

Lucrări publicate

I. Cărți

1. Negrea Petre, Grigorie Teodor-Lucian, *Tehnici de detecție și procesare a semnalelor în navigatorii MEMS-INS*, ISBN 978-606-11-7338-9, Editura SITECH Craiova, 2020

II. Îndrumare de laborator publicate

1. Dincă Liviu, Corcău Jenica-Ileana, Negrea Petre, *Mecanica și dinamica zborului avionului – Îndrumar de laborator*, ISBN 978-606-14-1602-8, Editura Universitaria Craiova, 2020

III. Teza de doctorat

1. Sisteme de navigație aerospațială cu senzori inerțiali miniaturizați, Universitatea Politehnica din București, Școala Doctorală de Inginerie Aerospațială, 2016.

IV. Articole publicate în ISI proceedings

1. Negrea, P., *An Overview of Acceleration Detection in Inertial Navigation Systems*, 2021 International Conference on Applied and Theoretical Electricity (ICATE), pp. 1-6, DOI: 10.1109/ICATE49685.2021.9464969, Craiova, Romania, 2021 (**ISI proceedings**);
2. Vaduvescu, V.-A., Negrea P., *Inertial Measurement Unit – A Short Overview of the Evolving Trend for Miniaturization and Hardware Structures*, 2021 International Conference on Applied and Theoretical Electricity (ICATE), pp. 1-5, DOI: 10.1109/ICATE49685.2021.9465024, Craiova, Romania, 2021(**ISI proceedings**);
3. Grigorie, T.L., Corcau, C.L., Negrea, P., Sandu, D.G., *GPS/INS integration - some current issues and development perspectives*, 16th International Multidisciplinary Scientific GeoConference SGEM 2016, ISBN: 978-1-5108-2990-9, Albena, Bulgaria, Vol. 2, pag. 353-360, 30 iunie-6 iulie 2016 (**ISI proceedings**);
4. Grigorie, T.L., Corcau, C.L., Negrea, P., Sandu, D.G., *Evaluation of an INS error model for miniaturized inertial sensors*, 16th International Multidisciplinary Scientific GeoConference SGEM 2016, ISBN: 978-1-5108-2990-9, Albena, Bulgaria, Vol. 2, pag. 271-278, 30 iunie-6 iulie 2016 (**ISI proceedings**);
5. Adochiei (Edu), I.R., Grigorie, T.L., Adochiei, F., Negrea, P., Vidan, C., Jula, N., Adochiei, F.C. “*Assistive Inertial 3D Positioning MEMS System*”, 5th International IEEE Conference on e-Health and Bioengineering (EHB 2015), Print ISBN: 978-1-4673-7544-3, 19-21 November, 2015, Iasi, Romania (**ISI proceedings**);
6. Grigorie, T.L., George, S.D., Negrea, P., Adochiei, F., Adochiei, I.E. *Experimental validation of a low-cost integrated INS/GPS navigator for assistive positioning*, 5th IEEE International Conference on E-Health and Bioengineering - EHB 2015, Print ISBN: 978-1-4673-7544-3, Iasi, Romania, 19-21 November, 2015 (**ISI proceedings**);
7. Grigorie, T.L., Negrea, P., Cîrstea, F., *Modelling and Simulation of a Miniaturized Gyrometer*, 2nd International Symposium on Physics and Technology-ISPTS-2, ISBN: 978-146738018-8, Pune, India, 8-10th March, 2015 (**ISI proceedings**);
8. Grigorie, T.L., Negrea, P., Edu, I.R., Adochiei, F.C. “*Assistive Positioning System Based Inertial Techniques and Wavelet Denoising*”, 8th International Conference on PErvasive Technologies Related to Assistive Environments (PETRA 2015), Corfu, Greece, July 1-3, 2015 (**ISI proceedings**);

9. Grigorie, T.L., Negrea, P., Corcau, J., Dinca, L., Grigorie, O., “*A fuzzy logic control structure of a MEMS accelerometer*”, 13th International Multidisciplinary Scientific GeoConference SGEM 2013, ISBN 978-619-7105-06-3/ISSN 1314-2704, Albena, Bulgaria, 16-22 June, 2013 (**ISI proceedings**);
10. Negrea, P., Grigorie, T.L., “*Mathematical modeling and numerical simulation of the detection unit in a miniaturized capacitive accelerometer*”, 11th International Conference on Applied and Theoretical Electricity – ICATE 2012, Aerospace Engineering Section, Craiova, Romania, Published in Annals of the University of Craiova, Electrical Engineering series, No. 36, pp. 427-431, ISBN: 978-1-4673-1809-9/ISSN 1842-4805, 25-27 October, 2012, (B+ category in the CNCSIS hierarchy and indexed in database Index Copernicus Journals Master List) (**ISI proceedings**).

V. Articole indexate în alte baze de date internaționale

1. Mustata, M. S., Negrea, P., Tiganiuc, D., Niculescu, A., “*A Low-Cost Baro-Altimeter Model with Piezoresistive Sensor and Commercial Off-the-Shelf Components*”, 2024 International Conference on Applied and Theoretical Electricity (ICATE), Craiova, Romania, 2024, pp. 1-6, doi: 10.1109/ICATE62934.2024.10748791(**Scopus, IEEE Explore**);
2. Adochiei, IR., Grigorie, T.L., Adochiei, FC., Negrea, P., Cristian, V., Jula, N. (2024). *Towards Improved Assistive Inertial Positioning Solutions by Using Finely Tuned Wavelet Functions*. 6th International Conference on Nanotechnologies and Biomedical Engineering. ICNBME 2023. IFMBE Proceedings, vol 91, Editor Springer Nature Switzerland, 2023 (**Scopus, Scimago, Google scholar**)
3. Tiganiuc, D., Negrea, P., *Indoor Navigation: Necessity, Mechanisms and Evolution*, 24th Edition of the International Conference Scientific Research & Education in the Air Force-AFASES 2023, 25-27 mai, DOI: 10.19062/2247-3173.2023.24.22, Romania, 2023 (**EBSCO, Google Scholar**)
4. Vaduvescu, V.A., Grigorie, T.L., Negrea, P., Corcau, C.L., *Hardware structure for an INS/GPS integrated navigator*, 7th International Workshop on Numerical Modelling in Aerospace Sciences (NMAS 2019); INCAS Bulletin, Vol. 11, Iss. 4, pp. 203-213, Bucuresti, Romania, 2019 (**Scopus database**);
5. Negrea, P., Vaduvescu, V.A., “*Calculating tool for the spring constant of a serpentine flexure used in inertial MEMS devices*”, 21st Edition of the International Conference Scientific Research and Education in the Air Force (AFASES 2019), DOI: 10.19062/2247-3173.2019.21.21, Brasov, Romania, 31 mai - 2 iunie 2019 (**EBSCO, Copernicus, Google Academic databases**)
6. Tudosie, A.N., Negrea, P., Vaduvescu, V.A., “*Method of control of aircraft center of gravity based on the fuel consumption order*”, 21st Edition of the International Conference Scientific Research and Education in the Air Force (AFASES 2019), Brasov, Romania, 31 mai - 2 iunie 2019 (**EBSCO, Copernicus, Google Academic databases**)
7. Negrea, P., Sepcu, C.L., Lungu, R., Grigorie, T.L., *Mathematical Modeling and Numerical Simulation of a Vibrating MEMS Gyro*, Universitatea POLITEHNICA din București “Scientific Bulletin (Buletin Științific)”, Series D, Vol. 77, Iss. 4, Mechanical Engineering, ISSN 1454-2358, 2015 (**Scopus database**);
8. Sepcu, C.L., Negrea, P., Lungu, M.A., Lungu, R., *Controllability and longitudinal movement stability of an insect-type micro air vehicle*, Universitatea POLITEHNICA din București “Scientific Bulletin (Buletin Științific)”, Series D, Vol. 77, Iss. 2, Mechanical Engineering, ISSN 1454-2358, 2015 (**Scopus database**);
9. Grigorie, T.L., Jula, N., Negrea, P., Obreja, R., Botez, R.M. “*Optimization of a smart accelerometer based on amplitude-frequency characteristics constraints*”. The 33rd IASTED International Conference on Modelling, Identification and Control (MIC 2014), Innsbruck, Austria, February 17-19, 2014 (**Scopus database**);
10. Grigorie, T.L., Negrea, P., Corcau, J., Tudosie, A., Dinca, L., “*About the Capacitive Sensing of the Acceleration in Miniaturized Strap-Down Inertial Navigation Systems*”, 1st International Conference on Aeronautical and Mechanical Engineering (AEME '13), ISBN: 978-1-61804-185-2, Vouliagmeni, Athens, Greece, May 14-16, 2013 (**British Library database**);
11. Grigorie, T.L., Lungu, M., Negrea, P., Baziukaite, D. *The compensation of the thermocouples cold junction temperature variation errors using a neuro – fuzzy controller*. International Conference on Applied

VI. Articole neindexate

1. Negrea, P., Grigorie, T.L., Sandu, D., *Modeling and Testing of a MEMS Strap-Down INS*, IEEE International Conference on Engineering and Technology (ICETECH'15), Coimbatore, TN, India, 20 Martie 2015;
2. Grigorie, T.L., Negrea, P., Mirea, M.C. *Controlled Architecture of a MEMS Capacitive Accelerometer in Closed Loop*, International Symposium on Physics and Technology of Sensors- ISPTS-2, Pune, India, 20 Martie 2015;
3. Negrea, P., Edu, I.R., Grigorie, T.L., “*A Closed Loop Capacitive Miniaturized Accelerometer*”, 1st International Conference New Challenges in Aerospace Sciences (NCAS 2013), Bucharest, 7-8 November, 2013;
4. Edu, I.R., Adochiei, F., Negrea, P., Obreja, R., Cepisca, C., Grigorie, T.L., “*Fabrication Technologies for Miniaturized Accelerometers and Gyros*”, 1st International Conference New Challenges in Aerospace Sciences (NCAS 2013), Bucharest, 7-8 November, 2013;
5. Negrea, P., Grigorie, T.L., Dinca, L., Corcau, J., “*Modeling and numerical simulation of an open-loop miniature capacitive accelerometer for inertial navigation applications*”, European Air & Space Conference (CEAS 2013), Linköping, Sweden, 16-19 Septembrie, 2013;