

CORINA-ANCA MNERIE

Curriculum Vitae

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h-index = 3 (ISI Web of Science)



EDUCATION

- **Ph.D. in Automatic Control** (24.04.2015), *Politehnica Univ. of Timisoara* (Romania). Thesis: Control solutions for optomechatronic devices used in biomedical applications; Supervisor, Prof. Stefan Preitl, 2003-2015;
- **Master in Automation** (2001), *Politehnica Univ. of Timisoara*, Romania. **Master Diploma Thesis: Some research on the Takagi-Sugeno fuzzy controllers**, advisor Prof. Radu Emil Precup, 2000-2001;
- **Diploma Engineer (M.Sc.) in Automatic Engineering**, major in Control Systems (2000), *Politehnica Univ. of Timisoara*, Romania, Diploma thesis: *The implementation of the Ray-tracing algorithm and enriching the image using anti aliasing techniques*; advisor Prof. Ionut Lungu, 1995-2000;
- **Moise Nicoara National College** (for Mathematics and Physics), Arad, Romania, 1991-1995.

SOCIAL STATUS

Born: October 3, 1976 in Lugoj, Timiș County, Romania;
Married: since 2004; two children;
Nationality and citizenship: Romanian. Religion: Christian Ortodox.

LANGUAGES

English: very good; **Romanian:** native.

TEACHING & RESEARCH (14 years of experience): Control Systems; Fuzzy Systems; Systems Theory; Systems Modeling and Simulation; Quality Engineering.

POSITIONS

- **Lecturer & Postdoctoral Researcher**, 2016-Present, Faculty of Engineering, *Aurel Vlaicu Univ. of Arad*, Romania;
- **Teaching & Research Assistant**, 2004-2015, Faculty of Engineering, *Aurel Vlaicu Univ. of Arad*, Romania;
- **Teaching Assistant**, 2002-2004, Dept. of Automation and Applied Informatics, Faculty of Automatics and Computers Science, *Politehnica Univ. of Timisoara*, Romania;
- **IT Manager**, 2000-2004, S.C. Azoma S.A., Arad, Romania.

SCIENTIFIC PAPERS <http://www.researcherid.com/rid/J-2933-2012>

18 published papers (7 as first author, 11 as co-author).

- 3 in peer-reviewed journals;
- 9 in ISI and International Data Bases proceedings;
- 6 in other conference proceedings.

1 Romanian patent (approved).

<https://scholar.google.com/citations?user=zI6w7r8AAAAJ&hl=ro>

<http://orcid.org/0000-0002-9710-7781>

<https://www.scopus.com/authid/detail.uri?authorId=35178155300>

CITATIONS (Feb. 2016): 12 time cited on ISI Web of Science; 23 on Google Scholar (excluding self-citations).

BOOKS & BOOKS CHAPTERS

One chapter in an internationally edited book (Springer).

RESEARCH GRANTS & CONTRACTS

1. **Researcher, PARTNERSHIP Grant** code PN-II-PT-PCCA-2011-3.2-1682, Romanian National Authority for Scientific Research, 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* (950k€), **2012-2016**;
2. **Researcher, IDEAS Grant, NURC/CNCS** (National University Research Council) code 1896/2008, Romanian Education and Research Ministry: *Analysis and design of some polygonal and galvanometer-based, 1D and 2D scanners*, **2009-2011** (100k€);

AFFILIATIONS

- **SPIE** (International Society for Optical Engineering), Bellingham, WA, since 2011;
- **AGIR** (The General Association of Engineers in Romania) – since 2007;
- **SRAIT** (Romanian Society of Automation and Technical Informatics) – since 2009.

TEACHING ACTIVITY (current topics are bolded)

- **Lectures: Automatic Control** (2016-present), **Advanced Control Systems** (2016-present), **Digital Signal Processing** (2016-present)
- **Seminars: Automatic Control Systems** (2004-present); Quality Engineering (2004-2009); **Systems Theory** (2007-present)
- **Laboratories: Control Systems** (2004-present); Industrial Engineering (2005-2009); **Modeling and Simulation of the Control Systems** – Matlab/Simulink (2007-present); **Peripheral Equipments of Computers** (2010-present); **Analysis and Synthesis of Digital Devices** (2011-present); **Analogic Electronic Circuits** (2011-present), **Systems Theory** (2011-present), Biomedical Engineering (2011-2015), **Digital Signal Processing** (2016-present).

SYMPOSIA PARTICIPATION

International:

- LASER – Word of Photonics Congress (SPIE Conferences), Munchen (Germany) **2011**;
- LASER – Word of Photonics Congress (SPIE Conferences), Munchen (Germany) **2013**;
- SACI - 8th IEEE International Symposium on Applied Computational Intelligence and Informatics, Timisoara (Romania) **2013**;
- SACI - 10th Jubilee IEEE International Symposium on Applied Computational Intelligence and Informatics, Timisoara (Romania) **2015**;

National (Romania):

- Aurel Vlaicu Univ. of Arad Symposia (ISREIE), Arad **2010, 2012; 2014**.

List of Publications

<http://www.researcherid.com/rid/J-2933-2012>

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Theses

T.3. **Mnerie C.A.**, *Control solutions for optomechatronic devices used in biomedical applications* (in Romanian), **Ph.D. Thesis**, Politehnica Univ. of Timisoara, April **2015**. Supervisor: Prof. Stefan Preitl, Politehnica Univ. of Timisoara, Romania;

T.2. **Mnerie C.A.**, *Some researches on the Takagi-Sugeno fuzzy controllers* (in Romanian), **Master Thesis**, Politehnica Univ. of Timisoara, Automations and Applied Informatics Department, July **2001**. Advisors: Prof. Radu Emil Precup, Politehnica Univ. of Timisoara, Romania;

T.1. **Mnerie C.A.**, *The implementation of the Ray-tracing algorithm and enriching the image using anti aliasing techniques* (in Romanian), **Diploma Thesis**, Politehnica Univ. of Timisoara, Automation and Applied Informatics Department, July **2000**. Advisors: Professors Ionut Lungu and Florin Dragan, Politehnica Univ. of Timisoara, Romania.

Patents – Invention Disclosure Forms

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 (approved);

Books Contributions and Chapters

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>;

Conference Papers - indexed in ISI Web of Science

ISI.C9. Duma V.-F.*, Schitea A., Tuf 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., ISSN 2211-0984, ISBN 978-3-319-01835-5, Springer **2014**, http://dx.doi.org/10.1007/978-3-319-01836-2_12;

ISI.C8. **Mnerie C.**, Duma V.-F.*, Control architectures of galvanometer-based scanners for an increased precision and a faster response, *Proc. SPIE*, Vol. 8925, 8925 00, Todea C., Podoleanu A., Duma V.F., Eds., *5th Intl Conference Lasers in Medicine*, Timisoara (Romania), Sept. 19-21, 2013 (**2014**), ISSN 0277-786X, <http://dx.doi.org/10.1117/12.2043034>;

ISI.C7. 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>;

ISI.C6. Duma V.-F.*, Negrutiu M. L.*, Sinescu C., Miutescu E.*, Burlea A., Vlascici 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>

ISI.C5. **Mnerie C.***, Preitl S., Duma V.-F.*, Performance enhancement of galvanometer scanners using extended control structures, *SACI: 8th IEEE International Symposium on Applied Computational Intelligence and Informatics*, May 23–25, **2013**, Timisoara (Romania), ISBN 978-1-4673-6397-6, pp. 127-130, DOI: [10.1109/SACI.2013.6608952](http://dx.doi.org/10.1109/SACI.2013.6608952);

ISI.C4. **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>;

ISI.C3. Duma V.-F.* and **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>;

ISI.C2. Balas M.M., Musca S.V., Toader D., **Mnerie C.**, Musca C.B., Falcan O., On a Promising Sustainable Energy System and its Control - the Passive Greenhouse, *Proc. of Sofa (3rd International Workshop on Soft Computing Applications)*, Szeged-Arad, July 29-August 1, **2009**, 211-216, ISBN 978-1-4244-5055-8, <http://dx.doi.org/10.1109/SOFA.2009.5254844>;

ISI.C1. 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., Vienna, ISSN 1726-9679, Oct 22-25, **2009**;

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

J3. **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. Bulletin of the Politehnica Univ. of Timisoara, Transactions on Mathematics-Physics* **56**(70), 73-80, **2011**, ISSN 1224-6069;

J2. 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. Bulletin of the Politehnica Univ. of Timisoara, Transactions on Mathematics-Physics* **56**(70), 89-97, **2011**, ISSN 1224-6069;

J1. Nicolov M. F.*, Duma V.F., **Mnerie C.**, Szantho L., Falcan O., New approaches in simulations, *Sc. Bulletin of the Politehnica Univ. of Timisoara, Transactions on Mathematics-Physics* **56**(70), 81-88, **2011**, ISSN 1224-6069;

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

C6. **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**;

C5. **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) - SCOPUS indexed; INSPEC Accession Number: 15383511

C4. **Mnerie C.***, Duma V.-F.*, Ascertainment of the transfer function of a galvoscaner, *Proc. 4th ISREIE (Aurel Vlaicu Univ. of Arad Symposium), Series: Engineering*, 97-102, Nov. 8-9, **2012**, ISSN 2065-2569;

C3. 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**;

C2. 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, Oct. 10-12, **2010**, ISSN 2065-2569;

C1. 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, Oct. 10-12, **2010**, ISSN 2065-2569;