

Universitatea Tehnică din Cluj-Napoca
Facultatea de Inginerie Electrică
Departamentul de Electrotehnică și Măsurări
Concurs pentru ocuparea postului de Conferențiar, poziția 24

Candidat: Septimiu Crisan
Funcția actuală: Șef de lucrări, Dr. ing.

LISTA DE LUCRĂRI

A. Lista celor 10 lucrări, în extras, considerate de candidat a fi cele mai relevante pentru realizările profesionale proprii

B. Teza de doctorat

C. Cărți și capitole în cărți

D. Lucrări științifice publicate în reviste de prestigiu sau volume ale manifestărilor naționale sau internaționale

I. Articole in reviste cotate si in volumele unor manifestari stiintifice indexate ISI proceedings

ISI Journals (reviste cotate ISI):

ISI Proceedings (volume ale unor manifestări indexate ISI):

II. Articole in reviste si volumele unor manifestari stiintifice indexate in alte baze de date internationale (BDI)

E. Granturi / proiecte câștigate prin competiție

I. Director/responsabil proiecte naționale câștigate prin competiție

II. Membru în echipă proiecte naționale

F. Contracte de cercetare cu terți

G. Burse de cercetare post-doctorale

A. Lista celor 10 lucrări considerate de candidat a fi cele mai relevante pentru realizările profesionale proprii:

1. **Septimiu Crisan**, Ioan Gavril Tarnovan, and Titus Eduard Crisan. "Radiation optimization and image processing algorithms in the identification of hand vein patterns." *Computer Standards & Interfaces* 32, no. 3 (2010):pp 130-140. (ISI IF=1.074), Elsevier, <http://dx.doi.org/10.1016/j.csi.2009.11.008>
2. **Septimiu Crisan**, Bogdan Tebrean, „Low Cost, High Quality Vein Pattern Recognition Device with Liveness Detection. Workflow and Implementations”, Measurement, Volume 108, Pages 207-216, Elsevier, 2017, (ISI IF=2.621)

3. Simina Emerich, Raul Malutan, **Septimiu Crisan**, Laszlo Lefkovits, „Dorsal Hand Vein Pattern Analysis and Neural Networks for Biometric Authentication”, Studies in Informatics and Control, ISSN 1220-1766, vol. 26(3), pp. 305-314, 2017 (ISI IF=0.754)
4. **Septimiu Crisan**, Bogdan Tebrean, Simina Emerich, Optimized Vein Pattern Recognition for Biometric Applications– a Modern Approach, 14th IMEKO TC10 Workshop on Technical Diagnostics - “NEW PERSPECTIVES IN MEASUREMENTS, TOOLS AND TECHNIQUES FOR SYSTEM’S RELIABILITY, MAINTAINABILITY AND SAFETY” Milan, Italy, June 27-28, 2016, ISBN 978-92-990073-9-6
5. **Septimiu Crisan**, Ioan Gavril Tarnovan, Titus Eduard Crisan, Bogdan Tebrean, “Optical Multi-touch System for Patient Monitoring and Medical Data Analysis”, ADVANCEMENTS OF MEDICINE AND HEALTH CARE THROUGH TECHNOLOGY, MEDITECH 2009, ISSN 1680-0737
6. **Crisan, S.**, Tarnovan, I.G.: Optimization of a multi-touch sensing device for biomedical applications. In: Vlaicu, A., Brad, S. (eds.) Interdisciplinary Research in Engineering: Steps Towards Breakthrough Innovation for Sustainable Development. Advanced Engineering Forum, vol. 8-9, pp. 545–552. Trans Tech Publications Ltd, Stafa-Zurich
7. **SEPTIMIU CRISAN**, VALENTIN DAN ZAHARIA, LEONARD VOICU BRENDER, TITUS EDUARD CRISAN, “A MULTI-TOUCH COLLABORATIVE SOLUTION FOR MEASUREMENT DATA VISUALISATION”, PROCEEDINGS OF THE IMEKO XIX WORLD CONGRESS, LISBON, PORTUGAL, PP 421-424 ISBN 978-963-88410-0-1 (2009)
8. **Septimiu Crisan**, Ioan Gavril Tarnovan, Titus Eduard Crisan, Bogdan Tebrean, “CORRELATION OF NEAR AND FAR INFRARED VEIN RECOGNITION FOR UNIFIED PROCESSING AND SIMULATION”, Proceedings of the IMEKO XIX World Congress, Lisbon, Portugal, pp 1734-1737 ISBN 978-963-88410-0-1 (2009) [ISI] [SCOPUS].
9. **S. Crişan**, I.G. Târnovan, T.E.Crişan, „A Low Cost Vein Detection System Using Near Infrared Radiation”, IEEE Sensor Application Symposium, San Diego, USA, 2007, ISBN 1-4244-0678-1 [ISI] [SCOPUS] [IEEE]
10. **S. Crisan**, V. D. Zaharia, C. Curta and E. D. Irimia, “Computer Assisted Optical Podoscope for Orthostatic Measurements ”, International Conference on Advancements of Medicine and Health Care through Technology, IFMBE Proceedings, 2011, Volume 36, Part 3, pp. 226-229, DOI: 10.1007/978-3-642-22586-4_48

B. Teza de doctorat

„ Cercetări privind dezvoltarea măsurărilor biometrice în infraroşu”

conducător ştiinţific : Prof.dr.ing Ioan G. Tarnovan

Universitatea Tehnica din Cluj-Napoca

Susţinere publică: 01.07.2008

C. Cărţi şi capitole în cărţi

1. N.D. Dragomir, R.I. Munteanu, I.G. Târnovan, T.E. Crişan, **S. Crişan** „Măsurarea Electrică a Mărimilor Neelectrice, VOL. 4 Măsurarea vibraţiilor şi a mărimilor de material”, Mediamira, ISBN 973-713-058-8, 2006
2. **Crisan, Septimiu**. "A Novel Perspective on Hand Vein Patterns for Biometric Recognition: Problems, Challenges, and Implementations." Biometric Security and Privacy. Springer International Publishing, 2017. pp.21-49, ISBN: 978-3-319-47300-0
3. Emerich, Simina, Eugen Lupu, Bogdan Belean, and **Septimiu Crisan**. "Image Analysis and Coding Based on Ordinal Data Representation." Image Feature Detectors and Descriptors: Foundations and Applications (2016): pp. 281-304, Springer International Publishing, ISBN 978-3-319-28852-9

D. Lucrări științifice publicate în reviste de prestigiu sau volume ale manifestărilor naționale sau internaționale

I. Articole in reviste cotate si in volumele unor manifestări științifice indexate în baza de date ISI Web of Knowledge– reasearcherID: B-7965-2015

ISI Journals (reviste cotate ISI):

1. **Septimiu Crisan**, Ioan Gavril Tarnovan, and Titus Eduard Crisan. "Radiation optimization and image processing algorithms in the identification of hand vein patterns." *Computer Standards & Interfaces* 32, no. 3 (2010):pp 130-140. (ISI IF=1.074), Elsevier, <http://dx.doi.org/10.1016/j.csi.2009.11.008>
2. **Septimiu Crisan**, Bogdan Tebrean, „Low Cost, High Quality Vein Pattern Recognition Device with Liveness Detection. Workflow and Implementations”, *Measurement*, Volume 108, Pages 207-216, Elsevier, 2017
3. Simina Emerich, Raul Malutan, **Septimiu Crisan**, Laszlo Lefkovits, „Dorsal Hand Vein Pattern Analysis and Neural Networks for Biometric Authentication”, *Studies in Informatics and Control*, ISSN 1220-1766, vol. 26(3), pp. 305-314, 2017

ISI Proceedings (volume ale unor manifestări indexate ISI):

1. **Crisan, S.**, Tarnovan, I.G.: Optimization of a multi-touch sensing device for biomedical applications. In: Vlaicu, A., Brad, S. (eds.) *Interdisciplinary Research in Engineering: Steps Towards Breakthrough Innovation for Sustainable Development*. Advanced Engineering Forum, vol. 8-9, pp. 545–552. Trans Tech Publications Ltd, Stafa-Zurich, [ISI] [SCOPUS].
2. Catalin Curta, **Septimiu Crisan**, Radu V Ciupa, „Prefrontal cortex magnetic stimulation, a simulation analysis” *Interdisciplinary Research in Engineering: Steps Towards Breakthrough Innovation for Sustainable Development*. Advanced Engineering Forum, vol. 8-9, pp. 631-638. Trans Tech Publications Ltd, Stafa-Zurich, 2013 [ISI] [SCOPUS].
3. **S. Crisan**, **I. G. Tarnovan**, **B. Tebrean** and **T. E. Crisan**, „Hand Vein Biometric Authentication in Optical Multi-touch Systems ”, *International Conference on Advancements of Medicine and Health Care through Technology, IFMBE Proceedings*, 2011, Volume 36, Part 2, pp. 124-127, DOI: 10.1007/978-3-642-22586-4_26 [ISI] [SCOPUS].
4. **S. Crisan**, **V. D. Zaharia**, **C. Curta** and **E. D. Irimia**, “Computer Assisted Optical Podoscope for Orthostatic Measurements”, *International Conference on Advancements of Medicine and Health Care through Technology, IFMBE Proceedings*, 2011, Volume 36, Part 3, pp. 226-229, DOI: 10.1007/978-3-642-22586-4_48 [ISI] [SCOPUS].
5. **C. Curta**, **S. Crisan** and **R. V. Ciupa**, “3D Simulation Analysis of Transcranial Magnetic Stimulation” *International Conference on Advancements of Medicine and Health Care through Technology, IFMBE Proceedings*, 2011, Volume 36, Part 4, pp. 316-319, DOI: 10.1007/978-3-642-22586-4_66 [ISI] [SCOPUS].
6. **SEPTIMIU CRISAN**, VALENTIN DAN ZAHARIA, LEONARD VOICU BRENDER, TITUS EDUARD CRISAN, “A MULTI-TOUCH COLLABORATIVE SOLUTION FOR MEASUREMENT DATA VISUALISATION”, *PROCEEDINGS OF THE IMEKO XIX WORLD CONGRESS, LISBON, PORTUGAL*, PP 421-424 ISBN 978-963-88410-0-1 (2009) [ISI] [SCOPUS].
7. **Septimiu Crisan**, Ioan Gavril Tarnovan, Titus Eduard Crisan, Bogdan Tebrean, “Optical Multi-touch System for Patient Monitoring and Medical Data Analysis”, *ADVANCEMENTS OF MEDICINE AND HEALTH CARE THROUGH TECHNOLOGY, MEDITECH 2009*, ISSN 1680-0737 (ISI proceedings) (2009) [ISI] [SCOPUS].
8. **Septimiu Crisan**, Ioan Gavril Tarnovan, Titus Eduard Crisan, Bogdan Tebrean, “CORRELATION OF NEAR AND FAR INFRARED VEIN RECOGNITION FOR UNIFIED PROCESSING AND SIMULATION”, *Proceedings of the IMEKO XIX World Congress, Lisbon, Portugal*, pp 1734-1737 ISBN 978-963-88410-0-1 (2009) [ISI] [SCOPUS].

9. S. Crişan, I.G. Târnovan, T.E.Crişan, „A Low Cost Vein Detection System Using Near Infrared Radiation”, IEEE Sensor Application Symposium, San Diego, USA, 2007, ISBN 1-4244-0678-1 [ISI] [SCOPUS] [IEEE]
10. Simina Emerich, Raul Malutan, **Septimiu Crisan**, Laszlo Lefkovits, Iris indexing based on local intensity order pattern, In Ninth International Conference on Machine Vision, pp. 1034121-1034121. International Society for Optics and Photonics, 2017.
11. Bogdan Tebrean, **Septimiu Crisan**, Ioan Tarnovan, Titus Crisan, Low Cost Command and Control System for Automated Infusion Devices." International Conference on Advancements of Medicine and Health Care through Technology; 12th-15th October 2016, Cluj-Napoca, Romania. Springer, Cham, 2017.
- 12.

II. Articole in reviste si volumele unor manifestari stiintifice indexate in alte baze de date internationale (BDI)

1. Septimiu Crisan, Bogdan Tebrean, Simina Emerich, Optimized Vein Pattern Recognition for Biometric Applications–a Modern Approach, 14th IMEKO TC10 Workshop on Technical Diagnostics - "NEW PERSPECTIVES IN MEASUREMENTS, TOOLS AND TECHNIQUES FOR SYSTEM'S RELIABILITY, MAINTAINABILITY AND SAFETY" Milan, Italy, June 27-28, 2016, ISBN 978-92-990073-9-6 [SCOPUS]
2. Bogdan TEBREAN, Septimiu CRISAN, Calin MURESAN, Titus E. CRISAN, Low Cost Command and Control System for Automated Infusion Devices, International Conference on Advancements of Medicine and Health Care through Technology; 5th – 7th June 2014, Cluj-Napoca, Romania [SCOPUS]
3. V.D. Zaharia, S. Crişan, B. Tebrean, V.T. Popa, R.A. Munteanu, „Sensorial System for Visually Impaired Individuals”, International Conference on Advancements of Medicine and Health Care through Technology; 5th–7th June 2014, Cluj-Napoca, Romania; pp. 173-176; Springer International Publishing, 2014 [SCOPUS]
4. CATALIN CURTA, ANCA-IULIA NICU, MIHAELA PLESA, RADU CIUPA, **SEPTIMIU CRISAN** „MAGNETIC NEURAL STIMULATORS — GEOMETRY ASSESSMENT” NONLINEAR OPTICS, QUANTUM OPTICS/OLD CITY PUBLISHING, ISSN 1058-7268 VOLUME 39, NUMBER 2-3, 2009 [SCOPUS]
5. S. Crişan, I.G. Târnovan, T.E.Crişan, „A hand vein structure simulation platform for algorithm testing and biometric identification”, 16th IMEKO TC4 Symposium, Florenta, Italia, septembrie 2008 [SCOPUS]
6. S. Crişan, I.G. Târnovan, T.E.Crişan, „Vein pattern recognition. Image enhancement and feature extraction algorithms”, 15th MEKO TC4 Symposium, Iaşi, Romania, 2007, ISBN 978-973-667-260-6 [SCOPUS]
7. Malutan, Raul, Simina Emerich, Septimiu Crisan, Olimpiu Pop, and László Lefkovits. "Dorsal hand vein recognition based on Riesz Wavelet Transform and Local Line Binary Pattern." In *Frontiers of Signal Processing (ICFSP)*, 2017 3rd International Conference on, pp. 146-150. IEEE, 2017. [IEEE]
8. Bogdan TEBREAN, Septimiu CRISAN, Valentin D. ZAHARIA, Titus E. CRISAN, Capacitive Monitoring of a Tubular Layered Substance Delivery System, International Conference on Advancements of Medicine and Health Care through Technology; 5th – 7th June 2014, Cluj-Napoca, Romania, IFMBE Proceedings - Springer International Publishing, Volume 44, 2014, pg. 197-202, DOI 10.1007/978-3-319-07653-9_40
9. Crisan, T.E., Dragomir, N.D., Holonec, R., Crisan, S., Image treatment method for roughness measurement, 19th International Metrology Symposium: IMEKO TC 11 Metrological Infrastructure Measurement in Chemistry and Clinical Chemistry - Proceedings, MS 2005
10. Titus Crisan, Andrei Catinean, Bogdan Tebrean, **Septimiu Crisan**, Analysis of inherent perturbations modeling on optical fibers. *Acta Electrotehnica* . 2014, Vol. 55 Issue 1/2, p60-64.
11. Bogdan Tebrean, Septimiu Crisan, BOGDAN, Radu I.; CRIŞAN, Titus E., Low Cost GSM Detector, *Acta Electrotehnica* . 2014, Vol. 55 Issue 1/2, p56-59.
12. ZAHARIA, Valentin Dan; HOLONEC, Rodica; CRIŞAN, Septimiu; MUREŞAN, Călin; MUNTEANU jr., Radu, Three-Dimensional Scanning and Graphic Processing System, *Acta Electrotehnica* . 2014, Vol. 55 Issue 1/2, p83-88.

13. Bogdan Tebrean, Septimiu Crisan, Valentin Zaharia, CRIȘAN, Titus E., Capacitive Method for Drug Release Monitoring in Dermal Patches, Acta Electrotehnica . 2014, Vol. 55 Issue 3/4, p115-119
14. L. Badila, S. Crisan, T.E. Crisan, Assessment of Electrical and Mechanical LED Parameters for the Design of Multiple Optical Measurement Barriers, Acta Electrotehnica . 2014, Vol. 55 Issue 3/4, p141-144
15. L. Badila, S. Crisan, T.E. Crisan, Optical Measurements Stand for Determining Electric and Geometric Parameters of Light Emitting Diodes, Acta Electrotehnica . 2014, Vol. 55 Issue 3/4, p110-114

E. Granturi / proiecte câștigate prin competiție

I. Director/responsabil proiecte naționale câștigate prin competiție

Grant PN-II TE 306/2105, Titlu grant: „Platformă pentru studiul și dezvoltarea aplicațiilor de analiză optică a modelului venelor periferice superficiale în biometrie și biomedicină” 550000 RON, 2 ISI, 5 BDI, 1 carte

Director Grant: S.I. Dr. Ing. Septimiu Crișan

II. Membru în echipă proiecte naționale

Grant PN-II TE 304/2105, Titlu grant: “Tehnici de analiză și codare a imaginilor bazate pe reprezentarea ordinală a datelor, cu aplicații în biometrie”

Director Grant: S.I. Dr. Ing. Simina Emerich

Grant CNCSIS tip A. Cod 860/2004, Titlu grant: “Traductoare și tehnici moderne de achiziție și prelucrare specializată a datelor de măsurare cu implicații în sistemele senzoriale utilizate în robotica”

Director Grant: Conf. Dr. Ing. Titus E. Crișan

Grant CNCSIS tip A, cod 1229/2006, Titlu grant: „Modelarea matematică a senzorilor cu fibre optice utilizând metoda elementelor finite”

Director Grant: Prof. dr. ing. Ioan G. Târnovan

Grant PN-II IDEI 616/2009 cod 180 Titlu Grant: „Metode de măsurare în spectrul infraroșu cu aplicații în sistemele biomedicale și de securitate”

Director Grant: Conf. Dr. Ing. Titus E. Crișan

F. Contracte de cercetare cu terții

Membru în echipă proiecte naționale

Membru Contract cercetare cu terți nr.112A / 21.10. 2008 Titlu grant: “Studii și măsurători pentru determinarea eficienței eco-energetice a cuptorului modernizat tip cameră cu vatră mobilă Sv = 25mp, Secția Forjă”

Director Grant: S.I. Ing. Cristina-Daniela Deac

G. Burse de cercetare

1. **Bursa de cercetare post-doctorala** „Sisteme de interfațare tactile multi-punct, multi-utilizator în aplicații industriale și medicale” cod contract POSDRU/89/1.5/S/52603: *Dezvoltarea și susținerea de programe postdoctorale multidisciplinare în domenii tehnice prioritare ale strategiei naționale de cercetare-dezvoltare-inovare” 4D-POSTDOC.* Intervalul de derulare al contractului: Iulie 2010 – Mai 2013.