cf. LEN 1/2011: I > 5, P > 6, C > 5</p> |
| Membru în colectivul de redacție al unei reviste științifice | <p>Editor-in-Chief (și fondator), <i>Scientific and Technical Bulletin of the Aurel Vlaicu Univ. of Arad, Series: Mechanical Engineering</i>, www.uavsb.xhost.ro, nationally recognized by the Romanian CNCS / NURC (National University Research Council) since 2006; Membru Editorial Board, <i>J of Adhesion Science and Technology</i> (Taylor & Francis) IF≈1, din 2016</p> |
| Conducere societăți științifice internaționale/naționale | <p>Vice-președinte și reprezentant al UAV Arad în EUROP-RO, filială a European Robotics Platform EUROP – din 2006; Președinte filiala Arad a SRR (Romanian Robotics Society), 2013-2016;</p> |
| Membru în societăți științifice internaționale/naționale | <p>Senior Member SPIE (International Society for Optical Engineering, USA) – din 2011, membru din 2005 Life Member, Fulbright Association, USA – din 2012; OSA (Optical Society of America, USA) – din 2007 – Life Member din 2014; European Technology Platform Photonics21 – din 2006.</p> |

| | |
|---|--|
| Referent științific la reviste ISI / internaționale / naționale | <p>Optical Society of America (www.osa.org): <i>Optics Express</i> (IF>3), <i>Biomedical Optics Express</i> (IF>3), <i>Optics Letters</i> (IF>3), <i>J. Opt. Soc. Am. A</i> (IF>1.5), <i>Applied Optics</i> (IF>1.5): 5-8 reviews/year, www.osa.org, din 2007;</p> <p>Springer: <i>Acta Mechanica Sinica</i> (IF≈0.7), din 2010; <i>Differential Eqs and Dynamic Systems</i>, since 2012; <i>J of Zhejiang University SCIENCE A</i> (IF≈0.5), din 2012;</p> <p>Elsevier: <i>Optics Communications</i> (IF≈1.5), din 2015; <i>Mechatronics</i> (IF≈1.8), din 2015; <i>Control Eng. Practice</i> (IF≈1.8), din 2015; <i>Applied Mathematical Modelling</i> (IF>2), din 2016;</p> <p>Wiley: <i>Lasers in Surgery & Medicine</i> (IF>2.5), din 2015;</p> <p>IEEE: <i>IEEE Access</i> (IF>3), din 2017; <i>IEEE Transactions on Industrial Electronics</i> (IF>5), din 2015; <i>IEEE/ASME Transactions on Mechatronics</i> (IF≈3.5), din 2015;</p> <p>ASME: <i>J of Medical Devices</i> (IF>0.5), din 2015;</p> <p>IOP (UK): <i>J of Optics</i> (IF>2), din 2015; <i>Measurement Science and Technology</i> (IF>1.4), din 2015;</p> <p>AIP: <i>Theoretical & Applied Mechanics Letters</i>, din 2012;</p> <p>SAGE: <i>J of Engineering in Medicine</i> (IF>1), din 2014;</p> <p><i>Latin American Journal of Solids and Structures</i> (IF>1), din 2012;</p> <p>Taylor & Francis: <i>J of Adhesion Science and Technology</i> (IF≈1), din 2015; <i>Phase Transitions</i> (IF≈1), din 2015;</p> <p>MDPI: <i>Applied Sciences</i> (IF>1.7), din 2016; <i>Sensors</i> (IF>2), din 2017;</p> <p><i>Optica Applicata</i> (IF<1), din 2016;</p> <p>Hindawi: <i>Advances in Optical Technologies</i>, din 2011;</p> <p><i>Journal of Visualized Experiments</i>, din 2016;</p> <p>L&P, <i>Discontinuity, Nonlinearity, and Complexity</i>, din 2016;</p> |
| Evaluator Proiecte de cercetare științifice | <p>Din 2017: Reviewer - Grants of the Czech Science Foundation; 1 Propunere evaluată;</p> <p>Din 2013: Reviewer - Grants of the Foundation for Polish Science; 4 Propuneri evaluate;</p> <p>Din 2010: Reviewer - Fulbright Grants of the US Department of State; 10 Propuneri evaluate;</p> <p>Din 2008: Reviewer - Grants with European Union Funding (POS); Propuneri evaluate: 16 (2009); 6 (2010); 9 (2011), 8 (2012), 5 (2013); 5 (2015); 3 (2016);</p> <p>Din 2007: Reviewer - Grants of the Romanian R&D Plan; Propuneri evaluate: 30 (2007), 13 (2008), 4 (2010), 8 (2011), 3 (2014), 1 (2014), 15 (2015), 1 (2017);</p> |
| Organizare conferințe științifice | <p>Chair, Editor-SPIE Proc. [ISI], Member-Scientific & Organizing Committee, reviewer, and Chairman of Session - SRLS 7th Intl. Conf. Lasers in Medicine (ICLM), Timisoara (Romania) 2017;</p> <p>Member of the Scientific Committee and reviewer, 2nd Intl Seminar on Biomaterials and Regenerative Medicine (BioReMed), Timisoara (Romania) 2017;</p> <p>Chair, Editor - SPIE Proceedings [ISI], Member - Scientific Committee, Organizing Committee, reviewer, and Chairman of Session - SPIE 5th Congress of the World Federation of Lasers in Dentistry-European Division (WFLD-ED) & 6th SRLS Intl. Conference Lasers in Medicine (ICLM) (http://wflde-bucharest2015.wix.com/romania), Bucharest (Romania) 2015;</p> <p>Chair, Editor - SPIE Proceedings [ISI], Member - Scientific Committee, Organizing Committee, Chairman of Session-SRLS 5th Intl Conference Lasers in Medicine (ICLM), Timisoara (Romania) 2013;</p> <p>Chairman of Session "Applications in high-tech products," 11th IFToMM Intl Symposium on the Theory of Machines and Mechanisms – SYROM (http://arotmm.ro/syrom2013/), Brasov (Romania) 2013 [ISI];</p> <p>Chairman 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;</p> <p>Member of the Scientific Committee, Chairman of Session, and reviewer, Intl. Conf. on Dynamic Systems Theory and Applications (DSTA), Lodz (Poland), 2007-2019 (http://www.dys-ta.com/); la fiecare doi ani;</p> <p>Chairman of Session: Optics in Precision Mechanics and Mechatronics, 8th Intl. Conference on Mechatronics and Fine Mechanics (COMEFIM), Cluj-Napoca (Romania), June 8-10, 2006;</p> <p>Member, Organizing Committees & reviewer of the Proc. of ISREIE (Aurel Vlaicu Univ.), Arad (Romania), 2000, 2002, 2004, 2006, 2008, 2010; Editor of the Engineering Proceedings, 2008, 2010.</p> |

- B16. **Duma V.-F.**, *Mecanisme. Teme experimentale*, ISBN 978-606-675-185-8, Ed. Gutenberg Univers, Arad **2018**, 140 pages;
- B15. C. Todea, A. Podoleanu, and V.-F. Duma (Eds.), *Proceedings of SPIE [ISI]*, Vol. **10831**, 7th Int'l Conference on Lasers in Medicine (ICLM): Advanced Laser Technologies in the Hands of Medicine, Timisoara (Romania), July 13-16, 2017 (SPIE Press, Bellingham, WA, USA, **2018**), ISSN 1605-7422, ISBN 9781510622876, 164 pages; 24 papers (Front Matter: <https://doi.org/10.1117/12.2513212>); <http://spie.org/Publications/Proceedings/Volume/10831>
- B14. **Duma V.-F.**, Galvanometer laser scanning: Custom-made input signals for maximum duty cycles in high-end imaging applications, 6th European Conference on Mechanism Science (EUCOMES) - New Trends in Mechanism and Machine Science, *Mechanisms and Machine Science* **43**, P. Wenger and P. Flores, Eds., 269-277, Nantes (France), Sept. 20-23, 2016; ISSN 2211-0984; ISBN 978-3-319-44155-9; Springer **2017**; DOI 10.1007/978-3-319-44156-6_28
- B13. Todea C., Podoleanu A. Gh., and **Duma V.-F.** (Eds.), *Proceedings of SPIE [ISI]*, Vol. **9670** - PROGRESS IN BIOMEDICAL OPTICS AND IMAGING 16(62), 5th Congress of the World Federation of Lasers in Dentistry-European Division (WFLD-ED) & 6th Intl Conference on Lasers in Medicine: High-end Medicine Based on Laser and Biotechnologies, Bucharest (Romania), May 7-9, 2015 (SPIE Press, Bellingham, WA, USA, **2016**), ISSN 1605-7422, ISBN 9781628418934, 300 pages; 37 papers (ISI Accession Number: WOS); <http://spie.org/Publications/Proceedings/Volume/9670>
- B12. Todea C., Podoleanu A. Gh., and **Duma V.-F.** (Eds.), *Proceedings of SPIE [ISI]*, Vol. **8925** - PROGRESS IN BIOMEDICAL OPTICS AND IMAGING 15(44), 5th Intl Conference on Lasers in Medicine: Biotechnologies Integrated in Daily Medicine, Timisoara (Romania), Sept. 19-21, 2013 (SPIE Press, Bellingham, WA, USA, **2014**), ISSN 0277-786X, ISBN 978-0-8194-9817-5, 264 pages; 33 papers (ISI Accession Number: WOS:000333186500001); <http://spie.org/Publications/Proceedings/Volume/8925>
- B11. **Duma V.-F.***, Nicolov M. F., Kiss M., Ilca T., Mnerie C., Demian D. and Szantho L., Choppers: Optomechatronic Devices for the Controlled Modulation of Light, in *Mechanisms, Transmissions and Applications*, Mechanisms and Machine Science, Vol. 3, 129-134, Lovasz E.C., Corves B., Eds., ISSN 2211-0984, ISBN 978-94-007-2726-7, Springer **2011**, <http://dx.doi.org/10.1007/978-94-007-2727-4>;
- B10. **Duma V.-F.** (Ed.), *Proceedings of the 3rd International Symposium: Research and Education in an Innovation Era, Engineering Sciences*, ISSN 20652569, Arad, Nov. 10-12, **2010**;
- B9. **Duma V.-F.** (Ed.), *Proceedings of the 2nd International Symposium: Research and Education in an Innovation Era, Engineering Sciences*, ISSN 20652569, Arad, Nov. 20-22, **2008**, 502 pages;
- B8. **Duma V.-F.** (Ed.), *Tools, Devices, and Control Apparatuses. Experimental Topics* (in Romanian), Aurel Vlaicu Univ. Publishing House, ISBN 978-973-752-283-2, Arad, **2008**, 194 pages;
- B7. Perju D., Ianosi E., Mateas M., **Duma V.-F.**, *Measuring Apparatuses and Systems. Experimental Works* (in Romanian), Politehnica, ISBN 973-625-194-2, Timisoara, **2005**, 267 pages.
- B6. **Duma V.-F.**, *Scanning* (in Romanian), Politehnica, ISBN 973-625-191-8, Timisoara, **2004**, 190 pages.
- B5. **Duma V.-F.**, *Vignetting* (in Romanian), Politehnica, ISBN 973-625-154-3, Timisoara, **2004**, 124 pages;
- B4. Perju D., Davidescu A., Mateas M., **Duma V.-F.**, *Measurement and Control Apparatuses. Metrology* (in Romanian), University Horizons, ISBN 973-8109-60-4, Timisoara, **2001**, 106 pages;
- B3. Nicoara I., Gruescu C., Atitoaie V., **Duma V.-F.**, *Optical Apparatuses, Vol. I* (in Romanian), University Horizons, ISBN 973-944-96-5, Timisoara, **2000**, 248 pages;
- B2. Nicoara I., **Duma V.-F.** (Eds.), *Optical Apparatuses. Experimental Topics* (in Romanian), Miron, ISBN 973-578-134-4, Timisoara, **1996**, 224 pages;
- B1. Pommersheim A., Varga St., Gruescu C., Zsivanov D., **Duma V.-F.**, *Technical Optics. Laboratory Works* (in Romanian), Polytechnics Univ. Publishing House, Timisoara, **1995**, 101 pages;

Articole reprezentative
în reviste indexate
ISI Web of Science,
cu Factor de Impact (IF)

- selectie

(vezi Anexa pentru Lista completa)

- V.-F. Duma, Optical attenuators with Risley prisms and disk choppers, *Proceedings of the Romanian Academy Series A* **20**(2), 141-150 (2019); ISSN 1454-9069; <https://acad.ro/sectii2002/proceedings/doc2019-2/05-Duma.pdf>; **ISI IF 1.402/2018**; OPEN ACCESS; **Q3**;
- R. Luca, C. D. Todea*, V.-F. Duma*, A. Bradu, A. Podoleanu, Quantitative assessment of rat bone regeneration using complex master-slave optical coherence tomography, *Quantitative Imaging in Medicine and Surgery (QIMS)* **9**(5), 782-798 (2019); ISSN 2223-4292; <http://dx.doi.org/10.21037/qims.2019.05.03>; **ISI IF 3.074/2018**; OPEN ACCESS; **Q2**
- V.-F. Duma*, C. Sinescu*, A. Bradu, A. Podoleanu, Optical Coherence Tomography Investigations and Modeling of the Sintering of Ceramic Crowns, *Materials* **12**(6), 947 (2019); EISSN 1996-1944; <https://doi.org/10.3390/ma12060947>; **ISI IF 2.972/2018**; OPEN ACCESS; **Q2**
- V.-F. Duma, Laser scanners with oscillatory elements: Design and optimization of 1D and 2D scanning functions, *Applied Mathematical Modelling* **67**(3), 456-476 (2019); ISSN 0307-904X; <https://doi.org/10.1016/j.apm.2018.11.001>; **ISI IF 2.617/2017**; **Q1**
- C. Sinescu, V.-F. Duma*, D. Dodenciu, S. Stratul, M. Manole, Gh. E. Draganescu, Mechanical properties of the periodontal system and of dental constructs deduced from the free response of the tooth, *J. of Healthcare Eng.*, ID 4609264 (2018); ISSN 2040-2295; <https://doi.org/10.1155/2018/4609264>; **ISI IF 1.261/2017**; **Q4**
- Gh. Hutiu, V.-F. Duma*, D. Demian, A. Bradu, A. Podoleanu, Assessment of ductile, brittle, and fatigue fractures of metals using optical coherence tomography, *Metals* **8**(2), 117 (2018); ISSN 2075-4701; doi: [10.3390/met8020117](https://doi.org/10.3390/met8020117); **ISI IF 1.704/2017**; **Q2**
- V.-F. Duma* and A. Schitea, Laser scanners with rotational Risley prisms: Exact scan patterns, *Proceedings of the Romanian Academy, Series A* **19**(1), 53-60 (2018); ISSN 1454-9069; <http://www.acad.ro/sectii2002/proceedings/doc2018-1/08.pdf>; **ISI IF 1.752/2017**; **Q2**¹
- Beiu R.-M.*, Beiu V., and Duma V.-F.*, Fiber optic mechanical deformation sensors employing perpendicular photonic crystals, *Optics Express* **25**(19), 23388-23398 (2017); ISSN 1094-4087; **ISI IF 3.307/2016**; <https://doi.org/10.1364/OE.25.023388>; **Q1**
- Sinescu C., Bradu A., Duma V.-F.*, Topala F., Negrutiu M. L., Podoleanu A. Gh., Effects of the temperature variations in the technology of metal ceramic dental prostheses: Non-destructive detection using optical coherence tomography, *Applied Sciences* **7**(6), 552 (2017) **ISI IF 1.679/2016**; doi: [10.3390/app7060552](https://doi.org/10.3390/app7060552); **Q3**
- Mnerie C.*, Preitl S., and Duma V.-F.*, Galvanometer-based scanners: Mathematical model and alternative control structures for improved dynamics and immunity to disturbances, *International Journal of Structural Stability and Dynamics* **17**(5), 1740006 (2017); ISSN 0219-4554; **ISI IF 1.617/2016**; doi: [10.1142/S0219455417400065](https://doi.org/10.1142/S0219455417400065); **Q2**
- Duma V.-F., Polygonal mirror laser scanning heads: Characteristic functions, *Proceedings of the Romanian Academy Series A-Mathematics Physics Technical Sciences Information Science* **18**(1), 25-33 (2017); ISSN 1454-9069; **ISI IF 1.623/2016**; <http://www.acad.ro/sectii2002/proceedings/doc2017-1/04Duma.pdf>; **Q2**
- Cogliati A., Canavesi C.*, Hayes A., Tankam P., Duma V.-F., Santhanam A., Thompson K. P., and Rolland J. P., MEMS-based handheld scanning probe with pre-shaped input signals for distortion-free images in Gabor-Domain Optical Coherence Microscopy, *Optics Express* **24**(12), 13365-13374 (2016); ISSN 1094-4087; **ISI IF 3.307**; <http://dx.doi.org/10.1364/OE.24.013365> - also selected & published in *Virtual J. for Biomedical Optics* **11**(7), ISSN 1931-1532 (2016); OPEN ACCESS; **Q1**
- Craciunescu E., Sinescu C., Negrutiu M. L., Pop D. M., Lauer H.-C., Rominu M., Hutiu Gh., Bunoiu M., Duma V.-F.*, Antoniac I., Shear Bond Strength Tests of Zirconia Veneering Ceramics after Chipping Repair, *J of Adhesion Science and Technology* **30**(6), 666-676 (2016); ISSN 0169-4243; **ISI IF 0.961**; <http://dx.doi.org/10.1080/01694243.2015.1117304>; **Q4**
- Duma V.-F.*, Dobre G., Demian D., Cernat R., Sinescu C., Topala F. I., Negrutiu M. L., Hutiu Gh., Bradu A., and Podoleanu A. Gh., Handheld scanning probes for optical coherence tomography, *Romanian Reports in Physics* **67**(4), 1346-1358 (2015); ISSN 1221-1451; **ISI IF 1.517**; http://www.rrp.infm.ro/2015_67_4/A14.pdf; **Q2**
- Duma V.-F.*, Tankam P., Huang J., Won J. J., and Rolland J. P., Optimization of galvanometer scanning for Optical Coherence Tomography, *Applied Optics* **54**(17), 5495-5507 (2015), ISSN 1559-128X; **ISI IF 1.784** <http://dx.doi.org/10.1364/AO.54.005495> - Virtual J. for Biomed. Opt. **10**(6), ISSN 1931-1532 (2015);
- Canjau S., Todea C., Negrutiu M.L., Sinescu C., Topala F.I., Marcauteanu C., Manescu A., Duma V.-F., Bradu A., Podoleanu A. Gh., Optical Coherence Tomography for Non-Invasive ex vivo Investigations in Dental Medicine - a Joint Group Experience (Review). *Modern Technologies in Medicine* **7**(1), 97-115 (2015) <http://dx.doi.org/10.17691/stm2015.7.1.13>; **Q4**

| | |
|--------------------------------------|---|
| | <p>Sinescu C., Negrutiu M. L., Bradu A., Duma V.-F.*, Podoleanu A. Gh., Noninvasive quantitative evaluation of the dentin layer during dental procedures using Optical Coherence Tomography, <i>Computational and Mathematical Methods in Medicine</i>, Paper ID 709076 (2015) ISSN 1748-670X; ISI IF 0.766; http://dx.doi.org/10.1155/2015/709076; Q4</p> <p>Oancea R., Bradu A., Sinescu C.*, Negru R. M., Negrutiu M. L., Antoniac I., Duma V. F., and Podoleanu A. Gh., Assessment of the sealant/tooth interface using optical coherence tomography, <i>J of Adhesion Science and Technology</i> 29(1), 49-58 (2015); ISSN 0169-4243; ISI IF 1.153; http://dx.doi.org/10.1080/01694243.2014.974879 - all the authors had equal contributions.</p> <p>Hutiu Gh., Duma V. F.*, Demian D., Bradu A., Podoleanu A. Gh., Surface imaging of metallic material fractures using optical coherence tomography, <i>Applied Optics</i> 53(26), 5912-5916 (2014), ISSN 0003-6935 ISI IF 1.649; http://dx.doi.org/10.1364/AO.53.005912; - <i>Virtual J. for Biomed. Opt.</i> 9(11), ISSN 1931-1532 (2014); Q2</p> <p>Demian D., Duma V.-F.*, Sinescu C., Negrutiu M. L., Cernat R., Topala F. I., Hutiu Gh., Bradu A., Podoleanu A. Gh., Design and testing of prototype handheld scanning probes for optical coherence tomography, <i>Proc. of the Institution of Mechanical Engineers, Part H: J.I of Eng. in Medicine</i> 228(8), 743-753 (2014); ISSN 0954-4119; ISI IF 1.329; http://dx.doi.org/10.1177/0954411914543963; Q3</p> <p>Duma V.-F., Prototypes and modulation functions of classical and novel configurations of optical chopper wheels, <i>Latin American J. of Solids and Structures</i> 10(1), 5-18 (2013), ISSN 1679-7825; ISI IF 1.254 http://www.lajss.org/index.php/LAJSS/article/view/510; Q3</p> <p>Duma V.-F.*, Lee K.-S., Meemon P., and Rolland J. P., Experimental investigations of the scanning functions of galvanometer-based scanners with applications in OCT, <i>Applied Optics</i> 50(29), 5735-5749 (2011), ISSN 1559-128X; http://dx.doi.org/10.1364/AO.50.005735, ISI IF 1.748 - <i>Virtual J. for Biomed. Opt.</i> 6(11), ISSN 1931-1532 (2011); Q2</p> <p>Duma V.-F., Optical choppers with circular-shaped windows: Modulation functions, <i>Communications in Nonlinear Science and Numerical Simulation</i> 16(5), 2218-2224 (2011); ISSN 1007-5704; http://dx.doi.org/10.1016/j.cnsns.2010.04.043; ISI IF 2.806; Q1</p> <p>Duma V.-F., Optimal scanning function of a galvanometer scanner for an increased duty cycle, <i>Opt. Eng.</i> 49(10), 103001 (2010); http://dx.doi.org/10.1117/1.3497570, ISSN 0091-3286; ISI IF 0.822; Q3</p> <p>Duma V.-F., Radiometric versus geometric, linear and non-linear vignetting coefficient, <i>Applied Optics</i> 48(32), 6355-6364 (2009); ISSN 1559-128X, http://dx.doi.org/10.1364/AO.48.006355; ISI IF 1.41; Q2</p> <p>Duma V.-F.* and Nicolov M., Neutral density filters with Risley prisms: analysis and design, <i>Applied Optics</i> 48(14), 2678-2685 (2009); ISSN 1559-128X, http://dx.doi.org/doi:10.1364/AO.48.002678, ISI IF 1.41; Q2</p> <p>Duma V.-F., Theoretical approach on optical choppers for top-hat light beam distributions, <i>J. of Opt. A: Pure and Appl. Opt.</i> 10(6), 064008 (2008); http://iopscience.iop.org/article/10.1088/1464-4258/10/6/064008; ISSN 2040-8978; ISI IF 1.742; Q2</p> |
| Brevete de inventie | <p>Duma V.-F., Demian D., Optical modulator, has solid rotating shaft with some through slots of well-defined profiles, Romanian Patent number RO129610-A0, Derwent Primary Accession Number: 2014-P50842 (in evaluate);</p> <p>Duma V.F., Demian D., Optical modulator with a rotational disk, Romanian Patent Request, OSIM, A01083/28.10.2011 (in evaluate);</p> <p>Duma V.F., Nicolov M. F, Mnerie C., Szantho L., Optical modulator with an element in rotation movement, Romanian Patent Request, OSIM, A01263/30.11.2010 (aprobat - in curs de publicare);</p> |
| Stagii de cercetare de scurtă durată | <p>1 lună: Univ. of Kent, Canterbury (UK): Aug. 2016; July-Aug. 2015; Aug. 2013; July-Aug. 2011; Univ. of Rochester, NY (USA): Oct. 2016; Oct. 2015; June 2010;</p> <p>1-2 săptămâni (Visiting Professor):</p> <p><i>Universidad de Guadalajara</i> - http://www.cucei.udg.mx/ (Mexico), Nov. 26-Dec. 1, 2018;</p> <p>Univ. of Kent, Canterbury (UK): Feb. 13-22, 2015; Feb. 07-21, Aug. 2-20 2014; Oct. 27-Nov. 09, 2013;</p> <p>Univ. of Rochester, NY (USA): Oct. 16-23, 2017; July 17-30, 2014; Feb. 15-28, 2013;</p> <p><i>Univ. of Guanajuato</i>, Salamanca (Mexico), Aug. 31-Sept. 05, 2015</p> <p><i>National Univ. of Ireland (NUI) at Galway</i> (Ireland), Nov. 24-27, 2014;</p> <p><i>City Univ. of New York</i>, NY (USA): Oct. 11-15, 2017; Feb. 08-15, 2013; Apr. 14-20, 2010;</p> <p><i>Ana G. Mendez Univ. System</i>, San Juan (Puerto Rico, USA): Mar. 18-22, 2010;</p> <p><i>RWTH Aachen</i> (Germany): June 25-30, 2007; <i>Jacobs Univ. of Bremen</i> (Germany): Oct. 25-30, 2004;</p> |

Burse
(Scholarships & Fellowships)

Visiting Senior Research Fellowship, at the *Univ. of Kent at Canterbury*, Faculty of Science, Technology and Medical Sciences (UK); Host: Prof. Adrian Gh. Podoleanu (Head of the *Applied Optics Group*, <http://www.kent.ac.uk/physical-sciences/research/aog/index.html>), July **2009**-Present;

Fulbright Senior Research Fellowship, awarded by the US Dept. of State, at *The Institute of Optics* (#1 rated in Optics and #4 in Applied Physics in the US), *Univ. of Rochester*, N.Y. (USA); Host: Prof. Jannick P. Rolland (Brian J. Thomson Chair in Optical Engineering), ODALAB (<http://www.odalab-spectrum.org/Rochester/People.html>), 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**).

Granturi și proiecte naționale și
internationale

1. **Principal Investigator (PI), Project for Experimental Demonstration (PED) Grant** PN-III-P2-2.1-PED-2016-1937 (Contract 44PED/2017), [Romanian National Authority for Scientific Research \(ANCS-UEFISCDI\)](#): *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](#) (133k€); Jan. **2017**-July **2018**; **6 journal papers in ISI Web of Science (WoS), Σ IF 17.031**; <http://3om-group-optomechatronics.ro/pedp1937/>
2. **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)* (102k€), Oct. **2016**-Oct. **2018**; **3 journal papers in ISI WoS, Σ IF 5.967**; <http://3om-group-optomechatronics.ro/bg297/>
3. **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](#) (435k€), Oct. **2016**-Oct. **2018**; **8 journal papers in ISI WoS, Σ IF 11.672**; <http://3om-group-optomechatronics.ro/ptep181/>
4. **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 (2M€), Aug. **2016** - Aug. **2020**; **1 journal paper in ISI WoS, Σ IF 3.307** (Oct. 2017);
5. **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€); **17 journal papers in ISI WoS, Σ IF=31.633**; <http://3om-group-optomechatronics.ro/pp1682/>
6. **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 in the USA), [Univ. of Rochester, NY](#) (USA); Host: [Prof. J. P. Rolland, ODALab](#), Sept. **2009**-June **2010** (\$26,450); **1 journal paper in ISI WoS, IF=1.748**;
7. **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** (support of \$6,3k);
8. **PI, IDEAS Grant** 1896/2008, [ANCS-UEFISCDI](#): *Analysis and design of some polygonal and galvanometer-based, 1D and 2D scanners*, **2009-2011** (101k€); **5 journal papers in ISI WoS, Σ IF=9.931**;
9. **Co-PI, Erasmus Program**, RWTH Aachen (IGM) - Aurel Vlaicu Univ. of Arad, **2007-2013**;
10. **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, **2007-2010** (600k€);
11. **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€);
12. **Researcher, CEEX 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** (60k€);
13. **PI, 3 Research Contracts** (Romanian companies), through Aurel Vlaicu Univ., **2004-2005** (2k€);
14. **PI, Young Researchers (AT) Grant**, ANCS code 385: *Development of Some New Scanning Equipments*, **2003-2004** (3.5k€); **2 books (monographs) published in 2014** [B5, B6];

15. **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** (225k€);
16. **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 GRANTS

17. **Member, CMST COST Action CM1405**, “Molecules in Motion” (MOLIM2018), <https://www.molim2018.ethz.ch/2018/>, **2015-2018**;
18. **Member, COST Action CA17126** “Towards understanding and modelling intense electronic excitation” (TUMIEE), http://www.cost.eu/COST_Actions/ca/CA17126, **2018-2021**;
19. **Member, COST Action CM1405- Chemistry and Molecular Sc. and Technologies**, [link](#), **2016-2019**;
20. **Consultant** (Expert-Coordinator of the Mechatronics and Mechanical Eng. 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**;
21. **Consultant** (Expert in Education), **POSDRU 2/1.2/S/3** (EU Funding)-UEFISCDI Project 2684: *Quality and Leadership for Romanian High Education System (QLHE)* (www.edu2025.ro), **2009-2011**;
22. **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**;
23. **Consultant** (Expert in Robotics), **CARE** (Coordinated Action for Robotics in EU), **FP 6** Program of the European Commission (participation at CARE Consensus Meetings: Stuttgart, May 2008; Pisa, Oct. 2008, for elaboration of SRA 2008-2020 – Strategic Research Agenda for Robotics in Europe);

GRANTURI PENTRU PARTICIPARE LA CONFERINȚE

24. **PI, SPIE Lecturer Program Grant**, from SPIE (The Int'l Society for Optics & Photonics, USA) and the Univ. for lecturing at the *Universidad de Guadalajara* (Mexico), Nov. 26-30, **2018** (~\$2k);
25. **PI, Grant PN-III-P1-1.1-MCD-2018-0230**, [ANCS-UEFISCDI](#) to support the visit of Dr. G. Dobre ([Univ. of Kent](#), Canterbury, UK) to UAV Arad (~1k€), [link](#), Nov. **2018**;
26. **PI, SPIE Lecturer Program Grant**, from SPIE (The Int'l Society for Optics & Photonics, USA) for lecturing at the *9th Int'l Physics Conf. ICPYS-LTP*, Kharkov (Ukraine), June 4-8, **2018** (~1k€);
27. **PI, SPIE Grant** (The Int'l Society for Optics and Photonics, USA) to support a booth at the *SPIE Photonics Europe 'Innovation Village'*, Strasbourg (France), Apr. 22-23, **2018**;
28. **PI**, Support from the Royal Society of Jordan, to participate at the [World Science Forum](#), as representative of Romania in the Fulbright Alumni delegation, Jordan, Nov. 7-11, **2017** (>1000€);
29. **PI, Grant PN-III-P1-1.1-MCD-2016-0077**, [ANCS-UEFISCDI](#) to support the visit of Dr. G. Dobre ([Univ. of Kent](#), Canterbury, UK) to UAV Arad (~1.3k€), [link](#), Nov. **2016**;
30. **PI**, Full support from ANCS to participate at the International Conference “Diaspora in Scientific Research and Higher Education in Romania,” Timisoara **2016**;
31. **PI**, Support from the Hungarian Acad. of Sciences, to participate at [Word Science Forum](#), as representative of Romania in the Fulbright Alumni delegation, Budapest (Hungary), Nov. **2015** (>300€);
32. **PI, SPIE Lecturer Program Grant**, from SPIE (The Int'l Society for Optics and Photonics, USA) and support from the Univ. of Guanajuato for lecturing at this university (Mexico), Sept. **2015** (~\$1.8k);
33. **PI, SPIE Lecturer Program Grant**, from SPIE for lecturing at the National Univ. of Ireland (NUI) at Galway, Nov. **2014** (600€);
34. **PI**, Support from the Brazilian Academy of Sciences and from the Fulbright Association, to participate at the [Word Science Forum](#), as representative of Romania in the Fulbright Alumni delegation, Rio de Janeiro (Brazil), Nov. **2013** (~4k€);
35. **PI**, Support from the Fulbright Academy of Science and Technology and from the Hungarian Academy of Sciences, to participate at the [Word Science Forum](#), as representative of Romania in the Fulbright Alumni 30+ delegation, Budapest (Hungary), Nov. **2011** (~1.5k€);
36. **PI, Fulbright Occasional Lecturer Program Grant** – from the US Department of State, for lecturing in New York (N.Y., USA), April **2010** (\$250);
37. **PI, Research Foundation of City Univ. of New York**, for Invited Seminar, April **2010** (\$350);
38. **PI, Fulbright Conference Support** – from the US Department of State, for participating at the Fulbright Conference: Linking Campus to Community, in Washington D.C. (USA), April **2010** (~\$1k);
39. **PI, Fulbright Occasional Lecturer Program Grant** – from the US Department of State, for lecturing in San Juan (Puerto Rico, USA), March **2010** (\$750);

40. **PI**, Ratiu Family Charitable Foundation (UK) Grant, for participating at the SPIE 1st Canterbury Workshop on Adaptive Optics and OCT, Sept. **2008**, Kent (UK) [ISI] (335£);
41. **PI, MC** ANCS Grant 237/2007, for participating at DSTA Conference, Lodz (Poland), [link](#) (800€);
42. **PI, MC** ANCS Grant 140/2007, for DAAAM Symposium, Zadar (Croatia) [ISI] [link](#) (800€);
43. **PI, IEEE & FEDROM** (FEDeration of ROManians in Spain) Support for participation at IEEE/LEOS ODIMAP V (2 papers), Oct. **2006**, Madrid (Spain) (total: ~900€).

PREMII

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-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 Physics and Astronomy (2016) – on **Publons**, <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. Gh., Confocal laser scanning microscopy versus digital microscopy in the analysis of the marginal adaptation of Tizian overlays, *7th Intl 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](#) (75€);
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, and 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](#) (150€);
SPIE Senior Membership (Intl 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](#) (250€);
ANCS Award 87/2008, for *J. of Optics A: Pure and Applied Optics* **10**(6), 064008, **2008**, [link](#) (1,000€);
Merit Salary, granted annually, on a competitive basis (15% salary bonus), by the Univ., **2004-2006**;
University, Traian Lalescu National Students' Olympics:

- **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.

Dotări semnificative

Am dezvoltat și dotat Laboratorul de Optomecatronică și Fonică Biomedicală (UAV, Sala M29), de cercetare, cu aparatură de peste 150.000 Euro – exclusiv în cadrul proiectelor de cercetare la care am fost/sunt director.
 Am continuat (după 1999) dotarea Laboratorului de Mecanisme (didactic) – exclusiv prin lucru cu studenții.

Domenii de interes științific

Aparate și sisteme de măsurare; Optomecatronică și sisteme optice; Fonică biomedicală; Mecanisme și teoria mașinilor; Ingineria calității.

Arad, 15.12.2019



List of Publications

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

h-index = 18 (ISI Web of Science)

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

Papers in Journals indexed in ISI Web of Science (**ISI Impact Factor (IF) > 60**)¹

39. **V.-F. Duma**, Optical attenuators with Risley prisms and disk choppers, *Proceedings of the Romanian Academy Series A* **20**(2), 141-150 (2019); ISSN 1454-9069; <https://acad.ro/sectii2002/proceedings/doc2019-2/05-Duma.pdf>; **ISI IF 1.402/2018**; OPEN ACCESS; **Q3**;
38. R. Luca, C. D. Todea*, **V.-F. Duma***, A. Bradu, A. Podoleanu, Quantitative assessment of rat bone regeneration using complex master-slave optical coherence tomography, *Quantitative Imaging in Medicine and Surgery (QIMS)* **9**(5), 782-798 (2019); ISSN 2223-4292; <http://dx.doi.org/10.21037/qims.2019.05.03>; **ISI IF 3.074/2018**; OPEN ACCESS; **Q2**
37. A.-C. Cojocariu, C.-S. Neagu, C. Serban, C. Modiga, M. M. Togoe, Jivanescu A.*, M. L. Negrutiu, **V.-F. Duma**, A. Podoleanu, C. Sinescu, Analysis of modern digital impression technologies: A review, *Romanian J. of Oral Rehabilitation* **11**(2), - (2019), ISSN 2066-7000; OPEN ACCESS;
36. M. M. Togoe, A.-C. Cojocariu, C. Sinescu*, **V.-F. Duma**, A. Podoleanu, M. L. Negrutiu, Analysis of endodontic lesions using endoscopy and optical coherence tomography: A review, *Romanian J. of Oral Rehabilitation* **11**(2), 38-51 (2019), ISSN 2066-7000; OPEN ACCESS; <http://www.rjor.ro/link>
35. **V.-F. Duma***, C. Sinescu*, A. Bradu, A. Podoleanu, Optical Coherence Tomography Investigations and Modeling of the Sintering of Ceramic Crowns, *Materials* **12**(6), 947 (2019); EISSN 1996-1944; <https://doi.org/10.3390/ma12060947>; **ISI IF 2.972/2018**; OPEN ACCESS; **Q2**
34. **V.-F. Duma**, Laser scanners with oscillatory elements: Design and optimization of 1D and 2D scanning functions, *Applied Mathematical Modelling* **67**(3), 456-476 (2019); ISSN 0307-904X; <https://doi.org/10.1016/j.apm.2018.11.001>; **ISI IF 2.617/2017**; **Q1**
33. Golban D. M., R. Negru, C. Szuhaneck*, M. L. Negrutiu, L. Marsavina, **V.-F. Duma**, C. Sinescu, L. Porojan, Flash-Free Orthodontic Adhesive System Bonded on CAD/CAM Produced Resin Restorations, *Materiale Plastice* **55**(4), 606-608 (2018), ISSN 2537-5741; OPEN ACCESS; http://www.revmaterialeplastice.ro/pdf/GOLBAN_4_18.pdf; **ISI IF 1.248**; **Q3**;
32. A. T. Stan†, A. Vaduva, M. L. Negrutiu, C. Sinescu†, C. Szuhaneck*, A. Rogobete, D. Muntean, S. Talpos, **V.-F. Duma**†, L. Idorasi, T. Hajaj, M. Rominu, Evaluation of dental composite resin interface and adhesion using laser scanning confocal microscopy, *Materiale Plastice* **55**(4), 541-544 (2018), ISSN 2537-5741; OPEN ACCESS; (tequal contributions); http://www.revmaterialeplastice.ro/pdf/STAN_A_418.pdf; **ISI IF 1.248**; **Q3**;
31. C. Szuhaneck, D. M. Golban*, R. Negru, M. L. Negrutiu, L. Marsavina, **V.-F. Duma**, C. Sinescu*, L. Porojan, Flash-Free Orthodontic Adhesive System Compared with the Conventional Direct Bonding Method, *Revista de Chimie* **68**(11), 4093-4095 (2018), ISSN 0034-7752; OPEN ACCESS; http://www.revistadechimie.ro/article_eng.asp_ID=6709; **ISI IF 1.412**; **Q3**
30. D. A. Pop, R. Mălăescu, L. Marsavina, T. Hosszu*, R. Rotar, L. Goguță, **V.-F. Duma**, M. L. Negrutiu, C. Sinescu, A. Jivănescu, Fracture resistance of CAD/CAM versus traditional interim fixed dental prostheses, *Materiale Plastice* **55**(3), 361-363 (2018), ISSN 0025-5289; OPEN ACCESS; http://www.revmaterialeplastice.ro/article_ID=5030; **ISI IF 1.248/2017**; **Q3**
29. A. Gabort, C. Zaharia, V. Todericiu, C. Szuhaneck*†, A. C. Cojocariu, **V.-F. Duma**†, C. Sticlaru, M. L. Negrutiu, I. V. Antoniac, C. Sinescu†, Adhesion of scaffolds with implants to the mandibular bone with a defect: A Finite Element Analysis, *Materiale Plastice* **55**(3), 394-397 (2018), ISSN 0025-5289; OPEN ACCESS; (tequal contributions); http://www.revmaterialeplastice.ro/article_ID=5036; **ISI IF 1.248/2017**; **Q3**
28. C. Sinescu, **V.-F. Duma***, D. Dodenciu, S. Stratul, M. Manole, Gh. E. Drăganescu, Mechanical properties of the periodontal system and of dental constructs deduced from the free response of the tooth, *J. of Healthcare Engineering*, ID 4609264 (2018); ISSN 2040-2295; OPEN ACCESS; <https://doi.org/10.1155/2018/4609264>; **ISI IF 1.261/2017**; **Q4**
27. Gh. Hutiu, **V.-F. Duma***, D. Demian, A. Bradu, A. Podoleanu, Assessment of ductile, brittle, and fatigue fractures of metals using optical coherence tomography, *Metals* **8**(2), 117 (2018); ISSN 2075-4701; OPEN ACCESS; doi: [10.3390/met8020117](https://doi.org/10.3390/met8020117); **ISI IF 1.704/2017**; **Q2**
26. R. Nagib, C. Szuhaneck, B. Moldoveanu, M. L. Negrutiu, **V.-F. Duma**, C. Sinescu, S. Brad, Dimensional study of impacted maxillary canine replicas printed 3D by using two types of resin materials, *Materiale Plastice* **55**(2), 190-191 (2018); ISSN 0025-5289; OPEN ACCESS; <http://www.revmaterialeplastice.ro/NAGIB2018.pdf>; **ISI IF 1.248/2017**; **Q3**
25. S. Canjau, D. C. M. Todea*, C. Sinescu, M. O. Pricop, **V.-F. Duma**, Fluorescence Influence on Screening Decisions for Oral Malignant Lesions, *Romanian J. of Morphology and Embryology* **59**(1), 203-209 (2018); ISSN 1220-0522; OPEN ACCESS; <http://www.rjme.ro/RJME/590118203209.pdf>; **ISI IF 0.912/2017**; **Q4**
24. **V.-F. Duma*** and A. Schitea, Laser scanners with rotational Risley prisms: Exact scan patterns, *Proceedings of the Romanian Academy, Series A* **19**(1), 53-60 (2018); ISSN 1454-9069; OPEN ACCESS; <http://www.acad.ro/sectii2002/proceedings/doc2018-1/08.pdf>; **ISI IF 1.752/2017**; **Q2**²
23. Măroiu A.-C.†, Sinescu C.†, Negrutiu M.-L., Negru R.†, Marsavina L., Bretean I.-D., **Duma V.-F.**†, Romînu M., Bortun C. M., Negrutiu M. L.*, Evaluation of the adhesion of a novel design of veneers to dental materials, *Revista Chimie/Chemistry Magazine* **68**(9), 2125-2128 (2017), ISSN 0034-7752; **ISI IF 1.232/2016**. OPEN ACCESS; http://www.revistadechimie.ro/pdf/39MAROIU_9_2017.pdf; († equal contributions); **Q3**

¹ The corresponding author of the papers with multiple authors is indicated by the sign *

² Most cited paper on ISI Web of Science

22. Beiu R.-M.*, Beiu V., and **Duma V.-F.***, Fiber optic mechanical deformation sensors employing perpendicular photonic crystals, *Optics Express* **25**(19), 23388-23398 (2017); ISSN 1094-4087; **ISI IF 3.307/2016**; OPEN ACCESS; <https://doi.org/10.1364/OE.25.023388>; **Q1**
21. Baciú S., Berece C., Florea A., Burde V. A., Negrutiu M. L., Szuhanek C.*, Sinescu C., **Duma V.-F.**, Manole M., A Comparative Three- and Bi-dimensional Research of the Marginal Fit of Pressed Lithium Disilicate Inlays, *Revista Chimie/Chemistry Magazine* **68**(6), 1316-1329 (2017), ISSN 0034-7752; **ISI IF 1.232/2016**, OPEN ACCESS; http://www.revistadechimie.ro/BACIU_2017.pdf; **Q3**
20. Sinescu C., Bradu A., **Duma V.-F.***, Topala F., Negrutiu M. L., Podoleanu A. Gh., Effects of the temperature variations in the technology of metal ceramic dental prostheses: Non-destructive detection using optical coherence tomography, *Applied Sciences* **7**(6), 552 (2017) **ISI IF 1.679/2016**; doi:[10.3390/app7060552](https://doi.org/10.3390/app7060552); **Q3**
19. Mnerie C.*, Preitl S., and **Duma V.-F.***, Galvanometer-based scanners: Mathematical model and alternative control structures for improved dynamics and immunity to disturbances, *International Journal of Structural Stability and Dynamics* **17**(5), 1740006 (2017); ISSN 0219-4554; **ISI IF 1.617/2016**; doi: [10.1142/S0219455417400065](https://doi.org/10.1142/S0219455417400065); **Q2**
18. **Duma V.-F.**, Polygonal mirror laser scanning heads: Characteristic functions, *Proceedings of the Romanian Academy Series A-Mathematics Physics Technical Sciences Information Science* **18**(1), 25-33 (2017); ISSN 1454-9069; **ISI IF 1.623/2016**; <http://www.acad.ro/sectii2002/proceedings/doc2017-1/04Duma.pdf>; OPEN ACCESS; **Q2**
17. Cogliati A., Canavesi C.*, Hayes A., Tankam P., **Duma V.-F.**, Santhanam A., Thompson K. P., and Rolland J. P., MEMS-based handheld scanning probe with pre-shaped input signals for distortion-free images in Gabor-Domain Optical Coherence Microscopy, *Optics Express* **24**(12), 13365-13374 (2016); ISSN 1094-4087; **ISI IF 3.307**; <http://dx.doi.org/10.1364/OE.24.013365> - also selected & published in *Virtual J. for Biomedical Optics* **11**(7), ISSN 1931-1532 (2016); OPEN ACCESS; **Q1**
16. Craciunescu E., Sinescu C.*, Negrutiu M. L., Pop D. M., Lauer H.-C., Rominu M., Hutiu Gh., Bunoiu M., **Duma V.-F.***, and Antoniac I., Shear Bond Strength Tests of Zirconia Veneering Ceramics after Chipping Repair, *J. of Adhesion Science and Technology* **30**(6), 666-676 (2016); ISSN 0169-4243; **ISI IF 1.073**; <http://dx.doi.org/10.1080/01694243.2015.1117304>; **Q4**
15. **Duma V.-F.***, Dobre G., Demian D., Cernat R., Sinescu C., Topala F. I., Negrutiu M. L., Hutiu Gh., Bradu A., and Podoleanu A. Gh., Handheld scanning probes for optical coherence tomography, *Romanian Reports in Physics* **67**(4), 1346-1358 (2015); ISSN 1221-1451; **ISI IF 1.367**; http://www.rrp.infm.ro/2015_67_4/A14.pdf; OPEN ACCESS; **Q2**
14. **Duma V.-F.***, Tankam P., Huang J., Won J. J., and Rolland J. P., Optimization of galvanometer scanning for Optical Coherence Tomography, *Applied Optics* **54**(17), 5495-5507 (2015), ISSN 1559-128X; **ISI IF 1.598**; doi: [10.1364/AO.54.005495](https://doi.org/10.1364/AO.54.005495) - also selected & published in *Virtual J. for Biomedical Optics* **10**(6) (2015); ISSN 1931-1532; OPEN ACCESS; **Q2**
13. Canjau S., Todea C., Negrutiu M.L., Sinescu C., Topala F.I., Marcautuanu C., Manescu A., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Optical Coherence Tomography for Non-Invasive ex vivo Investigations in Dental Medicine - a Joint Group Experience (Review). *Sovrem. Technol. Med./Modern Technologies in Medicine* **7**(1), 97-115 (2015); ISSN 2076-4243; <http://dx.doi.org/10.17691/stm2015.7.1.13>; OPEN ACCESS; **Q4**
12. Sinescu C., Negrutiu M. L., Bradu A., **Duma V.-F.***, and Podoleanu A. Gh., Noninvasive quantitative evaluation of the dentin layer during dental procedures using Optical Coherence Tomography, *Computational and Mathematical Methods in Medicine*, Paper ID 709076 (2015); ISSN 1748-670X; **ISI IF 0.887**; <http://dx.doi.org/10.1155/2015/709076>; OPEN ACCESS; **Q3**
11. Oancea R., Bradu A., Sinescu C.*, Negru R. M., Negrutiu M. L., Antoniac I., **Duma V.-F.**, and Podoleanu A. Gh., Assessment of the sealant/tooth interface using optical coherence tomography, *J. of Adhesion Science and Technology* **29**(1), 49-58 (2015); ISSN 0169-4243; **ISI IF 0.863**; <http://dx.doi.org/10.1080/01694243.2014.974879> - all authors had equal contributions. **Q3**
10. Hutiu Gh., **Duma V.-F.***, Demian D., Bradu A., and Podoleanu A. Gh., Surface imaging of metallic material fractures using optical coherence tomography, *Applied Optics* **53**(26), 5912-5916 (2014); ISSN 1559-128X; **ISI IF 1.784**; <http://dx.doi.org/10.1364/AO.53.005912> - also selected & published in *Virtual J. for Biomedical Optics* **9**(11), ISSN 1931-1532 (2014); OPEN ACCESS; **Q2**
9. Velea O.-A., Sinescu C.*, Zeicu C., Freiman P. C., Velea P. I., Onisei D., **Duma V.-F.**, Evaluation of periodontal pockets using different biomaterials: a preliminary study, *Revista de Chimie/Chemistry Magazine* **65**(9), 1063-1066 (2014), ISSN 0034-7752; **ISI IF 0.810** - all authors had equal contributions. http://www.revistadechimie.ro/VELEA_2014.pdf OPEN ACCESS; **Q4**
8. Demian D., **Duma V.-F.***, Sinescu C., Negrutiu M. L., Cernat R., Topala F. I., Hutiu Gh., Bradu A., and Podoleanu A. Gh., Design and testing of prototype handheld scanning probes for optical coherence tomography, *Proc. of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine* **228**(8), 743-753 (2014); ISSN 0954-4119; **ISI IF 1.329**; <http://dx.doi.org/10.1177/0954411914543963>;^{1,2} OPEN ACCESS; **Q3**
7. **Duma V.-F.**, Prototypes and modulation functions of classical and novel configurations of optical chopper wheels, *Latin American Journal of Solids and Structures* **10**(1), 5-18 (2013), ISSN 1679-7825; **ISI IF 1.254** <http://www.lajss.org/index.php/LAJSS/article/view/510>; OPEN ACCESS; **Q3**
6. **Duma V.-F.***, Lee K.-S., Meemon P., and Rolland J. P., Experimental investigations of the scanning functions of galvanometer-based scanners with applications in OCT³, *Applied Optics* **50**(29), 5735-5749 (2011), ISSN 1559-128X; <http://dx.doi.org/10.1364/AO.50.005735>, **ISI IF 1.748** - also selected & published in *Virtual J. for Biomedical Optics* **6**(11), ISSN 1931-1532 (2011); **Q2**
5. **Duma V.-F.**, Optical choppers with circular-shaped windows: Modulation functions, *Communications in Nonlinear Science and Numerical Simulation* **16**(5), 2218-2224 (2011); ISSN 1007-5704; <http://dx.doi.org/10.1016/j.cnsns.2010.04.043>; **ISI IF 2.806**; **Q1**

¹ 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/>

² From top downloaded papers of *J of Eng in Medicine* (SAGE), Oct. 2014 to Jan. 2015.

³ From top downloaded papers of *Applied Optics* (flagship journal of the Optical Society of America - OSA), Oct. 2011.

4. Duma V.-F., Optimal scanning function of a galvanometer scanner for an increased duty cycle, *Optical Engineering* **49**(10), 103001 (2010); <http://dx.doi.org/10.1117/1.3497570>, ISSN 0091-3286; **ISI IF 0.822; Q3**
3. Duma V.-F., Radiometric versus geometric, linear and non-linear vignetting coefficient, *Applied Optics* **48**(32), 6355-6364 (2009); ISSN 1559-128X, <http://dx.doi.org/10.1364/AO.48.006355>; **ISI IF 1.41; Q2**
2. Duma V.-F.* and Nicolov M., Neutral density filters with Risley prisms: analysis and design, *Applied Optics* **48**(14), 2678-2685 (2009); ISSN 1559-128X, <http://dx.doi.org/doi:10.1364/AO.48.002678>, **ISI IF 1.41; Q2**
1. Duma V.-F., Theoretical approach on optical choppers for top-hat light beam distributions, *Journal of Optics A: Pure and Applied Optics* **10**(6), 064008 (2008); <http://iopscience.iop.org/article/10.1088/1464-4258/10/6/064008>; ISSN 2040-8978; **ISI IF 1.742; Q2**

Theses

- T3. Duma V.-F., *Optomechatronic Modulators: Choppers, Attenuators and Scanners. Analysis and Design*, **Habilitation Thesis**, defended Oct. 2013, at the Polytechnic Univ. of Bucharest (UPB), Romania. Commission: President - Prof. V.I. Vlad (President of the Romanian Academy); Members - Prof. N. Puscas (UPB), Prof. J.P. Huignard (Institute Lavoisier, France), Dr. G. Perrone (Univ. Torino, Italy).
- T2. Duma V.-F., *Contributions to the analysis and design of scanning systems* (in Romanian), **PhD Thesis**, degree: **cum laude**, Sept. 2001. Supervisor: Prof. Dan Perju, Polytechnic Univ. of Timisoara, Romania;
- T1. Duma V.-F., *Tri-chromatic colorimeter with mix synthesis* (in Romanian), **Diploma Thesis** (equivalent to a M.Sc. Dissertation), degree: **valedictorian**, July 1991. Supervisor: Prof. Ioan Mihalca, Polytechnic Univ. of Timisoara, Romania.

Patents – Invention Disclosure Forms

- P3. Duma V.-F., Demian D., Optical modulator, has solid rotating shaft with some through slots of well-defined profiles, Romanian Patent number RO129610-A0, Derwent Primary Accession Nr: 2014-P50842 (pending);
- P2. Duma V.-F., Demian D., Optical modulator with a rotational disk, Romanian Patent Request, OSIM, A01083/28.10.2011 (pending);
- P1. Duma V.-F., Nicolov M. F., Mnerie C., Szantho L., Optical modulator with rotating element, has role to generate light pulses of certain profile, Derwent Primary Accession Number: 2011-J76364; [Romanian Patent RO 126505/2016](#);

Books Contributions and Chapters

- B16. Duma V.-F., *Mecanisme. Teme experimentale*, ISBN 978-606-675-185-8, Ed. Gutenberg Univers, Arad 2018, 140 pages;
- B15. Todea C., Podoleanu A. Gh., and Duma V.-F. (Eds.), *Proceedings of SPIE [ISI], Vol. 10831, 7th Int'l Conference on Lasers in Medicine (ICLM): Advanced Laser Technologies in the Hands of Medicine*, Timisoara (Romania), July 13-16, 2017 (SPIE Press, Bellingham, WA, USA, 2018), ISSN 1605-7422, ISBN 9781510622876, 164 pages; 24 papers (Front Matter: <https://doi.org/10.1117/12.2513212>); <http://spie.org/Publications/Proceedings/Volume/10831>
- B14. Duma V.-F., Galvanometer laser scanning: Custom-made input signals for maximum duty cycles in high-end imaging applications, 6th European Conference on Mechanism Science (EUCOMES) - New Trends in Mechanism and Machine Science, *Mechanisms and Machine Science* **43**, P. Wenger and P. Flores, Eds., 269-277, Nantes (France), Sept. 20-23, 2016; ISSN 2211-0984; ISBN 978-3-319-44155-9; Springer 2017; DOI 10.1007/978-3-319-44156-6_28
- B13. Todea C., Podoleanu A. Gh., and Duma V.-F. (Eds.), *Proceedings of SPIE [ISI], Vol. 9670 - PROGRESS IN BIOMEDICAL OPTICS AND IMAGING 16(62), 5th Congress of the World Federation of Lasers in Dentistry-European Division (WFLD-ED) & 6th Intl Conference on Lasers in Medicine: High-end Medicine Based on Laser and Biotechnologies*, Bucharest (Romania), May 7-9, 2015 (SPIE Press, Bellingham, WA, USA, 2016), ISSN 1605-7422, ISBN 9781628418934, 300 pages; 37 papers (ISI Accession Number: WOS); <http://spie.org/Publications/Proceedings/Volume/9670>
- B12. Todea C., Podoleanu A. Gh., and Duma V.-F. (Eds.), *Proceedings of SPIE [ISI], Vol. 8925 - PROGRESS IN BIOMEDICAL OPTICS AND IMAGING 15(44), 5th Intl Conference on Lasers in Medicine: Biotechnologies Integrated in Daily Medicine*, Timisoara (Romania), Sept. 19-21, 2013 (SPIE Press, Bellingham, WA, USA, 2014), ISSN 0277-786X, ISBN 978-0-8194-9817-5, 264 pages; 33 papers (ISI Accession Number: WOS:000333186500001); <http://spie.org/Publications/Proceedings/Volume/8925>
- B11. Duma V.-F.*, Nicolov M. F., Kiss M., Ilca T., Mnerie C., Demian D. and Szantho L., Choppers: Optomechatronic Devices for the Controlled Modulation of Light, in *Mechanisms, Transmissions and Applications*, Mechanisms and Machine Science, Vol. 3, 129-134, Lovasz E.C., Corves B., Eds., ISSN 2211-0984, ISBN 978-94-007-2726-7, Springer 2011, <http://dx.doi.org/10.1007/978-94-007-2727-4>;
- B10. Duma V.-F. (Ed.), *Proceedings of the 3rd International Symposium: Research and Education in an Innovation Era, Engineering Sciences*, ISSN 20652569, Arad, Nov. 10-12, 2010;
- B9. Duma V.-F. (Ed.), *Proceedings of the 2nd International Symposium: Research and Education in an Innovation Era, Engineering Sciences*, ISSN 20652569, Arad, Nov. 20-22, 2008, 502 pages;
- B8. Duma V.-F. (Ed.), *Tools, Devices, and Control Apparatuses. Experimental Topics* (in Romanian), Aurel Vlaicu Univ. Publishing House, ISBN 978-973-752-283-2, Arad, 2008, 194 pages;
- B7. Perju D., Ianosi E., Mateas M., Duma V.-F., *Measuring Apparatuses and Systems. Experimental Works* (in Romanian), Politehnica, ISBN 973-625-194-2, Timisoara, 2005, 267 pages.
- B6. Duma V.-F., *Scanning* (in Romanian), Politehnica, ISBN 973-625-191-8, Timisoara, 2004, 190 pages.
- B5. Duma V.-F., *Vignetting* (in Romanian), Politehnica, ISBN 973-625-154-3, Timisoara, 2004, 124 pages;

- B4. Perju D., Davidescu A., Mateas M., **Duma V.-F.**, *Measurement and Control Apparatuses. Metrology* (in Romanian), University Horizons, ISBN 973-8109-60-4, Timisoara, **2001**, 106 pages;
- B3. Nicoara I., Gruescu C., Atitoaie V., **Duma V.-F.**, *Optical Apparatuses, Vol. I* (in Romanian), University Horizons, ISBN 973-944-96-5, Timisoara, **2000**, 248 pages;
- B2. Nicoara I., **Duma V.-F.** (Eds.), *Optical Apparatuses. Experimental Topics* (in Romanian), Mirton, ISBN 973-578-134-4, Timisoara, **1996**, 224 pages;
- B1. Pommersheim A., Varga St., Gruescu C., Zsivanov D., **Duma V.-F.**, *Technical Optics. Laboratory Works* (in Romanian), Polytechnics Univ. Publishing House, Timisoara, **1995**, 101 pages;

Conference Proceedings Papers - indexed in ISI Web of Science

- ISI.C97. **Duma V.-F.***, Demian D., Csukas E. S., Pop N., Cira O., Non-conventional optomechanical choppers: analysis and design of novel prototypes, *Proc. SPIE*, Vol. 10448, 104481W, J. L. Bentley, S. Stoebeu, Eds., *SPIE OptiFab (Optical Design and Engineering VII)*, ISSN 0277-786X, Rochester, NY (USA), Oct. 16-19, **2017**; <http://dx.doi.org/10.1117/12.2275937> (Poster);
- ISI.C96. Barua S., Sinescu C., Topala F. I., Negrutiu M. L., Duma V.-F., Gabor A. G., Zaharia C., Bradu A., Podoleanu A. Gh., Dental Impression Technique Using Optoelectronic Devices, *Proc. SPIE*, Vol. 10591, 10591-, Podoleanu A. Gh., Eds., *2nd Canterbury Conference on Optical Coherence Tomography (CCOCT17)*, Canterbury (UK), Sept. 6-8, **2017** (Poster); accepted;
- ISI.C95. Everson M.*, **Duma V.-F.**, Dobre G., Optimisation of a polygon mirror-based, spectral filter for Swept Source Optical Coherence Tomography (SS-OCT), *Proc. SPIE*, Vol. 10591, 10591-, Podoleanu A. Gh., Eds., *2nd Canterbury Conference on Optical Coherence Tomography (CCOCT17)*, Canterbury (UK), Sept. 6-8, **2017** (Poster); accepted;
- ISI.C94. Todor R., Negrutiu M. L., Sinescu C., Topala F. I., Bradu A., Duma V.-F., Rominu M., Podoleanu A. Gh., Investigation of firing temperature variation in ovens for ceramic-fused-to-metal dental prostheses using swept source optical coherence tomography, *Proc. SPIE*, Vol. 10591, 10591-, Podoleanu A. Gh., Eds., *2nd Canterbury Conference on Optical Coherence Tomography (CCOCT17)*, Canterbury (UK), Sept. 6-8, **2017** (Poster);
- ISI.C93. Cirligeriu L. E., Stan A. T., Rominu M., Marinescu A., Boariu M., Vaduva A., Negrutiu M. L., Sinescu C., Duma V.-F., Nica L., Evaluation of Biodentine - Tooth Structures Interfaces using Laser Scanning Confocal Microscopy, *Proc. SPIE*, Vol. , Todea C., Podoleanu A. Gh., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Poster); accepted;
- ISI.C92. Canjau S., Todea C., Sinescu C., Pricop M., **Duma V.-F.**, Fluorescence influence on screening decisions for oral cancer, *Proc. SPIE*, Vol. , Todea C., Podoleanu A., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Poster); accepted;
- ISI.C91. Sinescu C., Negrutiu M. L., Stoica E. T., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Pattern recognition for different sintering temperature in the technology of metal ceramic dental prostheses: a non-destructive investigations approach by optical coherence tomography, *Proc. SPIE*, Vol. , Todea C., Podoleanu A., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Invited Paper); accepted;
- ISI.C90. Cirligeriu L. E., Sinescu C., Negrutiu M. L., Stoica E. T., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Teeth enamel monitoring with laser - fluorescence, *Proc. SPIE*, Vol. , Todea C., Podoleanu A., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Poster); accepted;
- ISI.C98. Pop O., Sinescu C., Negrutiu M. L., Stoica E. T., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Evaluating the enamel structure before and after orthodontic treatment by using optical coherence tomography, *Proc. SPIE*, Vol. , Todea C., Podoleanu A., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Poster); accepted;
- ISI.C88. Maroiu A., Sinescu C., Negrutiu M. L., Stoica E. T., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Optoelectronic evaluation of indirect dental veneers interfaces, *Proc. SPIE*, Vol. , Todea C., Podoleanu A., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Poster); accepted;
- ISI.C87. Stoica E. T., Sinescu C., Negrutiu M. L., Stoica E. T., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Postural evaluation in dentistry, *Proc. SPIE*, Vol. , Todea C., Podoleanu A., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Oral Presentation); accepted;
- ISI.C86. Mitroi F. E., Sinescu C., Negrutiu M. L., Stoica E. T., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Confocal laser scanning microscopy versus digital microscopy in the analysis of the marginal adaptation of Tizian overlays, *Proc. SPIE*, Vol. , Todea C., Podoleanu A., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Oral Presentation); accepted;
- ISI.C85. Marcautaneu C., Sinescu C., Negrutiu M. L., Stoica E. T., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Biomimetic Tizian table tops analyzed with swept source optical coherence tomography, *Proc. SPIE*, Vol. , Todea C., Podoleanu A., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Oral Presentation); accepted;
- ISI.C84. Everson M.*, **Duma V.-F.**, Dobre G., Aspects of vignetting in a polygon mirror-based spectral filter for Swept Source Optical Coherence Tomography (SS-OCT), *Proc. SPIE*, Vol. , Todea C., Podoleanu A., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Oral Presentation); accepted;
- ISI.C83. Hutiu Gh., Dimb A., **Duma V.-F.***, Demian D., Bradu A., [Podoleanu](#) A. Gh., Roughness measurements using optical coherence tomography: a preliminary study, *Proc. SPIE*, Vol. , Todea C., Podoleanu A., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Poster); accepted;
- ISI.C82. Beiu R., Beiu V., **Duma V.-F.***, Fundamentals and biomedical applications of photonic crystals: an overview, *Proc. SPIE*, Todea C., Podoleanu A., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Oral Presentation); accepted;

- ISI.C81. **Duma V.-F.***, Laser scanning optimization for high-end applications in biomedical imaging, *Proc. SPIE*, Todea C., Podoleanu A., Duma V.-F., Eds., *7th Intl Conference Lasers in Medicine (ICLM)*, ISSN 0277-786X, Timisoara, July 13-16, **2017** (Invited Paper); accepted;
- ISI.C80. Pop N., Cira O., and **Duma V.-F.***, Analytic functions of optical choppers for Gaussian laser beams, *Proc. SPIE*, Vol. 10335, 10335-61, B. C. Kress, W. Osten, H. P. Urbach, Eds., *Digital Optical Technologies (LASER Congress)*, ISSN 0277-786X, Munchen (Germany), June 25-30, **2017** <http://dx.doi.org/10.1117/12.2270119>; (Poster);
- ISI.C79. Duma M.-A. and **Duma V.-F.***, Two-mirror device for laser scanning systems: multi-parameter analysis, *Proc. SPIE*, Vol. 10330, 1033014, B. Bodermann, K. Frenner, R. M. Silver, Eds., *Modeling Aspects in Optical Metrology VI (Optical Metrology – LASER Congress)*, ISSN 0277-786X, Munchen (Germany), June 25-30, **2017** <http://dx.doi.org/10.1117/12.2269397>; (Poster);
- ISI.C78. Hutiu Gh., **Duma V.-F.***, Demian D., Bradu A., **Podoleanu A. Gh.**, Analysis of the fractures of metallic materials using optical coherence tomography, *Proc. SPIE*, Vol. 10329, 103292D, P. Lehmann, W. Osten, A.A. Gonçalves, Eds., *Optical Measurement Systems for Industrial Inspection X (Optical Metrology – LASER Congress)*, ISSN 0277-786X, Munchen (Germany), June 25-30, **2017** <http://dx.doi.org/10.1117/12.2270117>; (Poster);
- ISI.C77. Everson M.*, **Duma V.-F.**, Dobre G., Optical power transmission in a polygon mirror-based swept source optical coherence tomography system, *Proc. SPIE*, Vol. 10335, 1033520, B. C. Kress, W. Osten, H. P. Urbach, Eds., *Digital Optical Technologies (LASER Congress)*, ISSN 0277-786X, Munchen (Germany), June 25-30, **2017** <http://dx.doi.org/10.1117/12.2270256>; (Poster);
- ISI.C76. **Duma V.-F.***, Demian D., Cira O., Optical choppers with rotational elements: Modeling, design, and prototypes, *Proc. SPIE*, Vol. 10231, 102311K, **Baldini F.**, **Homola J.**, **Lieberman R. A.**, Eds., *Optical Sensors (Optics + Optoelectronics)*, ISSN 0277-786X, Prague (Czech Republic), Apr. 24-27, **2017** <http://dx.doi.org/10.1117/12.2265155> (Poster);
- ISI.C75. **Duma V.-F.**, Analysis of polygonal scanning heads: from industrial to high-end applications in swept sources for OCT, *Proc. SPIE*, Vol. 10056, 100560P, **Raghavachari R.**, **Liang R.**, Eds., *Design and Quality for Biomedical Technologies X (BIOS, Photonics West)*, ISSN 0277-786X, San Francisco (USA), Jan. 28-Feb. 2, **2017** <http://dx.doi.org/10.1117/12.2251023>; (Oral Presentation);
- ISI.C74. Everson M.*, Dobre G., **Duma V.-F.**, Geometric & radiometric vignetting associated with a 72-facet, off-axis, polygon mirror for swept source optical coherence tomography (SS-OCT), *AIP Conference Proc.*, Vol. 1796, Issue 1, 040004, Jan. **2017** <http://dx.doi.org/10.1063/1.4972382>; (Oral Presentation);
- ISI.C73. Beiu R.*, Mnerie C. A., **Duma V.-F.**, Analysis of Curved Shape Micro-mirrors For On-Chip Communication, *Proc. SPIE*, Vol. 10010, 100101Y, *SPIE 8th Intl' Conference Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies (ATOM-N)*, Constanta (Romania), Aug. 25-28, **2016** <http://dx.doi.org/10.1117/12.2246019> (Oral Presentation);
- ISI.C72. **Sinescu C.**, **Duma V.-F.***, **Canjau S.**, **Dobre G.**, **Demian D.**, **Cernat R.**, **Negrutiu M. L.**, **Todea C.**, **Topala F. I.**, **Hutiu Gh.**, **Bradu A.**, **Podoleanu A. Gh.**, Dentistry investigations of teeth and dental prostheses using OCT, *Proc. SPIE*, Vol. 9887, 98870B, J. Popp, V. V. Tuchin, D. L. Matthews, F. S. Pavone, Eds., *SPIE Photonics Europe (Biophotonics: Photonic Solutions for Better Health Care V)*, Brussels (Belgium), Apr. 27, **2016** <http://dx.doi.org/10.1117/12.2227443> (Oral Presentation);
- ISI.C71. **Stan A.-T.**, **Cojocariu A.-C.**, **Antal A. A.**, **Topala F.**, **Sinescu C.**, **Negrutiu M. L.**, **Duma V.-F.**, and **Podoleanu A. Gh.**, Marginal integrity evaluation of dental composite using optical coherence tomography, *Proc. SPIE*, Vol. 9670, 967012, Todea C., Podoleanu A., Duma V.-F., Eds., *5th World Federation of Lasers in Dentistry - European Division (WFLD-ED) & 6th Intl Conference Lasers in Medicine (ICLM, May 7-9, 2015)*, ISSN 0277-786X, Bucharest (Romania), **2016** doi: [10.1117/12.2192855](http://dx.doi.org/10.1117/12.2192855) (Oral Presentation);
- ISI.C70. Zaharia C., Gabor A., Topala F. I., Negrutiu M. L., Sinescu C., **Duma V.-F.**, Podoleanu A. Gh., OCT Evaluation of Zirconia Fixed Partial Prosthesis Processed with a Conventional CAD/CAM Technology, *Proc. SPIE*, Vol. 9670, 967010, Todea C., Podoleanu A., Duma V.-F., Eds., *5th World Federation of Lasers in Dentistry - European Division (WFLD-ED) & 6th Intl Conference Lasers in Medicine (ICLM, May 7-9, 2015)*, ISSN 0277-786X, Bucharest (Romania), **2016** (Oral Presentation); doi: [10.1117/12.2192980](http://dx.doi.org/10.1117/12.2192980) (Oral Presentation);
- ISI.C69. Pribac V., Todea C., **Duma V.-F.***, Low-Level Laser Therapy (LLLT) for periodontal pockets. A preliminary study, *Proc. SPIE*, Vol. 9670, 96700K, Todea C., Podoleanu A., Duma V.-F., Eds., *5th World Federation of Lasers in Dentistry - European Division (WFLD-ED) & 6th Intl Conference Lasers in Medicine (ICLM, May 7-9, 2015)*, ISSN 0277-786X, Bucharest (Romania), **2016**; doi: [10.1117/12.2192010](http://dx.doi.org/10.1117/12.2192010) (Poster);
- ISI.C68. Marcauteanu C., Sinescu C., Negrutiu M. L., Stoica E. T., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Evaluation of Tizian overlays by means of a swept source optical coherence tomography system, *Proc. SPIE*, Vol. 9670, 96700X, Todea C., Podoleanu A., Duma V.-F., Eds., *5th World Federation of Lasers in Dentistry - European Division (WFLD-ED) & 6th Intl Conference Lasers in Medicine (ICLM, May 7-9, 2015)*, ISSN 0277-786X, Bucharest (Romania), **2016**; doi: [10.1117/12.2191905](http://dx.doi.org/10.1117/12.2191905) (Oral Presentation);
- ISI.C67. Stoica E. T., Marcauteanu C., Sinescu C., Negrutiu M. L., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., All ceramic “table tops” analyzed using swept source optical coherence tomography, *Proc. SPIE*, Vol. 9670, 967011, Todea C., Podoleanu A., Duma V.-F., Eds., *5th World Federation of Lasers in Dentistry - European Division (WFLD-ED) & 6th Intl Conference Lasers in Medicine (ICLM, May 7-9, 2015)*, ISSN 0277-786X, Bucharest (Romania), **2016**; doi: [10.1117/12.2191909](http://dx.doi.org/10.1117/12.2191909) (Poster);
- ISI.C66. Dughir C., Popovschi A. M., Cojocariu, A. C., Topala F. I., Negrutiu M. L., Sinescu C., de Sabata A., **Duma V.-F.***, Complete Denture Base Assessment using Holograms for Dimensional Alterations after Different Activation Methods, *Proc. SPIE*, Vol. 9670, 967013, Todea C., Podoleanu A., Duma V.-F., Eds., *5th World Federation of Lasers in Dentistry-European Division (WFLD-ED) & 6th Intl Conference Lasers in Medicine (ICLM)*, May 7-9, 2015, ISSN 0277-786X, Bucharest (Romania), **2016**; doi: [10.1117/12.2191886](http://dx.doi.org/10.1117/12.2191886) (Poster);
- ISI.C65. Negrutiu M. L.*, Sinescu C., Craciunescu E. L., Topala F. I., Cojocariu A. C., **Duma V.-F.**, and Podoleanu A. Gh., Assessment of Dental Plaque by Optoelectronic Methods, *Proc. SPIE*, Vol. 9670, 96700W, Todea C., Podoleanu A., Duma V.-F., Eds., *5th World Federation of Lasers in Dentistry - European Division (WFLD-ED) & 6th Intl Conference Lasers in Medicine (ICLM)*, May 7-9, 2015, ISSN 0277-786X, Bucharest (Romania), **2016**; doi: [10.1117/12.2191640](http://dx.doi.org/10.1117/12.2191640) (Invited Paper);
- ISI.C64. **Duma V.-F.***, Demian D., Sinescu C., Negrutiu M. L., Cernat R., Topala F. I., Hutiu Gh., Bradu A., Podoleanu A. Gh., Handheld scanning probes for OCT: Developments, applications and perspectives, *Proc. SPIE*, Vol. 9670, 96700V, Todea C., Podoleanu A., Duma V.-F., Eds., *5th*

World Federation of Lasers in Dentistry-European Division (WFLD-ED) & 6th Intl Conference Lasers in Medicine (ICLM), May 7-9, 2015, ISSN 0277-786X, Bucharest (Romania), **2016**; doi: [10.1117/12.2178590](https://doi.org/10.1117/12.2178590) (Invited Paper);

ISI.C63. Gabor A.*, Jivanescu A., Zaharia C., Hategan S., Topala F. I., Negrutiu M. L., Sinescu C., **Duma V.-F.**, Podoleanu A. Gh., OCT evaluation of single ceramic crowns made with conventional and chair-side CAD/CAM technology, *Proc. SPIE*, Vol. 9670, 96700Z, Todea C., Podoleanu A., Duma V.-F., Eds., *5th World Federation of Lasers in Dentistry - European Division (WFLD-ED) & 6th Intl Conference Lasers in Medicine (ICLM)*, May 7-9, 2015, ISSN 0277-786X, Bucharest (Romania), **2016**; doi: [10.1117/12.2191907](https://doi.org/10.1117/12.2191907) (Oral Presentation);

ISI.C62. Mnerie C. A.*, Preitl S., **Duma V.-F.**, Classical PID versus predictive control solutions for a galvanometer-based scanner, *IEEE Applied Computational Intelligence and Informatics (SACI)*, 349-353, May 21-23, **2015**; doi: [10.1109/SACI.2015.7208227](https://doi.org/10.1109/SACI.2015.7208227) (Poster);

ISI.C61. **Duma V.-F.***, Demian D., Dobre G. M., Sinescu C., Cernat R. C., Negrutiu M. L., Hutiu Gh., Bradu A., Rolland J. P., Podoleanu A. Gh., Constructive solutions of handheld probes with galvanometer scanners for biomedical and industrial imaging. Applications in OCT, *Proc. SPIE*, Vol. 9633, 96330Q, Mazuray L., Wartmann R., Wood A. P., Eds., *SPIE OptiFab (Optical Design and Engineering VI)*, ISSN 0277-786X, Rochester, NY (USA), Oct. 12-15, **2015**; doi: [10.1117/12.2195839](https://doi.org/10.1117/12.2195839) (Poster);

ISI.C60. **Duma V.-F.***, Dobre G. M., Demian D., Cernat R. C., Sinescu C., Topala F. I., Negrutiu M. L., Hutiu Gh., Bradu A., Rolland J. P., and Podoleanu A. Gh., Handheld probes and galvanometer scanning for optical coherence tomography, *Proc. SPIE*, Vol. 9626, 9626-50, Mazuray L., Wartmann R., Wood A. P., Eds., *SPIE Optical Design (Optical Design and Engineering VI)*, ISSN 0277-786X, Jena (Germany), Sept. 7-10, **2015**; doi: [10.1117/12.2191130](https://doi.org/10.1117/12.2191130); (Oral Presentation);

ISI.C59. Sinescu C., Negrutiu M. L., Manole M., de Sabata A., Rusu L.-C., Stratul S., Duda D., Borzea D., **Duma V.-F.***, Retractions of the Gingival Margins Evaluated by Holographic Methods, *Proc. SPIE*, Vol. 9508, 95080V, [Hrabovsky M.](https://doi.org/10.1117/12.2179010), [Sheridan J. T.](https://doi.org/10.1117/12.2179010), [Fimia A.](https://doi.org/10.1117/12.2179010), Eds., *Holography: Advances and Modern Trends IV (Optics + Optoelectronics)*, ISSN 0277-786X, Prague (Czech Republic), Apr. 13-16, **2015**, [http://dx.doi.org/10.1117/12.2179010](https://doi.org/10.1117/12.2179010); (Poster);

ISI.C58. Negrutiu M. L., Sinescu C., Borlea M. V., Manescu A., **Duma V.-F.***, Rominu M., and Podoleanu A. Gh., Direct composite fillings: an optical coherence tomography and microCT investigation, *Proc. SPIE*, Vol. 9412, 94123R, Hoeschen C., Kontos D., Flohr T. G., Eds., *Physics of Medical Imaging (SPIE Medical Imaging)*, ISSN 0277-786X, Orlando (USA), Febr. 21-26, **2015**; [http://dx.doi.org/10.1117/12.2081661](https://doi.org/10.1117/12.2081661); (Poster);

ISI.C57. Sinescu C., Negrutiu M. L., Nica L., Manescu A., **Duma V.-F.***, Podoleanu A., MicroCT and Optical Coherence Tomography imagistic assessment of the dental roots adhesive, *Proc. SPIE*, Vol. 9417, 9417-29, Gimi B., [Molthen R. C.](https://doi.org/10.1117/12.2082470), Eds., *Biomedical Applications in Molecular, Structural, and Functional Imaging (SPIE Medical Imaging)*, ISSN 0277-786X, Orlando (USA), Febr. 21-26, **2015**; [http://dx.doi.org/10.1117/12.2082470](https://doi.org/10.1117/12.2082470); (Poster);

ISI.C56. **Duma V.F.***, Tankam P., Huang J., Won J. J., and Rolland J. P., Effective duty cycle of galvanometer-based scanners: Impact on OCT imaging, *Proc. SPIE*, Vol. 9315, 93150J, [Raghavachari R.](https://doi.org/10.1117/12.2079776), [Liang R.](https://doi.org/10.1117/12.2079776), Eds., *Design and Quality for Biomedical Technologies VIII (BIOS, Photonics West)*, ISSN 0277-786X, San Francisco (USA), Febr. 7-12, **2015**; [http://dx.doi.org/10.1117/12.2079776](https://doi.org/10.1117/12.2079776); (Oral Presentation);

ISI.C55. Cira O. and **Duma V.-F.***, Optomechatronic choppers with rotating elements: analysis and design, *Springer Proceedings in Mathematics and Statics*, Vol. 93 (Applied Non-Linear Dynamical Systems / DSTA 2013), 457-464, Awrejcewicz J., Ed., Springer **2014**; ISSN 2194-1009, ISBN 978-3-319-08265-3, [http://dx.doi.org/10.1007/978-3-319-08266-0_34](https://doi.org/10.1007/978-3-319-08266-0_34); (Oral Presentation);

ISI.C54. Canjau S.*, Todea C., Sinescu C., Negrutiu M., **Duma V.-F.**, Manescu A., Topala F., and Podoleanu A. Gh., Optical imaging of oral squamous cell carcinoma using optical coherence tomography and micro CT, *Key Engineering Materials* 587, 331-337, Trans Tech Publications (Switzerland), **2014**, ISSN 1662-9795, [http://dx.doi.org/10.4028/www.scientific.net/KEM.587.331](https://doi.org/10.4028/www.scientific.net/KEM.587.331); (Poster);

ISI.C53. **Duma V.-F.***, Negrutiu M. L., Sinescu C., Voiculescu I., Miutescu E., Burlea A., Vlascici M., Podoleanu A. Gh., Research lead student projects on multi-disciplinary optomechatronics with applications in biomedical imaging, *New Trends in Educational Activity in the Field of Mechanism and Machine Theory (ISEMMS, Madrid 2013)*, Mechanisms and Machine Science (Book Series), vol. 19, 145-153, García-Prada J. C., Castejon C., Eds., Springer **2014**, ISSN 2211-0984, ISBN 978-3-319-01835-5, [http://dx.doi.org/10.1007/978-3-319-01836-2_16](https://doi.org/10.1007/978-3-319-01836-2_16); (Oral Presentation);

ISI.C52. **Duma V.-F.***, Schitea A., Tuef M., Cira O., Hutiu Gh., Demian D., Mnerie C., Kaposta I., Optomechatronics applications of the theory of mechanisms with active student involvement in research, *New Trends in Educational Activity in the Field of Mechanism and Machine Theory (ISEMMS, Madrid 2013)*, Mechanisms and Machine Science (Book Series), vol. 19, 111-119, García-Prada J. C., Castejon C., Eds., Springer **2014**, ISSN 2211-0984, ISBN 978-3-319-01835-5, [http://dx.doi.org/10.1007/978-3-319-01836-2_12](https://doi.org/10.1007/978-3-319-01836-2_12); (Oral Presentation);

ISI.C51. **Duma V.-F.***, Demian D., Cira O., Optical choppers with high speed rotating elements, *Proc. SPIE*, Vol. 9131, 9131OE, [Wyrowski F.](https://doi.org/10.1117/12.2051828), [Sheridan J.T.](https://doi.org/10.1117/12.2051828), [Tervo J.](https://doi.org/10.1117/12.2051828), [Meuret Z.](https://doi.org/10.1117/12.2051828), Eds., *Optical Modelling and Design III (Photonics Europe)*, ISSN 0277-786X, Brussels (Belgium), Apr. 14-17, **2014**, [http://dx.doi.org/10.1117/12.2051828](https://doi.org/10.1117/12.2051828); (Poster);

ISI.C50. **Duma V.-F.*** and Rolland J. P., Advancements on galvanometer scanners for high-end applications, *Proc. SPIE*, Vol. 8936, 893612, [Raghavachari R.](https://doi.org/10.1117/12.2038357), [Liang R.](https://doi.org/10.1117/12.2038357), Eds., *Design and Quality for Biomedical Technologies VI (BIOS, Photonics West)*, ISSN 0277-786X, San Francisco, CA (USA); Febr. 1-7, **2014**, [http://dx.doi.org/10.1117/12.2038357](https://doi.org/10.1117/12.2038357); (Oral Presentation);

ISI.C49. Sinescu C., Negrutiu M., Bradu A., **Duma V.-F.***, and Podoleanu A. Gh., Integral ceramic superstructure evaluation by time domain optical coherence tomography, *Proc. SPIE*, Vol. 8929, 89290N, [Rechmann P.](https://doi.org/10.1117/12.2039618), [Fried D.](https://doi.org/10.1117/12.2039618), Eds., *Lasers in Dentistry XX (BIOS, Photonics West)*, ISSN 0277-786X, San Francisco, CA (USA); Febr. 1-7, **2014**, [http://dx.doi.org/10.1117/12.2039618](https://doi.org/10.1117/12.2039618); (Poster);

ISI.C48. Sinescu C.*, Topala F. I., Negrutiu M., Rominu M., **Duma V.-F.***, and Podoleanu A. Gh., Temperature variation in metal ceramic technology analyzed using Time Domain Optical Coherence Tomography, *Proc. SPIE*, Vol. 8925, 8925 0T, Todea C., Podoleanu A., Duma V.-F., Eds., *5th Intl Conference Lasers in Medicine*, ISSN 0277-786X, Timisoara (Romania), Sept. 19-21, 2013 (2014), [http://dx.doi.org/10.1117/12.2045848](https://doi.org/10.1117/12.2045848) (Invited Paper);

ISI.C47. Rusu L. C.*, Negrutiu M., Sinescu C., Hoinoiu B., Zaharia C., Ardelean L., **Duma V.-F.**, and Podoleanu A. Gh., Different matrix evaluation for the bone regeneration of rats femours using Time Domain Optical Coherence Tomography, *Proc. SPIE*, Vol. 8925, 8925 0V, Todea C.,

- Podoleanu A., Duma V.-F., Eds., *5th Intl Conference Lasers in Medicine*, ISSN 0277-786X, Timisoara (Romania), Sept. 19-21, 2013 (2014), <http://dx.doi.org/10.1117/12.2045849>; (Poster);
- ISI.C46. Negrutiu M. L.*, Sinescu C., Manescu A., Topala F.I., Hoinoiu B., Rominu M., Marcauteanu C., **Duma V.-F.**, Bradu A., and Podoleanu A. Gh., Imagistic evaluation of matrix bone interface, *Proc. SPIE*, Vol. 8925, 8925 0U, Todea C., Podoleanu A., Duma V.-F., Eds., *5th Intl Conference Lasers in Medicine*, ISSN 0277-786X, Timisoara (Romania), Sept. 19-21, 2013 (2014), <http://dx.doi.org/10.1117/12.2045777> (Invited Paper);
- ISI.C45. Stoica E. T.*, Marcauteanu C., Bradu A., Sinescu C., Topala F.I., Negrutiu M.L., **Duma V.-F.**, and Podoleanu A. Gh., Imaging of noncarious cervical lesions by means of a fast swept source optical coherence tomography system, *Proc. SPIE*, Vol. 8925, 8925 0Y, Todea C., Podoleanu A., Duma V.-F., Eds., *5th Intl Conference Lasers in Medicine*, ISSN 0277-786X, Timisoara (Romania), Sept. 19-21, 2013 (2014), <http://dx.doi.org/10.1117/12.2044214>; (Poster);
- ISI.C44. Marcauteanu C.*, Bradu A., Sinescu C., Topala F.I., Negrutiu M.L., **Duma V.-F.**, and Podoleanu A. Gh., The advantages of a swept source optical coherence tomography system in the evaluation of occlusal disorders, *Proc. SPIE*, Vol. 8925, 8925 0W, Todea C., Podoleanu A., Duma V.-F., Eds., *5th Intl Conference Lasers in Medicine*, ISSN 0277-786X, Timisoara (Romania), Sept. 19-21, 2013 (2014), <http://dx.doi.org/10.1117/12.2044198>; (Oral Presentation);
- ISI.C43. Cănjau S.*, Todea C., Sinescu C., **Duma V.-F.**, Topala F., Podoleanu A. Gh., Imaging of oral pathological tissue using optical coherence tomography, *Proc. SPIE*, Vol. 8925, 8925 0X, Todea C., Podoleanu A., Duma V.-F., Eds., *5th Intl Conference Lasers in Medicine*, ISSN 0277-786X, Timisoara (Romania), Sept. 19-21, 2013 (2014), <http://dx.doi.org/10.1117/12.2041752>; (Poster);
- ISI.C42. **Duma V.-F.**, Scanning in biomedical imaging: from classical devices to handheld heads and micro-systems, *Proc. SPIE*, Vol. 8925, 8925 0L, Todea C., Podoleanu A., Duma V.-F., Eds., *5th Intl Conference Lasers in Medicine*, ISSN 0277-786X, Timisoara (Romania), Sept. 19-21, 2013 (2014), <http://dx.doi.org/10.1117/12.2042733> (Invited Paper);
- ISI.C41. Kaposta I., **Duma V.-F.***, Driving solutions and optomechanical design of scanners with Risley prisms, *Proc. SPIE*, Vol. 8925, 8925 0Q, Todea C., Podoleanu A., Duma V.-F., Eds., *5th Intl Conference Lasers in Medicine*, ISSN 0277-786X, Timisoara (Romania), Sept. 19-21, 2013 (2014), <http://dx.doi.org/10.1117/12.2044053>; (Poster);
- ISI.C40. Cira O., **Duma V.-F.***, Design programs of optical choppers wheels with different configurations, *Proc. SPIE*, Vol. 8925, 8925 0S, Todea C., Podoleanu A., Duma V.-F., Eds., *5th Intl Conference Lasers in Medicine*, ISSN 0277-786X, Timisoara (Romania), Sept. 19-21, 2013 (2014), <http://dx.doi.org/10.1117/12.2043119>; (Poster);
- ISI.C39. **Duma V.-F.**, Risley prisms scanners with different configurations: a multi-parametric analysis, *Proc. SPIE*, Vol. 8925, 8925 0P, Todea C., Podoleanu A., Duma V. F., Eds., *5th Intl Conference Lasers in Medicine*, ISSN 0277-786X, Timisoara (Romania), Sept. 19-21, 2013 (2014), <http://dx.doi.org/10.1117/12.2044581>; (Poster);
- ISI.C38. Mnerie C., **Duma V.-F.***, Control architectures of galvanometer-based scanners for an increased precision and a faster response, *Proc. SPIE*, Vol. 8925, 8925 0O, Todea C., Podoleanu A., Duma V.F., Eds., *5th Intl Conference Lasers in Medicine*, ISSN 0277-786X, Timisoara (Romania), Sept. 19-21, 2013 (2014), <http://dx.doi.org/10.1117/12.2043034>; (Poster);
- ISI.C37. **Duma V.-F.***, Hutiu G., Cira O., Demian D., Mnerie C., Kaposta I., Building an Optomechatronics Group in a young university in Western Romania, *Proc. SPIE*, Vol. 9289, 928913, Manuel Filipe P. C. Martins Costa, Mourad Zghal, Eds., *12th Education and Training in Optics and Photonics (ETOP)* July 22-26, 2013), ISSN 0277-786X, Porto (Portugal), 2014 <http://dx.doi.org/10.1117/12.2070774>; (Poster);
- ISI.C36. **Duma V.-F.***, Negrutiu M. L.*, Sinescu C., Miutescu E.*, Burlea A., Vascici M.*, Negru C., Gheorghiu N.*, Demian D., Hutiu G., Mnerie C., Marcauteanu C., Topala F., Rolland J., Voiculescu I., and Podoleanu A. Gh.*, Towards a Research Pole in Photonics in Western Romania, *Proc. SPIE*, Vol. 9289, 928916, Manuel Filipe P. C. Martins Costa, Mourad Zghal, Eds., *12th Education and Training in Optics and Photonics (ETOP)* July 22-26, 2013), ISSN 0277-786X, Porto (Portugal), 2014 <http://dx.doi.org/10.1117/12.2070787> (Oral Presentation);
- ISI.C35. **Duma V.-F.**, Laser scanners: from industrial to biomedical applications, *Proc. SPIE*, Vol. 8785, 8785CU, Manuel Filipe P. C. M. Costa, Orlando Frazão, Eds., *RIAO-OPTILAS (VIII Iberomamerican Opticas Meeting & XI Latinamerican Meeting on Optics, Lasers and Applications)*, ISSN 0277-786X, Porto (Portugal), July 22-26, 2013 <http://dx.doi.org/10.1117/12.2025220> (Invited Paper);
- ISI.C34. Sinescu C.*, Negrutiu M. L., **Duma V.-F.***, Marcauteanu C., Topala F. I., Rominu M., Bradu A., Podoleanu A. Gh., Evaluation of metal-polymeric fixed partial prosthesis using optical coherence tomography, *Proc. SPIE*, Vol. 8785, 8785EH, Manuel Filipe P. C. M. Costa, Orlando Frazão, Eds., *RIAO-OPTILAS (VIII Iberoamerican Opticas Meeting & XI Latinamerican Meeting on Optics, Lasers and Applications)*, ISSN 0277-786X, Porto (Portugal), July 22-26, 2013, ISSN 0277-786X, <http://dx.doi.org/10.1117/12.2027502>; (Poster);
- ISI.C33. Rusu L. C.*, Negrutiu M., Sinescu C., Hoinoiu B., Topala F. I., **Duma V.-F.**, Rominu M., Podoleanu A. Gh., Time domain optical coherence tomography investigation of bone matrix interface in rat femurs, *Proc. SPIE*, Vol. 8914, 89141H, Eds., *ISPD 5th Intl Symposium on Photoelectronic Detection and Imaging*, ISSN 0277-786X, Beijing (China), June 25-27, 2013 <http://dx.doi.org/10.1117/12.2036345>; (Poster);
- ISI.C32. Cănjau S.*, Todea D. C., Sinescu C., Negrutiu M., **Duma V.-F.**, Manescu A., Topala F. I., Podoleanu A. Gh., Optical imaging of oral pathological tissue using optical coherence tomography and micro CT, *Proc. SPIE-OSA*, Vol. 8805, 880504, **Betz C., Brian J.F., Wong M.D.**, Eds., *Head and Neck Optical Diagnostics – European Conf. on Biomed. Opt. (LASER Congress)*, ISSN 1605-7422, Munchen (Germany), May 13-16, 2013 <http://dx.doi.org/10.1117/12.2032584>; (Oral Presentation);
- ISI.C31. Negrutiu M. L.*, Sinescu C., Cănjau S., Manescu A., Topala F. I., Hoinoiu B., Rominu M., Marcauteanu C., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Bone regeneration assessment by optical coherence tomography and microCT synchrotron radiation, *Proc. of OSA-SPIE*, Vol. 8802, 880204-6, **Brett E. Bouma; Rainer A. Leitgeb**, Eds., *Optical Coherence Tomography and Coherence Techniques VI – European Conf. on Biomed. Opt. (LASER Congress)*, ISSN 1605-7422, Munchen (Germany), May 13-16, 2013 <http://dx.doi.org/10.1117/12.2032624>; (Oral Presentation);
- ISI.C30. Mnerie C.*, Preitl S., **Duma V.-F.***, Performance enhancement of galvanometer scanners using extended control structures, *SACI: 8th IEEE Intl' Symposium on Appl. Computational Intelligence and Informatics*, 127-130, May 23–25, 2013, ISBN 978-1-4673-6397-6, Timisoara (Romania), DOI: [10.1109/SACI.2013.6608952](http://dx.doi.org/10.1109/SACI.2013.6608952); (Poster);

- ISI.C29. Schitea A., Tuf M., and **Duma V.-F.***, Modeling of Risley prisms devices for exact scan patterns, *Proc. SPIE*, Vol. 8789, 8789-40, **Bodermann B.**, Frenner K., **Silver R. M.**, Eds., *Modeling Aspects in Optical Metrology IV (LASER Congress)*, ISSN 0277-786X, Munchen (Germany), May 13-16, **2013** <http://dx.doi.org/10.1117/12.2020386>; (Poster);
- ISI.C28. Mnerie C., Preitl S., and **Duma V.-F.**, Mathematical model of a galvanometer-based scanner: simulations and experiments, *Proc. SPIE*, Vol. 8789, 8789-43, **Bodermann B.**, Frenner K., **Silver R. M.**, Eds., *Modeling Aspects in Optical Metrology IV (LASER Congress)*, ISSN 0277-786X, Munchen (Germany), May 13-16, **2013** <http://dx.doi.org/10.1117/12.2020462>; (Poster);
- ISI.C27. Cira O. and **Duma V.-F.***, Transmission functions of optical choppers for Gaussian beam distributions: Modeling and simulations, *Proc. SPIE*, Vol. 8789, 87890E, **Bodermann B.**, Frenner K., **Silver R. M.**, Eds., *Modeling Aspects in Optical Metrology (LASER Congress)*, ISSN 0277-786X, Munchen (Germany), May 13-16, **2013** <http://dx.doi.org/10.1117/12.2020383>; (Oral Presentation);
- ISI.C26. **Duma V.-F.**, Classical and eclipse optical choppers, *Proc. SPIE*, Vol. 8621, 8621-44, M. J. F. Digonnet, S. Jiang, J. C. Dries, Eds., *Optical Components and Materials X (OPTO, part of Photonics West)*, ISSN 0277-786X, San Francisco (USA), Feb. 2-7, **2013** <http://dx.doi.org/10.1117/12.2003122>; (Poster);
- ISI.C25. **Duma V.-F.*** and Podoleanu A. Gh., Polygon mirror scanners in biomedical imaging: a review, *Proc. SPIE*, Vol. 8621, 8621V, M. J. F. Digonnet, S. Jiang, J. C. Dries, Eds., *Optical Components and Materials X (OPTO, Photonics West)*, ISSN 0277-786X, San Francisco (USA), Feb. 2-7, **2013** <http://dx.doi.org/10.1117/12.2005065>; (Oral Presentation);
- ISI.C24. Nicolov M., **Duma V.-F.**, Simulations of two types of crystals used as laser materials, *Proc. SPIE*, Vol. 8433, Graf T., Mackenzie J.I., Jelinkova H., Powell J., Eds., *Laser sources and applications (SPIE Photonics Europe)*, ISSN 0277-786X, Brussels (Belgium), Apr. 16-19, **2012** <http://dx.doi.org/10.1117/12.922724>; (Poster);
- ISI.C23. **Duma V.-F.***, Mnerie C., Optimization of scanning and command functions of galvanometer-based scanners, *Proc. SPIE*, Vol. 8083, 8083-45, **Bodermann B.**, **Bosse H.**, **Silver R. M.**, Eds., *Modeling Aspects in Optical Metrology (LASER Congress)*, ISSN 0277-786X, Munchen (Germany), May 23-26, **2011** <http://dx.doi.org/10.1117/12.889566>; (Poster);
- ISI.C22. **Duma V.-F.***, Nicolov M., Kiss M., Ilca T., Demian D., and Szantho L., Modeling of modulation functions of different configurations of optical chopper wheels, *Proc. SPIE*, Vol. 8083, 8083-17, **Bodermann B.**, **Bosse H.**, **Silver R. M.**, Eds., *Modeling Aspects in Optical Metrology (LASER Congress)*, ISSN 0277-786X, Munchen (Germany), May 23-26, **2011** <http://dx.doi.org/10.1117/12.889509>; (Poster);
- ISI.C21. **Duma V.-F.***, Rolland J. P., Mechanical Constraints and Design Considerations for Polygon Scanners, in *New Trends in Mechanism Science: Analysis and Design*, Mechanisms and Machine Science, Vol. 5, Part 8, 475-483, Pislă D., Ceccarelli M., Husty M., Corves B., Eds., ISBN 978-90-481-9688-3, Springer, Berlin, Heidelberg, **2010**, http://dx.doi.org/10.1007/978-90-481-9689-0_55; (Oral Presentation);
- ISI.C20. **Duma V.-F.**, Teaching Mechanisms: from Classical to Hands-on-Experiments and Research-Oriented, in *New Trends in Mechanism Science: Analysis and Design*, Mechanisms and Machine Science, Vol. 5, Part 8, 493-501, Pislă D., Ceccarelli M., Husty M., Corves B., Eds., ISBN 978-90-481-9688-3, Springer, Berlin, Heidelberg, **2010**, http://dx.doi.org/10.1007/978-90-481-9689-0_57; (Oral Presentation);
- ISI.C19. **Duma V.-F.***, Nicolov M., and Kiss M., Optical choppers: modulators and attenuators, *Proc. SPIE*, Vol. 7469, 74690V, Vlad V.I., Ed., *RomOpto 2009: 9th Conference on Optics*, ISSN 0277-786X, Sibiu (Romania), May 17, 2010, <http://dx.doi.org/10.1117/12.859044>; (Poster);
- ISI.C18. **Duma V.-F.***, Rolland J., and Podoleanu A. Gh., Perspectives of optical scanning in OCT, *Proc. SPIE*, Vol. 7556, 7556-10, Raghavachari R., Liang R., Eds., *Design and Quality for Biomedical Technologies III (BIOS: Biomedical Optics, part of Photonics West)*, ISSN 0277-786X, San Francisco (USA), Jan. 23-28, 2010, <http://dx.doi.org/10.1117/12.840718>; (Oral Presentation);
- ISI.C17. **Duma V.-F.***, Podoleanu A. Gh., and Nicolov M., Modeling a galvoscaner with an optimized scanning function, *SYROM 2009: Proc. 10th IFToMM Intl. Symposium on Science of Mechanisms and Machines*, Visa I., Ed., 539-548, ISBN 978-90-481-3521-9, Brasov (Romania), Oct. 27-29, 2010, Springer, http://dx.doi.org/10.1007/978-90-481-3522-6_45; (Oral Presentation);
- ISI.C16. **Duma V.-F.***, Patruseș V., AutoCad simulations and experiments on the manufacturing of gears, in *SYROM 2009: Proc. 10th IFToMM Intl. Symposium on Science of Mechanisms and Machines*, Visa I., Ed., 529-538, ISBN 978-90-481-3521-9, Brasov (Romania), Oct. 27-29, **2010**, Springer, http://dx.doi.org/10.1007/978-90-481-3522-6_44; (Oral Presentation);
- ISI.C15. **Duma V.-F.**, Mathematical Functions of a 2-D Scanner with Oscillating Elements, in *Modeling, Simulation and Control of Nonlinear Engineering Dynamical Systems*, 243-253, Awrejcewicz J., Ed., ISBN 978-1-4020-8777-6, Springer, Heidelberg, **2009**, http://dx.doi.org/10.1007/978-1-4020-8778-3_22; (Invited Paper);
- ISI.C14. **Duma V.-F.***, Nicolov M., Szantho L., Mnerie C., Falcan O., Contributions to the development of optical scanners with rotating or oscillating elements, *Proc. 20th DAAAM Intl. Symposium*, 0397-0398, Katalinic B., Ed., ISSN 1726-9679, Vienna (Austria), Oct 22-25, 2009; (Poster);
- ISI.C13. Otlacan D., Tusz F., **Duma V.-F.***, Kaposta I., Contributions to the hydrostatic buffers for railway vehicles, *Proc. 20th DAAAM Intl. Symposium*, 0393-0394, Katalinic B., Ed., ISSN 1726-9679, Vienna (Austria), Oct 22-25, 2009; (Poster);
- ISI.C12. Otlacan D., **Duma V.-F.***, Kaposta I., Tusz F., Double buffers system for the improvement of railway vehicles behaviour in curves, *Proc. 20th DAAAM Intl. Symposium*, 0395-0396, Katalinic B., Ed., ISSN 1726-9679, Vienna (Austria), Oct 22-25, **2009**; (Poster);
- ISI.C11. **Duma V.-F.***, Nicolov M., Numerical and experimental study of the characteristic functions of polygon scanners, *Proc. SPIE*, Vol. 7390, 7390-15, Bosse H., Bodermann B., Silver R.M., Eds., *Modeling Aspects in Optical Metrology (part of LASER Congress)*, ISSN 0277-786X, Munchen (Germany), June 15-17, **2009**, <http://dx.doi.org/10.1117/12.827443>; (Poster);
- ISI.C10. **Duma V.-F.**, Dimensional measurements with optical scanners, in *Proc. 4th European Workshop on Structural Health Monitoring (ESHM)*, Uhl T., Ostachowicz W., HolnickiSzulc J., Eds., 1217-1224, Krakow (Poland), July 02-04, **2008**, ISBN 978-1-932078-94-7, DESTech, USA, www.destechpub.com-link; (Poster);
- ISI.C9. **Duma V.-F.***, Podoleanu A. G., Theoretical approach on a galvanometric scanner with an enhanced duty cycle, in *Proc. SPIE*, Vol. 7139, 71390D, *1st Canterbury Workshop on AO and OCT*, Podoleanu A., Ed., ISSN 0277-786X, Canterbury, Kent (UK), Sept. 6-10, 2008 <http://dx.doi.org/10.1117/12.810340>; (Oral Presentation);

- ISI.C8. **Duma V.-F.**, Vignetting of light beams for objects placed at a finite distance from an optical system, in *Proc. SPIE*, Vol. 7100, 7100.05, *Optical Design and Engineering*, Mazuray L., Wartmann R., Wood A., Tissots J. L., Raynor J. M., Eds., ISSN 0277-786X, Glasgow (UK), Sept. 27, **2008** <http://dx.doi.org/10.1117/12.797066>; (Oral Presentation);
- ISI.C7. Ghetea L.G.*, Niculescu A.M., Motoc R., Mihaescu G., **Duma V.-F.**, Manu D., Gavrilă L., Comparative study of primary and secondary tumors from patients with laryngeal and oropharyngeal cancer, using optical and electron microscopy, in *Proc. SPIE*, Vol. 6991, 699127, *Biophotonics: Photonic Solutions for Better Health Care*, J. Popp, W. Drexler, V.V. Tuchin, D.L. Matthews, Eds., ISSN 1605-7422, Strassburg (France), May 2, **2008** <http://dx.doi.org/10.1117/12.781379>; (Poster);
- ISI.C6. Ghetea L.G.*, Motoc R., Niculescu A.M., Litescu S.C., **Duma V.-F.**, Popescu C.F., Genetic characterization of some Romanian red wine grapevine varieties, in *Proc. SPIE*, Vol. 6991, 699128, *Biophotonics: Photonic Solutions for Better Health Care*, J. Popp, W. Drexler, V. V. Tuchin, D. L. Matthews Eds., ISSN 1605-7422, Strassburg (France), May 2, **2008** <http://dx.doi.org/10.1117/12.781420>; (Poster);
- ISI.C5. Otlacan D., **Duma V.-F.***, Kaposta I., Tusz F., Dragan I.F., Hydraulic shock absorber with force-deformation characteristic independent with regard to temperature, *Proc. 18th DAAAM Intl. Symposium*, Katalinic B., Ed., ISSN 1726-9679, Zadar (Croatia), Oct 24-27, 531-532, **2007**; (Poster);
- ISI.C4. Otlacan D., Kaposta I., Tusz F., **Duma V.-F.***, Dragan I.F., Contributions to the improvement of the dynamic characteristics of the hydrostatic springs, *Proc. 18th DAAAM Intl. Symposium*, Katalinic B., Ed., ISSN 1726-9679, Zadar (Croatia), Oct 24-27, 533-534, **2007**; (Poster);
- ISI.C3. **Duma V.-F.**, Novel approaches in the designing of polygon scanners, *Proc. SPIE*, Vol. 6785, 6785-1Q, *RomOpto: 8th Conference on Optics*, Vlad V.I., Ed., ISSN 0277-786X, Sibiu (Romania), Aug. 01, **2007**, <http://dx.doi.org/10.1117/12.756730>; (Oral Presentation);
- ISI.C2. **Duma V.-F.**, Double-prisms neutral density filters: a comparative approach, *Proc. SPIE*, Vol. 6785, 6785-1W, *RomOpto: 8th Conference on Optics*, Vlad V.I., Ed., ISSN 0277-786X, Sibiu (Romania), Aug. 01, **2007** <http://dx.doi.org/10.1117/12.756801>; (Poster);
- ISI.C1. **Duma V.-F.**, On-line measurements with optical scanners: metrological aspects, *Proc. SPIE*, Vol. 5856, 606-617, Osten W., Gorecki C., Novak E., Eds., *Opt. Measurement Systems for Industrial Inspection IV (LASER Congress)*, ISSN 0277-786X, Munchen (Germany), June 15-17, **2005** <http://dx.doi.org/10.1117/12.612103>; (Poster);

Papers in Peer-reviewed Journals (not indexed in Web of Science)

- J52. Canjau S., Todea C.*, Sinescu C., Sirbu O., Moatar A., Bejinar C., Pricop M., Negrutiu M. L., Duma V.-F., MicroRNAs used as biomarkers for the detection of oral malignancy, *Romanian J. of Stomatology* **77**(3), 69-74 (**2016**); ISSN 1843-0805; https://view.publitas.com/amph/rjs_2016_3_art-04/page/1
- J51. **Duma V.-F.**, Command functions of open loop galvanometer scanners with optimized duty cycles, *Theoretical and Appl. Mech. Lett.* **2**(4), 043005 (**2012**) (AIP); ISSN 2095-0349; [Doi 10.1063/2.1204305](https://doi.org/10.1063/2.1204305);
- J50. Andras F., Nicolov M., **Duma V.-F.***, Optical micrometer: measuring system with a polygonal scanning head, *Sc. Bull. Polytechnic Univ. of Timisoara, Trans. on Math.-Phys.* **56**(71), 75-81, **2011**, ISSN 1224-6069;
- J49. Mnerie C., Kiss M., Ilca T., Szantho L., Falcan O., Nicolov M. F., Demian D., Voiculescu I., **Duma V.-F.***, Study of optical modulators with rotating wheels: The experimental setup, *Sc. Bull. Polytechnic Univ. of Timisoara, Trans. on Math.-Physics* **56**(70), 73-80, **2011**, ISSN 1224-6069;
- J48. Szantho L., Mnerie C., Ilca T., Falcan O., Nicolov M. F., Demian D., **Duma V.-F.***, Radiometric scanning with applications in the lighting technology, *Sc. Bull. Polytechnic Univ. of Timisoara, Trans. on Math.-Physics* **56**(70), 89-97, **2011**, ISSN 1224-6069;
- J47. Nicolov M. F., **Duma V.-F.**, Mnerie C., Szantho L., Falcan O., New approaches in simulations, *Sc. Bull. Polytechnic Univ. of Timisoara, Trans. on Math.-Physics* **56**(70), 81-88, **2011**, ISSN 1224-6069;
- J46. **Duma V.-F.**, Mathematical analysis of the optical choppers, *Bulletins for Applied and Computer Mathematics, BAM-CXII/2008*, Nr. 2368, PAMM-Centre, Budapest Univ. of Technology and Economics, 153-160, **2008**, ISSN 0133-3526;
- J45. **Duma V.-F.* et al.**, Experimental stall for the study of polygonal mirror scanners, *Sc. and Tech. Bulletin of Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.* **4**(2), 37-48, **2008**, ISSN 1584-918X;
- J44. Silaghi D., **Duma V.-F.***, Direct solar energy use for greenhouses and small consumers, *Annals of Oradea Univ., Management and Technological Eng.* VI(XVI), 830-837, **2007**, ISSN 1583-0691, ulrichsweb.com/link
- J43. Munzer H., **Duma V.-F.***, Micro and nano mechOnics positioning stages, *Annals of Oradea Univ., Management and Technological Eng.* VI(XVI), 902-908, **2007**, ISSN 1583-0691, ulrichsweb.com/link
- J42. Patrusel V., **Duma V.-F.***, Simulation of the manufacturing of gears using toothed rack tools (Maag), *Sc. and Tech. Bulletin of Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.* **3**(2), 41-51, **2007**, ISSN 1584-918X;
- J41. **Duma V.-F.**, Study of the vignetting for telecentric optical systems, *Bulletins for Applied and Computer Mathematics, BAM-CXII/2008*, Nr. 2296 (PC152-153), PAMM-Centre, Budapest Univ. of Technology and Economics, 7-12, **2007**, ISSN 0133-3526;
- J40. Berar T., **Duma V.-F.***, Devices of orientation-fixation of pieces with irregular outline, *Sc. and Tech. Bulletin of Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.* **3**(2), 28-40, **2007**, ISSN 1584-918X;
- J39. **Duma V.-F.**, Scanning devices with oscillating elements, *Sc. and Tech. Bulletin of the Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.* **3**(2), 17-27, **2007**, ISSN 1584-918X;
- J38. **Duma V.-F.**, The monogon scanner: an analytic and experimental study, *Acta Technica Napocensis, Series: Applied Mathematics and Mechanics* **4**(49), Cluj-Napoca, 889-894, **2006**, ISSN 1221 5872;
- J37. **Duma V.-F.**, New approaches on the polygon scanners, *Acta Technica Napocensis, Series: Applied Mathematics and Mechanics* **4**(49), 895-900, Cluj-Napoca, **2006**, ISSN 1221 5872;

- J36. Munzer H., **Duma V.-F.***, Piezoelectric equipments for micropositioning, *Sc. and Tech. Bulletin of Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.* **2**(1), 17-23, **2006**, ISSN 1584-918X;
- J35. Tusz F.*, **Duma V.-F.**, Meszar G., Robotic manufacturing welding cell: the positioning precision, *Sc. and Tech. Bulletin of the Aurel Vlaicu Univ. Arad, Series: Mech. Eng.* **2**(1), 24-31, **2006**, ISSN 1584-918X;
- J34. **Duma V.-F.**, Development of some new scanning equipments (in Romanian), *Journal for the Science Policy and Scientometrics*, Special on-line No. **2005**, ISSN 1582-1218;
- J33. **Duma V.-F.**, The photometric aperture, *Romanian Journal of Optoelectronics* (Joint publication of Optoelectronica 2001 & SPIE Ro-Chapter) **1**(13), 11-21, **2005**, ISSN 1453-0600;
- J32. **Duma V.-F.***, Nicoara I., Multi-pupil optical systems, *Romanian Journal of Optoelectronics* (Joint publication of Optoelectronica 2001 & SPIE Ro Chapter) **2**(13), 37-46, **2005**, ISSN 1453-0600;
- J31. **Duma V.-F.**, A study of the vignetting for objects situated at a finite distance from an optical system, *Bulletins for Applied and Computer Mathematics, BAM-CVII/2005*, No. 2268, 33-40, PAMM-Centre, Budapest Univ. of Technology and Economics, **2005**, ISSN 0133-3526;
- J30. **Duma V.-F.**, Novel approaches in the rotating mirrors optical scanners, *TSTM* **11**, Vol. II, ID 0001551, 214-217, **2005**, ISSN 1224-7499;
- J29. **Duma V.-F.**, Pernevan M., Barglazan M., Pernevan I.*, Modeling a compression valve geometry of a mono-tube shock absorber for a constant damping force, *Modeling and optimization in the machine building field - MOCM* **11**, 214-217, **2005**, ISSN 1224-7480;
- J28. **Duma V.-F.**, Reducing the positioning error in the dimensional measurements using optical scanners, *Sc. and Tech. Bull. of Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.* **1**(4), 43-50, **2005**, ISSN 1584-918X;
- J27. **Duma V.-F.***, Gherman Gh., Muncut E., A study of the sources of errors in the scanning process, *Sc. and Tech. Bulletin of Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.* **1**(3), 21-30, **2005**, ISSN 1584-918X;
- J26. **Duma V.-F.***, Golosie M., Experimental ascertainments on photo-multipliers, *Romanian Review of Fine Mechanics, Optics & Mechatronics, Suppl. to No. 28*, 59-64, **2005**, ISSN 1584-5982;
- J25. Beches G., **Duma V.-F.***, Telescope mirrors: a manufacturing and control technology, *Romanian Review of Fine Mechanics, Optics & Mechatronics, Suppl. to No. 28*, 37-39, **2005**, ISSN 1584-5982;
- J24. **Duma V.-F.**, A few considerations on the optical choppers, *Sc. and Tech. Bulletin of the Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.* **1**(2), 20-28, **2005**, ISSN 1584-918X;
- J23. **Duma V.-F.***, Pommersheim A., An optimization of the dispersion in the optical prism, *Sc. and Tech. Bulletin of the Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.* **1**(1), 32-36, **2005**, ISSN 1584-918X;
- J22. **Duma V.-F.**, Experimentall ascertainments in the analysis and the design of the laser scanning devices with rotating mirorr: Part I (The experimentall stall) (in Romanian), *Annals of the Aurel Vlaicu Univ. of Arad, Series: Textile*, 348-354, Nov. 3-4, **2004**, ISSN 1582-3431;
- J21. **Duma V.-F.**, Experimentall ascertainments in the analysis and the design of the laser scanning devices with rotating mirorr: Part II (The ascertainment of the scanning function) (in Romanian), *Annals of the Aurel Vlaicu Univ. of Arad, Series: Textile*, 355-364, Nov. 3-4, **2004**, ISSN 1582-3431;
- J20. **Duma V.-F.**, The optical multi-cam: the analytical method, *Annals of the Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.*, 143-147, **2002**, ISSN 1582-3393;
- J19. **Duma V.-F.***, Gabor G., The optical multi-cam: the grapho-analytical method, *Annals of the Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.*, 148-153, **2002**, ISSN 1582-3393;
- J18. Beches G., **Duma V.-F.***, Manufacturing and control technology for telescope mirrors, *Annals of the Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.*, 154-162, **2002**, ISSN 1582-3393;
- J17. **Duma V.-F.**, The comparative study of some solutions of optical attenuators (in Romanian), *Annals of the Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.*, 109-118, **2000**, ISSN 1582-3393;
- J16. **Duma V.-F.**, Considerations on the photometric calculus of the visual colorimeters (in Romanian), *Annals of the Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.*, 119-126, **2000**, ISSN 1582-3393;
- J15. Alexandrescu C., **Duma V.-F.***, Galvanometric laser scanning device for dimensional measurements, *Sc. Bulletin of the Politehnica Univ. of Timisoara, Series: Electronics and Telecommunications*, Tom **43**(57), Fasc. 2 (ETC '98), 245-248, **1998**, ISSN 1224-6034;
- J14. Mateas M., **Duma V.-F.***, Robotics application of a 2D scanning device, *Romanian Review of Fine Mechanics & Optics (Suppl. 2 - COMEFIN 5)*, 411-416, **1998**, ISSN 1220-6830;
- J13. **Duma V.-F.***, Perju D., The analysis of scanning devices with rotating elements (in Romanian), *Annals of the Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.*, Vol. II, 87-96, Oct. 30-31, **1997**, ISBN 973-98365-0-5;
- J12. **Duma V.-F.**, The designing calculus of scanning devices with polygonal rotating mirrors (in Romanian), *Annals of the Aurel Vlaicu Univ. of Arad, Series: Mech. Eng.*, Vol. II, 97-106, Oct. 30-31, **1997**, ISBN 973-98365-0-5;
- J11. **Duma V.-F.***, Nicoara I., A quantitative analysis of the stop of light fascicles incident on centered optical systems (in Romanian), *Annals of the Aurel Vlaicu Univ. of Arad, Vol. III, Series: Mech. Eng.*, 109-116, May 16-17, **1996**, ISBN 973-97708-0-0;
- J10. **Duma V.-F.***, Nicoara I., The geometric vignetting coefficient of the centered optical systems (in Romanian), *Annals of the Aurel Vlaicu Univ. of Arad, Vol. III, Series: Mech. Eng.*, 117-122, May 16-17, **1996**, ISBN 973-97708-0-0;
- J9. **Duma V.-F.**, Photometric aspects in designing the Donaldson colorimeter, *Sc. Bulletin of the Polytechnics Univ. of Timisoara, Series: Mathematics-Physics* **40**(54), 134-140, **1995**, ISSN 1224-6069;

- J8. **Duma V.-F.***, Nicoara I., Some optical characteristics of the axis of the centered optical systems, *Sc. Bulletin of the Polytechnics Univ. of Timisoara, Series: Mathematics-Physics* **39**(53), 72-79, **1994**, ISSN 1224-6069;
- J7. **Duma V.-F.***, Nicoara I., Some photometric aspects regarding axial objects placed in front of a centered optical system, *Sc. Bulletin of the Polytechnics Univ. of Timisoara, Series: Mathematics-Physics* **39**(53), 80-86, **1994**, ISSN 1224-6069;
- J6. **Duma V.-F.**, A study of the vignetting for some optical systems, *Romanian Review of Fine Mechanics & Optics (Suppl. COMEFIN 4)*, Vol. II, 175-183, **1994**, ISSN 1220-6830;
- J5. **Duma V.-F.**, The axial photometric coefficient of an optical system, *Romanian Review of Fine Mechanics & Optics (Suppl. COMEFIN 4)*, Vol. II, 164-174, **1994**, ISSN 1220-6830;
- J4. **Duma V.-F.**, The calculus of optical neutral-density double wedges (in Romanian), *Annals of the Oradea Univ., Management and Technological Engineering*, Oradea, **1994**, ISSN 1583-0691;
- J3. Golosie M., **Duma V.-F.***, Experimental stall for the study of photo-multipliers (in Romanian), *Annals of the Oradea Univ., Management and Technological Engineering*, Oradea, **1994**, ISSN 1583-0691;
- J2. Beches G., **Duma V.-F.***, Technology of manufacturing of high-precision mirrors (in Romanian), *Annals of the Oradea Univ., Management and Technological Engineering*, Oradea, **1994**, ISSN 1583-0691;
- J1. **Duma V.-F.***, Nicoara I., Considerations on defining the vignetting coefficient (in Romanian), *Annals of the Oradea Univ., Management and Technological Engineering*, Oradea, 1994, ISSN 1583-0691;

Papers in Conference Proceedings (not indexed in ISI Web of Science)

- C64. **Duma V.-F.**, Macro- and micro-scanners for laser applications: Non-linear characteristics and their impact on biomedical imaging, *Dynamical Systems. Nonlinear Dynamics and Control (14th DSTA)*, 193-202, Awrejcewicz J., M. Kazmierczak, J. Mrozowski, P. Olejnik, Eds., Łódź (Poland), ISBN 978-83-935312-4-0, Dec. 11-14, **2017**;
- C63. Beiu R.-M., Duma V.-F., and Beiu V., Transverse 2D Photonic Crystal Inside a Fiber Optic For Picometer-scale Measurements, *IEEE 17th International Conference Optoelectronic Devices (NUSOD)*, Copenhagen, July 24-28, **2017**; Electronic ISSN 2158-3242; [10.1109/NUSOD.2017.8009987](https://doi.org/10.1109/NUSOD.2017.8009987)
- C62. **Duma V.-F.**, Tankam P., Huang J., Won J. J., and Rolland J. P., Galvanometer scanning for Optical Coherence Tomography, *Frontiers in Optics*, OSA (Optical Society of America) Technical Digest (online), paper JTh2A.129, ISBN 978-1-943580-19-4, Rochester, NY (USA), 17-21 Oct., **2016**;
- C61. **Duma V.-F.**, Optical Attenuators with Translational Risley Prisms, *4th Advanced Electromagnetics Symposium (AES)*, 337-338, Said Zouhdi, Eva Rajo-Iglesias, Enrique Marquez, Eds., Malaga (Spain), July 7-11, **2016**; ISSN 2491-2417;
- C60. **Duma V.-F.**, Galvanometer scanning for high-end biomedical and industrial imaging applications, *Dynamical Systems. Nonlinear Dynamics and Control (13th DSTA)*, 175-183, Awrejcewicz J., M. Kazmierczak, P. Olejnik, J. Mrozowski, Eds., Łódź (Poland), Dec. 7-11, **2015**;
- C59. Mnerie C., Preitl S., **Duma V.-F.***, Advanced control structures for galvanometer scanners for improved parameters in biomedical imaging, *Dynamical Systems. Nonlinear Dynamics and Control (13th DSTA)*, 175-183, Awrejcewicz J., M. Kazmierczak, P. Olejnik, J. Mrozowski, Eds., Łódź (Poland), Dec. 7-11, **2015**;
- C58. **Duma V.-F.**, Advances in opto-mechanical scanning technologies for high-end biomedical applications, *The 11th IFToMM International Symposium on Science of Mechanisms and Machines*, Mechanisms and Machine Sciences, Vol. 18, 361-369, Visa I., Ed, ISBN 978-3-319-01844-7, Brasov (Romania), Nov. 11-12, 2013, Springer (**2014**) http://dx.doi.org/10.1007/978-3-319-01845-4_36;
- C57. Schitea A., Kaposta I., Tuef M., Jurca S.-C., and **Duma V.-F.***, Scanners with Risley prisms: Modelling with mechanical design programs, *The 11th IFToMM International Symposium on Science of Mechanisms and Machines*, Mechanisms and Machine Sciences, Vol. 18, 453-461, Visa I., Ed, ISBN 978-3-319-01844-7, Brasov (Romania), Nov. 11-12, 2013, Springer (**2014**) http://dx.doi.org/10.1007/978-3-319-01845-4_45;
- C56. **Duma V.-F.**, Optical attenuators with tilting neutral density filters, *Dynamical Systems. Nonlinear Dynamics and Control (12th DSTA)*, 175-183, Awrejcewicz J., M. Kazmierczak, P. Olejnik, J. Mrozowski, Eds., ISBN 978-83-7283-588-8, Łódź (Poland), Dec. 2-5, **2013**;
- C55. **Duma V.-F.**, Scanning in Optical Coherence Tomography, *Proc. 4th ISREIE, Series: Engineering*, 67-72, Arad, Nov. 8-9, **2012**, ISSN 2065-2569;
- C54. Kaposta I., Jurca S., **Duma V.-F.***, Driving solutions of Risley prisms scanners, *Proc. 4th ISREIE, Series: Engineering*, 73-78, Arad, Nov. 8-9, **2012**, ISSN 2065-2569;
- C53. Demian D.*, Hutiu Gh., **Duma V.-F.***, Development of handheld scanning probes for optical coherence tomography, *Proc. 4th ISREIE, Series: Engineering*, 85-90, Arad, Nov. 8-9, **2012**, ISSN 2065-2569;
- C52. Cira O.*, **Duma V.-F.***, Modeling the modulation functions of optical choppers, *Proc. 4th ISREIE, Series: Engineering*, 79-84, Arad, Nov. 8-9, **2012**, ISSN 2065-2569;
- C51. A. Schitea*, **Duma V.-F.***, Kinematic analysis of linkages using three different methods, *Proc. 4th ISREIE, Series: Engineering*, 91-96, Arad, Nov. 8-9, **2012**, ISSN 2065-2569;
- C50. Mnerie C.*, **Duma V.-F.***, Ascertainment of the transfer function of a galvoscaner, *Proc. 4th ISREIE, Series: Engineering*, 97-102, Arad, Nov. 8-9, **2012**, ISSN 2065-2569;
- C49. **Duma V.-F.***, Mnerie C., Command functions of open loop galvanometer scanners, *Dynamical Systems. Nonlinear Dynamics and Control (11th DSTA)*, 115-120, Awrejcewicz J., Kazmierczak M., Olejnik, P., Mrozowski J., Eds., Łódź (Poland), Dec. 5-8, **2011**;

- C48. **Duma V.-F.**, Optical choppers with rotating wheels: Classical and novel configurations, and their modulation functions, *Dynamical Systems. Nonlinear Dynamics and Control (11th DSTA)*, 109-114, Awrejcewicz J., Kazmierczak M., Olejnik P., Mrozowski J., Eds., Łódź (Poland), Dec. 5-8, **2011**;
- C47. Kiss M., **Duma V.-F.***, Optical chopper wheels: a manufacturing technology, *Proc. 3rd ISREIE, Series: Engineering*, 91-97, Arad, Oct. 10-12, **2010**, ISSN 2065-2569;
- C46. Kiss M., Ilca T., Szantho L., Mnerie C., Falcan O., Demian D., Nicolov M. F., **Duma V.-F.***, Experimental setup for the study of optical modulators with rotating wheels, *Proc. 3rd ISREIE, Series: Engineering*, 98-104, Arad, Oct. 10-12, **2010**, ISSN 2065-2569;
- C45. Falcan O., Nicolov M. F., Voiculescu I., **Duma V.-F.***, Contributions to the analysis and design of polygon scanners, *Proc. 3rd ISREIE, Series: Engineering*, 84-90, Arad, Oct. 10-12, **2010**, ISSN 2065-2569;
- C44. Nicolov M. F., **Duma V.-F.**, Mnerie C., Szantho L., Falcan O., Ilca T., Fractional charges in advanced materials, *Proc. 3rd ISREIE, Series: Engineering*, 105-110, Arad, Oct. 10-12, **2010**, ISSN 2065-2569;
- C43. **Duma V.-F.***, Nicolov M., Theoretical investigations of optical modulators with circular windows, *Proc. 10th Conference on Dynamic Systems Theory and Applications (DSTA)*, 723-730, Awrejcewicz J., Kazmierczak M., Olejnik P., Mrozowski J., eds., Łódź (Poland), ISBN 978-83-929120-4-0, Dec. 7-10, **2009**;
- C42. **Duma V.-F.***, Pelle R., MathCad study of the polygonal mirror scanners, *Proc. 2nd ISREIE, Series: Engineering*, 116-124, Arad, Oct. 20-21, **2008**, ISSN 2065-2569;
- C41. **Duma V.-F.***, Berar T., Molnar V., Patrusel V., Planar mechanisms developed in the mechanism laboratory of the Aurel Vlaicu University of Arad, *Proc. 2nd ISREIE, Series: Engineering*, 125-133, Arad, Oct. 20-21, **2008**, ISSN 2065-2569;
- C40. **Duma V.-F.**, Overview of researches on rotating and oscillating mirrors scanners (in Romanian), *Proc. 3rd National Seminar on Mechanisms (SNM 3)*, 239-250, Cretu S.M., Copilusi C.P., Geonea I.D., Eds., ISBN 978-973-746-910-6, Craiova (Romania), Sept. 10-11, **2008**;
- C39. **Duma V.-F.**, Monogon scanners: analysis and design, *Proc. 12th IFToMM Word Congress*, Merlet J.P., Dahan M., Eds., Besancon (France), June 17-21, **2007**, IFToMM Database;
- C38. **Duma V.-F.**, Polygon scanners for dimensional measurements, *Proc. 12th IFToMM Word Congress*, Merlet J.P., Dahan M., Eds., Besancon (France), June 17-21, **2007**, IFToMM Database;
- C37. **Duma V.-F.**, EUROP-RO, towards a strategic agenda, *1st EUROP-RO Conference*, Bucharest (Romania), Sept. 15, **2007**, on CD-ROM;
- C36. **Duma V.-F.***, Kaposta I., Tusz F., South-West Axis of EUROP-RO, Region 5- Arad: premises, efforts, results, *3rd EUROP-RO Symposium*, Bucharest (Romania), Sept. 13-14, **2007**, on CD-ROM;
- C35. **Duma V.-F.**, Mathematical functions of a 2-D scanner with oscillating elements, *Proc. 9th Conf. Dynamic Systems Theory and Appl. (DSTA)*, 167-174, Łódź (Poland), ISBN 978-83-924382-9-8, Dec. 17-20, **2007**;
- C34. **Duma V.-F.**, Theoretical approach on a galvanometric scanner with an enhanced duty cycle with vibration control, *Proc. 9th Conference on Dynamic Systems Theory and Applications (DSTA)*, 711-718, Łódź (Poland), ISBN 978-83-924382-9-8, Dec. 17-20, **2007**;
- C33. **Duma V.-F.**, Optical comparator with diffuse reflection, *Proc. Intl. Conf. VSU*, 1.17-1.22, Sofia (Bulgaria), ISBN-10: 954-331-009-2; ISBN-13: 978-954-331-009-8, May **2007**;
- C32. **Duma V.-F.***, Silaghi D., Use of solar energy installations for locally solving the energy issues, *Proc. Intl. Conf. VSU*, 1.11-1.16, Sofia (Bulgaria), ISBN-10: 954-331-009-2, May **2007**;
- C31. Tusz F., **Duma V.-F.**, Meszar G., The positioning precision of the elements of a robotic welding cell, *Proc. of the 2006 IIW Intl. Congress*, Vol. 2, 318-328, ISBN 973-8359-40-6, Timisoara (Romania), May 24-26, **2006**, Document no. ICRA-2006-RO-35;
- C30. **Duma V.-F.**, Precise dimensional measurements using optical scanners, *Proc. IEEE/LEOS - ODIMAP V (5th Topical Meeting on Optoelectronic Distance/Displacement Measurements and Applications)*, 253-258, ISBN 84-690-0938-9, Madrid (Spain), Oct. 2-4, **2006**;
- C29. **Duma V.-F.**, Design of optimal scanners for industrial applications, *Proc. IEEE/LEOS - ODIMAP V (5th Topical Meeting on Optoelectronic Distance/Displacement Measurements and Applications)*, 259-264, ISBN 84-690-0938-9, Madrid (Spain), Oct. 2-4, **2006**;
- C28. **Duma V.-F.**, Designing 2D scanners for manufacturing processes, *Proc. Intl. Conf. VSU*, Vol. I, II-143 –II-148, Sofia (Bulgaria), ISBN 10: 954-331-009-2, ISBN-13: 978-954-331-009-8, May 22, **2006**;
- C27. **Duma V.-F.**, Dimensional measurements using optical scanners, *Proc. Intl. Conf. VSU*, Vol. II, pp. VII-15–VII-20, Sofia (Bulgaria), ISBN-10: 954-331-009-2; ISBN-13 978-954-331-009-8, May 22, **2006**;
- C26. **Duma V.-F.**, Optical choppers for visual and photometric apparatuses, *Universitaria Simpro*, 25-28, ISSN 1842-4449, Petrosani (Romania), Oct. 13-14, **2006**;
- C25. **Duma V.-F.**, Positioning errors control in dimensional measurements with optical scanners, *Universitaria Simpro*, 29-32, ISSN 1842-4449, Petrosani (Romania), Oct. 13-14, **2006**;
- C24. **Duma V.-F.**, An experimental study of the rotating mirror laser scanning devices, *SYROM: Proc. 9th IFToMM Intl. Symposium on the Theory of Machines and Mechanisms*, 477-482, ISBN 973-718-289-8, 973-718-219-X, Bucharest (Romania), Sept. 1-4, **2005**;
- C23. **Duma V.-F.***, Perju D., An analytical and experimental study of the polygonal mirror laser scanning devices, *Annals of MteM & Proceedings of the 5th Intl. MTeM Symposium* (Gyenge Cs., Ed.), 187-190, ISBN 973-85354-1-7, Cluj-Napoca (Romania), Oct. 4-6, **2001**;
- C22. **Duma V.-F.**, The optical multi-cam for rotating mirror laser scanning devices, *Annals of MteM & Proceedings of the 5th Intl. MTeM Symposium* (Gyenge Cs., Ed.), 183-186, ISBN 973-85354-1-7, Cluj-Napoca (Romania), Oct. 4-6, **2001**;
- C21. **Duma V.-F.***, Perju D., Rotating and oscillating head laser scanning devices, *SYROM: Proc. 8th IFToMM Intl' Symposium on the Theory of Machines and Mechanisms*, 141-148, ISBN 973-8143-38-1, Bucharest (Romania), Aug. 28-Sept. 1, **2001**;

- C20. **Duma V.-F.**, Laser scanning devices: the optical cam solution, *SYROM: Proc. 8th IFToMM Intl' Symposium on the Theory of Machines and Mechanisms*, 149-154, ISBN 973-8143-38-1, Bucharest (Romania), Aug. 28-Sept. 1, **2001**;
- C19. **Duma V.-F.**, 1D and 2D scanning systems applied in robotics (in Romanian), *Proc. 14th National Symposium Robotica 2000*, 151-156, Oradea (Romania), **2000**;
- C18. Perju D., **Duma V.-F.***, Laser scanning devices: the measurement techniques, *Proc. 8th Mechanisms and Mechanical Transmissions Symposium (MTeM)*, Vol. III, 197-202, ISBN 973-585-179-2, Timisoara (Romania), Oct. 19-22, **2000**;
- C17. **Duma V.-F.***, Perju D., The designing calculus of the rotating mirror scanning device, *Proc. 8th Symposium on Mechanisms and Mechanical Transmissions (MTeM)*, Vol. III, 119-124, ISBN 973-585-179-2, Timisoara (Romania), Oct. 19-22, **2000**;
- C16. Dumitriu C., **Duma V.-F.***, Overview of the Romanian education system in the last decade (1989-1999): present and perspectives (in Romanian), *Proc. 4th National Symposium*, Oradea (Romania), 216-225, **1999** (ISBN 973-8032-10-5, Cogito, 2001);
- C15. **Duma V.-F.***, Alexandrescu C., Galvanometric laser scanning device (in Romanian), *Proc. 17th Symposium of the Military Technical Academy*, 67-76, Bucharest (Romania), Nov. 13-14, **1997**;
- C14. Alexandrescu C., **Duma V.-F.**, Considerations on the designing of the electronic modulus of the galvanometric laser scanning device (in Romanian), *Proc. 17th Symposium of the Military Technical Academy*, 77-84, Bucharest (Romania), Nov. 13-14, **1997**;
- C13. Perju D., **Duma V.-F.***, Laser dimensional measurements: the rotating mirror device, *Proc. 7th Mechanisms and Mechanical Transmissions & 12th Industrial Robots Symposium*, 206-211, Timisoara (Romania), **1996**;
- C12. **Duma V.-F.**, Perju D., Laser scanning devices: a mathematical analysis, in *9 Kongreßmesse für Industrielle Meßtechnik*, 209-213, Wiesbaden (Germany) **1995**, ISBN 3-924651-48-5;
- C11. **Duma V.-F.***, Masek L., Aspects of the impact of the energy production on the global environment (in Romanian), *Communications of the Life Science Museum*, 277-282, Ploiesti (Romania), **1995**;
- C10. Masek L., **Duma V.-F.**, Considerations on the use of the wind energy in Romania (in Romanian), *Communications of the Life Science Museum*, 71-73, Ploiesti (Romania), **1995**;
- C9. Mateas M., Perju D., **Duma V.-F.**, An approach for an overall estimation of the quality/performances of the industrial robots, *SYROM: Proc. 6th IFToMM Intl. Symposium on the Theory of Mechanisms and Machines*, Vol. II, 161-165, Bucharest (Romania), Sept. **1993**;
- C8. Perju D., Mateas M., **Duma V.-F.***, Una posible estructuración de los criterios de marca de los robots industriales (in Spanish), *I. Congreso Iberoamericano de Ingeniería Mecánica*, Madrid (Spain), **1993**;
- C7. Nicoara I., **Duma V.-F.***, A method of ascertainment of the pupils and stops of a centered optical system (in Romanian), *1st National Conference of Optoelectronics (CNOE I)*, 93-96, Bucharest (Romania), **1993**;
- C6. **Duma V.-F.***, Pommersheim A., Optimization of the angular dispersion through the optical prism (in Romanian), *1st National Conference of Optoelectronics (CNOE I)*, 120-123, Bucharest (Romania), **1993**;
- C5. Nicoara I., **Duma V.-F.***, Aspects regarding the ascertainment of pupils and stops in a centered optical system (in Romanian), *6th Mechanisms and Mechanical Transmissions Symposium & 11th Industrial Robots Symposium*, 7.1-7.7, Timisoara (Romania), **1992**;
- C4. **Duma V.-F.***, Nicoara I., Considerations regarding the calculus of the flux incident on centered optical systems (in Romanian), *6th Mechanisms and Mechanical Transmissions Symposium & 11th Industrial Robots Symposium*, 8.1-8.4, Timisoara (Romania), **1992**;
- C3. Perju D., Mateas M., **Duma V.-F.**, Performance criteria / quality parameters for industrial robots (in Romanian), *6th Mechanisms and Mechanical Transmissions Symposium & 11th Industrial Robots Symposium*, 55.1-55.11, Timisoara (Romania), **1992**;
- C2. **Duma V.-F.**, Short overview on the systems of color coordinates (in Romanian), *6th Mechanisms and Mech. Transmissions Symposium & 11th Industrial Robots Symposium*, 11.1-11.5, Timisoara (Romania), **1992**;
- C1. **Duma V.-F.**, Considerations on designing a tri-chromatic colorimeter with mix synthesis (in Romanian), *6th Mechanisms and Mechanical Transmissions Symposium & 11th Industrial Robots Symposium*, 10.1-10.6, Timisoara (Romania), **1992**.

Conference Oral Presentations and Posters (with Published Abstracts, without Proceeding Papers)

- Ogorescu A., **Duma V.-F.**, Zetu I., Ogorescu E., Hutiu Gh., Dobre G., Bradu A., Podoleanu A. Gh., Dental brackets: noninvasive investigation using micro-CT and optical coherence tomography, *2nd Intl Seminar on Biomaterials and Regenerative Medicine (BioRemed)*, Timisoara (Romania), Oct. 5-8, **2017** (Oral Presentation);
- Marcauteanu C., Stoica E. T., Mitroi F. E., Sinescu C., Negrutiu M. L., Hutiu Gh., Beiu R., **Duma V.-F.**, Effect of a diode laser treatment on different types of dentine. Analysis using Raman spectroscopy and SEM, *2nd Intl Seminar on Biomaterials and Regenerative Medicine (BioRemed)*, Timisoara (Romania), Oct. 5-8, **2017** (Oral Presentation);
- Mitroi F. E., Sinescu C., Marcauteanu C., Vaduva A., Muntean D., Negrutiu M. L., Stoica E. T., Topala F., Stan A., **Duma V.-F.**, Microscopic analysis of the marginal gaps of Tizian adhesive partial crowns, *2nd Intl Seminar on Biomaterials and Regenerative Medicine (BioRemed)*, Timisoara (Romania), Oct. 5-8, **2017** (Oral Presentation);
- Stoica E. T., Marcauteanu C., Mitroi F. E., Sinescu C., Negrutiu M. L., Negru R., **Duma V.-F.**, – Influence of different surface pretreatments on the retention strength of adhesive Tizian partial crowns, *2nd Intl Seminar on Biomaterials and Regenerative Medicine (BioRemed)*, Timisoara (Romania), Oct. 5-8, **2017** (Oral Presentation);
- Cîrligeriu L., Boariu M., Negrutiu M. L., **Duma V.-F.**, Sinescu C., Nica L., Podoleanu A. Gh., Marinescu A., Stan A. T., Evaluation of Marginal Adaptation of Biodentine® in "Open Sandwich" Class II Restorations, *2nd Intl Seminar on Biomaterials and Regenerative Medicine (BioRemed)*, Timisoara (Romania), Oct. 5-8, **2017** (Poster);

- Negrutiu M.-L., Sinescu C., Bradu A., **Duma V.-F.**, Podoleanu A. Gh., Variations of the sintering temperature in the technology of metal ceramic dental prostheses: non-destructive investigations using swept source optical coherence tomography, *41st Annual Conference of European Prosthodontic Association (EPA)*, Bucharest (Romania), Sept. 28-30, **2017** (Oral Presentation);
- Sinescu C., Rominu M., Gabor A. G., Zaharia C., **Duma V.-F.**, Negrutiu M.-L., Podoleanu A. Gh., News in classical and modern impression in dentistry, *41st Annual Conference of European Prosthodontic Association (EPA)*, Bucharest (Romania), Sept. 28-30, **2017** (Oral Presentation);
- **Duma V.-F.***, Sinescu C., Demian D., Dobre G., Bradu A., Podoleanu A. Gh., Biomedical Imaging with Optical Coherence Tomography: Investigations in Dental Medicine, *28th Annual Conference of the European Society for Biomaterials (ESB)*, Athens (Greece), Sept. 4-8, **2017** (Oral Presentation);
- Beiu R., Corina Mnerie C., Pop N., **Duma V.-F.***, Dobre G. M., Bradu A., Podoleanu A. Gh., Study of thermal degradation of photovoltaic panels: Optical non-destructive versus mechanical destructive methods, *Central and Eastern European Conference for Thermal Analysis and Calorimetry (CEEC-TAC4)*, Book of Abstracts, ISBN 978-3-940237-47-7, Chisinau (Republic of Moldova), Aug. 28-31, **2017** (Poster);
- Sinescu C., Bradu A., **Duma V.-F.***, Pop N., Dobre G. M., Podoleanu A. Gh., Ceramics sintering in dental ovens: non-destructive evaluations using optical coherence tomography (OCT), *Central and Eastern European Conference for Thermal Analysis and Calorimetry (CEEC-TAC4)*, Book of Abstracts, ISBN 978-3-940237-47-7, Chisinau (Republic of Moldova), Aug. 28-31, **2017** (Poster);
- Todea C.*, Canjau S., Sinescu C., **Duma V.-F.**, Podoleanu A. Gh., OCT and fluorescence influence on screening decisions for oral malign lesions, *Annual Conf. of the American Soc. for Laser Medicine and Surgery (ASLMS)*, San Diego (USA), Apr. 5-9, **2017** (Oral Presentation; Meeting Abstract 121 in *Lasers in Surgery and Medicine* **49**, page 43, Supplement 28; <http://www.aslms.org/laser-dental-applications-abstract>
- Duma V.-F.*, Dobre G., Demian D., Sinescu C., Bradu A., Podoleanu A. Gh., Laser scanners and handheld probes for Optical coherence tomography: Fundamentals and applications, *SPIE 3rd International Conference on Applications of Optics and Photonics*, Faro (Portugal), May 8-12, **2017** (Oral Presentation);
- Hutiu Gh., **Duma V.-F.***, Demian D., Bradu A., Podoleanu A. Gh., Analysis of metallic materials using Optical Coherence Tomography, *4th Intl Conference Advances in Engineering & Management (ADEM)*, Severin (Romania), Nov. 17-18, **2016** (Poster);
- Hutiu Gh., **Duma V.-F.***, Dimb A., Demian D., Bradu A., Podoleanu A., Optical Coherence Tomography for Non-Contact Roughness Measurements, *RoMAT2016*, Bucharest (Romania), Nov. 10-12, **2016** (Poster);
- Mnerie C., **Duma V.-F.***, Galvanometer scanners for for Optical Coherence Tomography: Advanced control structures for increased precision and higher scanning speeds, *Proc. 4th ISREIE, Series: Engineering*, Arad (Romania), Dec. 8-10, **2016**; ISSN 2065-2569 (Oral Presentation);
- Demian D., **Duma V.-F.***, Hutiu Gh., Podoleanu A. Gh., Handheld scanning probes for Optical Coherence Tomography, *Proc. 4th ISREIE, Series: Engineering*, Arad (Romania), Dec. 8-10, **2016**; ISSN 2065-2569 (Oral Presentation);
- **Duma V.-F.***, Demian D., Cira O., Optical choppers: analysis and manufacturing technology using electroerosion, *Proc. 4th ISREIE, Series: Engineering*, Arad (Romania), Dec. 8-10, **2016**; ISSN 2065-2569 (Oral Presentation);
- Hutiu Gh., **Duma V.-F.***, Dimb A., Demian D., Bradu A., Podoleanu A. Gh., Evaluation of the roughness of surfaces using Optical Coherence Tomography, *Proc. 4th ISREIE, Series: Engineering*, Arad (Romania), Dec. 8-10, **2016**; ISSN 2065-2569; (Oral Presentation);
- Craciunescu E.L., Pop D.M., Negrutiu M.L., Sinescu C., **Duma V.-F.**, Podoleanu A., Importance of bleaching procedures for dental aesthetics, *BIOMMEDD 2016*, Constanta, Sept. 15-17, **2016** (Poster);
- Neagu C. S., Cojocariu A. C., Ionel R. C., Topala F. I., Rominu M., Negrutiu M. L., Sinescu C., **Duma V.-F.**, Podoleanu A. Gh., Optical coherence tomography employed for veneer interface evaluation, *BIOMMEDD 2016*, Constanta, Sept. 15-17, **2016** (Poster);
- Gabor A., Zaharia C., Kozma A.N., Tudericu V., **Duma V.-F.**, Rominu M., Negrutiu M.L., Sinescu C., Comparison of scaffolds made by 3D printing based on two different types of scan, *BIOMMEDD 2016*, Constanta, Sept. 15-17, **2016** (Poster);
- Zaharia C., Sinescu C., **Duma V.-F.**, Negrutiu M.-L., Podoleanu A. Gh., Hand-held devices applications for optical coherence tomography in dentistry, *BIOMMEDD 2016*, Constanta, Sept. 15-17, **2016** (Poster);
- Everson M., Dobre G., Podoleanu A., **Duma V.-F.**, A simulated investigation of the geometric and radiometric vignetting associated with a 72-facet, off axis, polygon mirror in Swept Source Optical Coherence Tomography, *TIM 15-16 Physics Conf.*, Timisoara, May 26-28, **2016** (Oral Presentation);
- Marcauteanu C., Stoica E. T., Sinescu C., Negrutiu M. L., Topala F., Mitroi F. E., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Therapy of dental attrition on partial crowns, *21th Congress of Dental Medicine – Banat Dentistry Days*, Timisoara (Romania), May 19-21, **2016** (Oral Presentation);
- **Duma V.-F.**, Towards a Research Pole in Photonics in Western Romania. Achievements and Challenges, *Intl' Conf. Diaspora in Sc. Research and HE in Romania*, Timisoara, Apr. 25-28, **2016** (Oral Presentation);
- Negrutiu M.-L., Sinescu C., Borlea M.-V., Manescu A., and **Duma V.-F.**, Bone Tissue Engineering Assessed by MicroCT, *Greater New York Dental Meeting*, New York (USA), Nov. 28-29, **2015** (Poster);
- Sinescu C., Negrutiu M.-L., Sinescu C., **Duma V.-F.**, Podoleanu A. Gh., Noninvasive Evaluation of Direct Dental Restoration by Transillumination Rx, MicroCT and OCT, *Greater New York Dental Meeting*, New York (USA), Nov. 28-29, **2015** (Poster);
- Cirligeriu L.-E.*, Cojocariu A.-C., Topala F.I., Negrutiu M.L., Sinescu C., **Duma V.-F.**, Podoleanu A., OCT Analysis of the Tooth-Composite Interface in Class II Direct Composite Restorations Using Anatomical Matrix Systems, *BioRemed Intl' Conf.*, Oradea (Romania), Sept. 19, **2015** bioremed2015.srb.ro (Poster);
- Antal A. A., Cojocariu A. C., Cîrligeriu, L., Sinescu C., Negruțiu M. L., Topala F. I., **Duma V.-F.**, Podoleanu A. Gh., A non-invasive Optical Coherence Tomography analysis of class IV microleakage, *BioRemed International Conference*, Oradea (Romania), Sept. 19, **2015** bioremed2015.srb.ro (Poster);

- Stan A.-T., Cojocariu A.-C., Antal A. A., Topala F. I., Sinescu C., Negrutiu M. L., **Duma V.-F.**, Podoleanu A. Gh., Marginal integrity evaluation of dental composite using optical coherence tomography, *BioRemed International Conference*, Oradea (Romania), Sept. 19, **2015** bioremed2015.srb.ro (Poster);
- Brătescu B., Sinescu C., Negruțiu M.-L., Topala F. I., **Duma V.-F.**, Podoleanu A. Gh., Fiber reinforcement for composite bridges: everStickC&B. An Optical Coherence Tomography investigation, *BioRemed International Conference*, Oradea (Romania), Sept. 19, **2015** bioremed2015.srb.ro (Poster);
- Negrutiu M. L.*, Sinescu C., Bortun C. M., **Duma V.-F.**, Podoleanu A. Gh., Applications of Optical Coherence Tomography in Dentistry, *20th Balkan Stomatological Society Congress*, Bucharest (Romania), Apr. 23-26, **2015**; e-bass.org/20thcongress (Oral Presentation);
- Sinescu C.*, Negrutiu M. L., Nica L., Bortun C. M., **Duma V.-F.**, Manescu A., Application of the Microcomputer Tomography (microCT) Technology in Dentistry, *20th Balkan Stomatological Society Congress*, Bucharest (Romania), Apr. 23-26, **2015**; e-bass.org/20thcongress (Oral Presentation)
- Sinescu C.*, Negrutiu M. L., **Duma V.-F.**, Manescu A., Applications of microCT Using Synchrotron Radiation in Dentistry, Research in Dental Medicine - from preclinical studies towards clinical applications, *Napoca Biodent*, Cluj-Napoca (Romania), Mar. 27-28, **2015** [link](#) (Oral Presentation);
- Negrutiu M. L., Sinescu C.*, **Duma V.-F.**, Manescu A., MicroCT Investigation of Bone Graft Biomaterials, *New York Great Dental Meeting*, NY (USA), Dec. 4-7, **2014** (**1st Award - Implant Poster Competition**);
- Sinescu C.*, Negrutiu M. L., Topala F. I., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Optical Coherence Tomography Investigations of Bleaching Procedures, *6th Intl Conference "Biomaterials, Tissue Engineering & Medical Devices" (BiomMedD)*, Constanta (Romania), Sept. 17-20, **2014** (Poster);
- Sinescu C.*, Negrutiu M. L., Topala F. I., Hoinoiu B., **Duma V.-F.**, Bradu A., Podoleanu A. Gh., Non-Invasive Methods of Evaluation for Dental Constructs, *6th Intl Conference "Biomaterials, Tissue Engineering & Medical Devices" (BiomMedD)*, Constanta (Romania), Sept. 17-20, **2014** (Poster);
- Sinescu C.*, Negrutiu M., Stratul F., Topala F., Negru R., Leretter M., Marsavina L., **Duma V.-F.**, and Podoleanu A. Gh., Quality Assessment of Ceramic Materials Defects by Different Imagistic Methods, *Intl' Association for Dental Research (IADR)/PER Congress*, Dubrovnik (Croatia), Sept. 10-13, **2014** (Poster);
- **Duma V.-F.**, Researches on galvanometer-based scanners with applications in biomedical imaging, *15th Intl Balkan Workshop on Applied Physics (IBWAP)*, Book of Abstracts, V. Ciupină, H. Alexandru, M. Girtu, Eds., Constanta (Romania), July 2-4, **2014** (Oral Presentation);
- Sinescu C., Negrutiu M., Topala F., Bradu A., **Duma V.-F.***, and Podoleanu, A. Gh., Time Domain and Spectral Domain Optical Coherence Tomography evaluation of dental ceramic embedded defects, *15th Intl Balkan Workshop on Applied Physics (IBWAP)*, Book of Abstracts, V. Ciupină, H. Alexandru, M. Girtu, Eds., Constanta (Romania), July 2-4, **2014** (Poster);
- **Duma V.-F.***, Rolland J.P., Meemon P., and Lee K.S., Galvanometer scanners: on the optimal scanning function for an increased duty cycle, *Spring Industrial Associates Meeting, The Institute of Optics, Univ. of Rochester*, NY (USA), Mar. 15-16, **2010** (Poster);
- **Duma V.-F.**, Polygon scanners: from dimensional measurements to swept laser sources for OCT, *Fall Industrial Associates Meeting, Institute of Optics, Univ. of Rochester*, NY (USA), Oct. 26-27, **2009** (Poster);
- Beches G., **Duma V.-F.***, Manufacturing and control technology for small-diameter telescope mirrors, *RomOpto: 9th Conference on Optics*, Sibiu (Romania), Aug. 30-Sept. 3, **2009** (Poster);
- Nicolov M. F.* and **Duma V.-F.**, Wigner Seitz and Brillouin zone analysis of crystal growth, *Romanian Conference on Advanced Materials (ROCAM)*, Brasov (Romania), Aug. 25-28, **2009** (Oral Presentation);
- Nicolov M.F.* and **Duma V.-F.**, Influences of the different types of charges to the energies in crystals, *10th Intl Balkan Workshop on Applied Physics (IBWAP)*, Book of Abstracts, V. Ciupină, H. Alexandru, M. Girtu, Ed., ISBN 978-973-614-507-0, Constanta (Romania), July 6-8, **2009** (Poster);
- **Duma V.-F.**, Education and research in mechanisms at the Aurel Vlaicu Univ. of Arad (in Romanian), *4th National Seminar on Mechanisms (SNM 4)*, Timisoara, April 10-11, **2009**, pp. 5 (Oral Presentation);
- **Duma V.-F.**, Considerations regarding Romanian university education and research: past, present and future (in Romanian), *14th National Symposium*, Ploiesti, **2009** (Oral Presentation);
- Niculescu A. M.*, Ghetea L.G., Motoc R., **Duma V.-F.**, Synergy between flow citometry and RT-PCR in the study of cancer cells apoptosis, *2nd EOS Topical Meeting OμS*, Capri (Italy) **2007** (Oral Presentation);
- **Duma V.-F.**, Optical choppers revisited, *2nd EOS Topical Meeting OμS*, Capri (Italy) **2007** (Poster);
- **Duma V.-F.**, Polygonal mirror laser scanning devices: the classical solution and the optical multi-cam, *5th International Conference of Metrology*, Bucharest, **2001** (Oral Presentation);
- **Duma V.-F.***, Perju D., On-line control using laser scanning devices, *5th International Conference of Metrology*, Bucharest, **2001** (Oral Presentation);
- Dumitriu C., **Duma V.-F.***, Equations of the human healing (in Romanian), *1st International Symposium of Complementary Medicine of the Third Millenium*, Oradea, Mar. 29-31, **2000** (Oral Presentation);
- **Duma V.-F.**, Study of the optical attenuators and of the photo-multipliers. Applications in photometry and colorimetry (in Romanian), *Ph.D. preparing paper no. 3*, Polytechnics Univ. of Timisoara, **1997**;

- **Duma V.-F.**, State-of-the-art regarding the methods of analysis of centered optical systems (in Romanian) - *Ph.D. preparing paper no. 2*, Polytechnics Univ. of Timisoara, **1997**;
- **Duma V.-F.**, Stop of the light fascicles incident on centered optical systems (in Romanian) - *Ph.D. preparing paper no. 1*, Polytechnics Univ. of Timisoara, **1996**;
- **Duma V.-F.**, Some considerations on the astronomic observatories (in Romanian), *10th Man and Mountain Symposium*, Ramnicu Valcea, **1994** (Oral Presentation);
- **Duma V.-F.**, A science of the future: planetary engineering (in Romanian), *Interdisciplinary Symposium Nature and Man*, Ploiesti, **1994** (Oral Presentation);
- **Duma V.-F.**, Global view on the problem of water on Earth at the end of the 2nd Millennium (in Romanian), *9th Man and Mountain Symposium*, Voineasa, **1993 (Keynote Lecture)**;
- **Duma V.-F.**, Calculus of the optical attenuators with wedge prisms (in Romanian), *15th Symposium of the Military Technical Academy*, Bucharest (Romania), June 10-11, **1993** (Oral Presentation);
- Hora H., Simutiu S., **Duma V.-F.***, Applications of linear algebra in mechanics (in Romanian), *28th Scientific Symposium for Students - Polytechnics Univ. of Timisoara*, **1988**

Arad, 15.12.2019

