

Bogdan ȚEBREAN
Current position: Associate Professor

LIST OF PAPERS

A. List of the most relevant 10 papers

B. Ph.D. Thesis

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D. Scientific papers in journals or proceedings of conferences

I. Papers in ISI journals and ISI proceedings

ISI Journals (reviste cotate ISI):

ISI Proceedings (volume ale unor manifestări indexate ISI):

II. Papers in IDB journals and IDB proceedings

E. Grants obtained in competition

I. Project manager in national grants obtained in competition

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F. Postdoctoral research grants

A. List of the most relevant 10 papers

1. **Bogdan ȚEBREAN**, Radu SILAGHI-DUMITRESCU, Titus Eduard CRIȘAN - Modelling of the Coplanar Capacitors for Dermal or Transdermal Drug Delivery System Monitoring, Proceedings of the Romanian Academy, Series A, volume 14, nr. 2/2013, pp.134-143, ISSN: 1454-9069
2. Ioan G. TARNOVAN, **Bogdan ȚEBREAN**, Titus E. CRISAN - Hall Effect Transducers Used in the Parameter Extraction of Captors Having Elastic Cantilever Beam. Proceedings of the 2007 IEEE Sensors Applications Symposium, IEEE Catalog Number 07EX1546, ISBN 1-4244-0678-1, San-Diego, USA, 6-8 February 2007
3. Septimiu CRISAN, **Bogdan ȚEBREAN**, Titus E. CRISAN - Multimodal Liveness Detection System for Hand Vein Biometrics, 2018 IEEE International, Symposium on Medical Measurements and Applications (MeMeA 2018), ISBN 978-1-5386-3393-9
4. **Bogdan ȚEBREAN**, Septimiu CRISAN, Ioan TÂRNOVAN, 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, Book Series: IFMBE Proceedings, Vol. 59, pp. 81-84, 2017 Springer.
5. **Bogdan ȚEBREAN**, Radu SILAGHI-DUMITRESCU, Titus E. CRIȘAN – Modelling of a capsule for controlled slow delivery, monitored via a capacitive method, ACTA ELECTROTEHNICA, vol. 53, nr. 4, 2012, pp. 323, ISSN 1841-3323

6. **Bogdan ȚEBREAN**, Septimiu CRIȘAN, Valentin ZAHARIA, Titus E. CRIȘAN, Capacitive Method for Drug Release Monitoring in Dermal Patches, Acta Electrotehnica, 2014, Vol. 55 Issue 3/4, p115-119, ISSN 1841-3323
7. Ioan G. TARNOVAN, **Bogdan ȚEBREAN**, Titus E. CRISAN - Shock Transducer with Hall Sensing Element, Proceedings of the 15th IMEKO TC4 Symposium on Novelties in Electrical Measurements and Instrumentation, ISBN 978-973-667-260-6, Iasi, Romania, 19-21 September 2007
8. **Bogdan ȚEBREAN**, 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. **Bogdan ȚEBREAN**, Septimiu CRISAN, Titus E. CRISAN - Modeling of a Controlled Drug Delivery Capsule, 2018 IEEE International, Symposium on Medical Measurements and Applications (MeMeA 2018), ISBN 978-1-5386-3393-9
10. **B. ȚEBREAN**, S. CRISAN, C. MURESAN, T. E. CRISAN - Coplanar capacitive matrix structures used for monitoring the recovery of burn injuries, 22nd IMEKO TC4 International Symposium and 20th International Workshop on ADC Modelling and Testing 2017: Supporting World Development Through Electrical and Electronic Measurements, Vol. 2017-September, 2017, Pag. 385-390, Code 134087

B. Ph.D. Thesis

„Researches Regarding Mechanical Shock and Vibration Measurement with Hall Effect Sensors”

Scientific Advisor: Prof.Eng. Ioan G. Tarnovan, PhD.
 Technical University of Cluj-Napoca
 Defended on: 27.09.2008

C. Books and chapter in books

1. **B. ȚEBREAN** - „Utilizarea senzorilor cu efect Hall în măsurarea șocurilor mecanice”, UTPRESS, ISBN 978-606-737-284-7, Cluj-Napoca, 2018;
2. **B. ȚEBREAN** - „Utilizarea structurilor capacitive în măsurări biomedicale”, UTPRESS, ISBN 978-606-737-342-4, Cluj-Napoca, 2019;
3. Rodica HOLONEC, **B. ȚEBREAN**, Ghe. TODORAN, I.G. TARNOVAN - „, Electronic Measurements-Laboratory Manual”, UTPRESS, ISBN 978-973-662-600-5, Cluj-Napoca, 2010;
4. S. CRIȘAN, **B. ȚEBREAN**, T.E. CRIȘAN - „Senzori integrați – îndrumător de laborator”, Editura Mediamira, ISBN 978-973-712-357-1, Cluj-Napoca, 2017.

D. Scientific papers in journals or proceedings of conferences

I. Papers in ISI journals and ISI proceedings

ISI Journals:

1. **Bogdan ȚEBREAN**, Radu SILAGHI-DUMITRESCU, Titus Eduard CRIȘAN - Modelling of the Coplanar Capacitors for Dermal or Transdermal Drug Delivery System Monitoring, Proceedings of the Romanian Academy, Series A, volume 14, nr. 2/2013, pp.134-143, ISSN: 1454-9069

2. Septimiu Crisan, **Bogdan ȚEBREAN** „Low Cost, High Quality Vein Pattern Recognition Device with Liveness Detection. Workflow and Implementations”, Measurement, Volume 108, Pages 207-216, Elsevier, 2017
3. Scurtu Florina, **Bogdan ȚEBREAN**, Arkosi Mariann Kinga, Ionele Adiran, Radu Silaghi-Dumitrescu „Hemoglobin-Albumin Co-Polymers for Blood Substitutes: Increasing the Reproducibility of the Polymerization Reaction”, STUDIA UNIVERSITATIS BABES-BOLYAI CHEMIA, Volume: 64 Issue: 2 Pages: 421-434 Part: 2, 2019, DOI: 10.24193/subbchem.2019.2.36

ISI Proceedings (volume ale unor manifestări indexate ISI):

1. **Bogdan ȚEBREAN**, 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; 12th-15th October 2016, Cluj-Napoca, Romania. Springer, Cham, 2017.
2. Ioan G. TARNOVAN, **Bogdan ȚEBREAN**, Titus E. CRISAN - Hall Effect Transducers Used in the Parameter Extraction of Captors Having Elastic Cantilever Beam. Proceedings of the 2007 IEEE Sensors Applications Symposium, IEEE Catalog Number 07EX1546, ISBN 1-4244-0678-1, San-Diego, USA, 6-8 February 2007
3. Septimiu CRISAN, Ioan G. TARNOVAN, **Bogdan ȚEBREAN**, Titus E. CRISAN - Corellation of Near and Far Infrared Vein Recognition For Unified Processing and Simulation, XIX IMEKO World Congress, Fundamental and Applied Metrology, Lisbon, Portugal, (September 2009)
4. Septimiu CRISAN, Ioan G. TARNOVAN, **Bogdan ȚEBREAN**, Titus E. CRISAN - Optical Multi-touch System for Patient Monitoring and Medical Data Analysis, in INTERNATIONAL CONFERENCE ON ADVANCEMENTS OF MEDICINE AND HEALTH CARE THROUGH TECHNOLOGY, vol. 26, pp. 279-282, 2009, ISSN 1680-0737
5. Septimiu CRISAN, Ioan G. TARNOVAN, **Bogdan ȚEBREAN**, Titus E. CRISAN - Hand Vein Biometric Authentication in Optical Multi-Touch Systems, International Conference on Advancements of Medicine and Health Care through Technology MediTech, Cluj-Napoca, Romania (29 August-2 September 2011), vol. 36, pp. 124-127, 2011, ISBN:978-3-642-22585-7

II. Papers in IDB journals and IDB proceedings

1. **Bogdan ȚEBREAN**, Septimiu CRISAN, Calin Muresan, Titus E. CRISAN - Determining the Response of a Mechanical Shock Transducer Based on a Hall Effect Sensor, IEEE 8th International Conference on Modern Power Systems (MPS), Cluj-Napoca, Romania, 2019, DOI: 10.1109/MPS.2019.8759778
2. Calin Muresan; Madalin Ionut Ardelean; **Bogdan ȚEBREAN**; Septimiu Crisan - LabVIEW Program for Implementing Hilbert Spaces Algorithms in Power Systems Analysis, IEEE 8th International Conference on Modern Power Systems (MPS), Cluj-Napoca, Romania, 2019, DOI:10.1109/MPS.2019.8759681;
3. Calin Muresan; **Bogdan ȚEBREAN**; Romul Copandean; Madalin Ardelean; Florin Dragan - Power Analysis Tools Developed in the LabVIEW Programming Environment, IEEE 8th International Conference on Modern Power Systems (MPS), Cluj-Napoca, Romania, 2019, DOI:10.1109/MPS.2019.8759714
4. **Bogdan ȚEBREAN**, Septimiu CRISAN, Titus E. CRISAN - Modeling of a Controlled Drug Delivery Capsule, 2018 IEEE International, Symposium on Medical Measurements and Applications (MeMeA 2018), ISBN 978-1-5386-3393-9
5. Septimiu CRISAN, **Bogdan ȚEBREAN**, Titus E. CRISAN - Multimodal Liveness Detection System for Hand Vein Biometrics, 2018 IEEE International, Symposium on Medical Measurements and Applications (MeMeA 2018), ISBN 978-1-5386-3393-9
6. **B. ȚEBREAN**, S. CRISAN, C. MURESAN, T. E. CRISAN - Coplanar capacitive matrix structures used for monitoring the recovery of burn injuries, 22nd IMEKO TC4 International Symposium and 20th International Workshop on ADC Modelling and Testing 2017: Supporting World Development

- Through Electrical and Electronic Measurements, Vol. 2017-September, 2017, Pag. 385-390, Code 134087
7. Andrei CATINEAN, **Bogdan ȚEBREAN**, Radu BOGDAN, Titus E. CRISAN - Fiber optic pressure sensor, 22nd IMEKO TC4 International Symposium and 20th International Workshop on ADC Modelling and Testing 2017: Supporting World Development Through Electrical and Electronic Measurements, Vol. 2017-September, 2017, Pag. 360-366, Code 134087
 8. Calin MURESAN, Radu A. MUNTEANU, Florin DRAGAN, Adrian O. MARZA, **Bogdan ȚEBREAN** - Application for Implementing the p-q Theory in a Three Phase System, Proceedings of the 6th International Conference on Modern Power Systems MPS2015, 18-21 May 2015, Cluj-Napoca, Romania, Acta Electrotehnica, 2015, Vol. 56 Issue 3, pp.192-199, ISSN 1841-3323
 9. Septimiu CRISAN, **Bogdan ȚEBREAN**, 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
 10. Valentin D. ZAHARIA, Septimiu CRIȘAN, **Bogdan ȚEBREAN**, Vadim T. POPA, Radu 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
 11. **Bogdan ȚEBREAN**, 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
 12. Titus E. CRISAN, Andrei CATINEAN, **Bogdan ȚEBREAN**, Septimiu CRIȘAN, Analysis of inherent perturbations modeling on optical fibers. Acta Electrotehnica. 2014, Vol. 55 Issue 1/2, pp.60-64, ISSN 1841-3323
 13. **Bogdan ȚEBREAN**, Septimiu CRIȘAN, Radu BOGDAN, Titus E. CRIȘAN, Low Cost GSM Detector, Acta Electrotehnica. 2014, Vol. 55 Issue 1/2, pp.56-59, ISSN 1841-3323
 14. **Bogdan ȚEBREAN**, Septimiu CRIȘAN, Valentin ZAHARIA, Titus E. CRIȘAN, Capacitive Method for Drug Release Monitoring in Dermal Patches, Acta Electrotehnica, 2014, Vol. 55 Issue 3/4, p115-119, ISSN 1841-3323
 15. Valentin ZAHARIA, Dan M. IUDEAN, **Bogdan ȚEBREAN**, Florin. DRAGAN, Titus .E. CRISAN – Implementing a Distributed Measurement System – a Case Study, ACTA ELECTROTEHNICA, vol. 55, nr. 3-4, 2014, pp.127-130, ISSN 1841-3323
 16. Calin MURESAN, **Bogdan ȚEBREAN**, Adrian O. MARZA, Dan IUDEAN– LabView Application for Implementing the Instantaneous Power Theory in a Three Phase System, ACTA ELECTROTEHNICA, vol. 55, nr. 3-4, 2014, pp.120-126, ISSN 1841-3323
 17. **Bogdan ȚEBREAN**, Radu SILAGHI-DUMITRESCU, Titus E. CRIȘAN – Modelling of a capsule for controlled slow delivery, monitored via a capacitive method, ACTA ELECTROTEHNICA, vol. 53, nr. 4, 2012, pp. 323, ISSN 1841-3323
 18. **Bogdan ȚEBREAN**, Septimiu CRISAN, Ioan G. TARNOVAN, Titus E. CRISAN - Novel Drug Delivery Systems – Method Review, ACTA ELECTROTEHNICA, vol. 52, nr. 1, 2011, pg. 49, ISSN 1841-3323
 19. **Bogdan ȚEBREAN**, Ioan G. TARNOVAN – Some Aspects Concerning Designing and Manufacturing of Shock Detectors with Analogical Hall Sensors, ACTA ELECTROTEHNICA, vol. 49, nr 1, 2008, pp. 102, ISSN 1841-3323
 20. **Bogdan ȚEBREAN**, Ioan G. TARNOVAN, Titus E. CRISAN – Response Analysis of Hall-based Mechanical Shock Transducer, ACTA ELECTROTEHNICA, vol. 49, nr. 4, 2008, pp. 480, ISSN 1841-3323
 21. Ioan G. TARNOVAN, **Bogdan ȚEBREAN**, Titus E. CRISAN - Shock Transducer with Hall Sensing Element, Proceedings of the 15th IMEKO TC4 Symposium on Novelties in Electrical Measurements and Instrumentation, ISBN 978-973-667-260-6, Iasi, Romania, 19-21 September 2007

22. Ioan G. TARNOVAN, **Bogdan ȚEBREAN** - Galvanomagnetic Sensors with Applications In The Measurement Of Non-Electrical Quantities: A Review, ACTA ELECTROTEHNICA, vol. 48, nr 1, 2007, pg. 76, ISSN 1841-3323
23. Ioan G. TARNOVAN, **Bogdan TEBREAN** - Galvanomagnetic Sensors with Applications in the Measurement of Electrical Quantities: A Review, ACTA ELECTROTEHNICA, vol. 47, nr 3, 2006, pp. 174, ISSN 1841-3323

E. Grants obtained in competition

I. Project manager in national grants obtained in competition

Research project CNCSIS TD, 430/2007, Title: "Research On Galvanomagnetic Sensors Used In Electrical Measurement Applications"

Project manager: eng. Bogdan ȚEBREAN

II. Member of the research team in national grants

Grant CNCSIS type A, code 1229/2006, Title: „Mathematical modelling of fiber optic sensors using finite element methods”

Project manager: Prof. Eng. Ioan G. Târnovan, PhD.

Grant PN-II IDEI 616/2009 code180 Title: „Infrared measurement methods with applications in biomedical and security systems”

Project Manager: Assoc. Prof. Eng. Titus E. Crișan, PhD.

YOUNG RESEARCH TEAMS -PN-II-RU -TE306/2015 Research Grant, Title: „Platform for the study and development of applications for optical analysis of peripheral superficial vein patterns in biometry and biomedicine”

Project Manager: Lecturer. Eng. Septimiu Crișan, PhD.

G. Postdoctoral research grants

Postdoctoral scholarship - „Innovative Postdoctoral programs for Sustainable development in a Knowledge based Society” - POSDRU/89/1.5/s/60189, Babeș-Bolyai University, Romania, **Title of Postdoctoral individual research project:** “Research Concerning the Use of Nanoporous Structures In Controlled Capsules Which Release a Substance As a Response To Different Parameters Detected By Biosensors”