

**Prof. Ph.D. Cristian Foşalău**

## LIST OF PAPERS

### I. Ph.D. Thesis

Title: *Contributions to improving the performances of transducers for geometrical quantities*, Technical University of Iasi, 171 pages – electrical engineering field, metrology.

### II. Books and book chapters

#### II.1. Printed

1. C. Foşalău, *Introducere în instrumentația virtuală (Introduction in virtual instrumentation)* Ed. Cermi, Iași, 2010, 161 p., ISBN 978-973-661-318-8
2. C. Foşalău, *Proiectarea și simularea circuitelor electronice de măsurare (Design and simulation of measurement electronic circuits)*, Ed. Politehniun, Iași, 2009, 205 p. ISBN 978-973-621-208-6
3. C. Foşalău, M.Temneanu, C.Zet, E.Vremeră, *Noi materiale în construcția de senzori (New materials in sensor construction)*, Casa de editură Venus, Iași, 2006, 171 p. ISBN: 973-756-020-5
4. C. Donciu, C. Foşalău, M. Temneanu, *Tehnici de teletransmisie a datelor în învățământul tehnic la distanță (Data teletransmission in technical remote teaching)*, Casa de editură Venus, Iași, 2005, 158 p.
5. L. Niță, C.Sărmășanu, C.Foşalău, *Sisteme informatice pentru gestionarea consumului de energie electrică*, Casa de editură Venus, Iași, 2003, 157 pagini.
6. C.Foşalău, M. Crețu, *Senzori și transductoare cu fire magnetice amorfe (Sensors and transducers with amorphous magnetic wires)*, Editura TEHNICA-INFO Chișinău, 2002, 157 p.
7. C.Foşalău, *Fire magnetice amorfe cu magnetostricțiune ridicată. Proprietăți și efecte*, capitol în *Tendințe novatoare în instrumentație și măsurări electrice*, coordonator M. Crețu, Editura Sedcom Libris Iași, 2001 (32 p.).
8. O. Postolache, M. Crețu, C. Foşalău, *Tratarea numerică a semnalelor. Teorie și aplicații (Digital signal processing: theory and application)*, Editura Gh.Asachi, Iași, 2000, 233 p.
9. L.Niță, M.Crețu, C.Foşalău, O.Postolache, *Interfațarea și programarea calculatoarelor pentru realizarea sistemelor informatice de măsurare (Computer programming and interfacing for measurement information systems)*, Editura Matrix Rom, București, 2000, 206 p.
10. C.Foşalău, O.Postolache, *Proiectarea asistată de calculator a sistemelor de măsură (CAD of measurement systems)*, Editura Gh.Asachi, Iași, 1999, 191 p.

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11. C. Foşalău, *Digital signal processing* [www.ee.tuiasi.ro/~tns](http://www.ee.tuiasi.ro/~tns)
12. C. Foşalău, *Environmental monitoring*, [www.ee.tuiasi.ro/~emse](http://www.ee.tuiasi.ro/~emse)

### III. Papers published in ISI indexed journals

1. C. Fosalau, C.Zet, D.Petrisor, *Multiaxis inclinometer for in depth measurement of landslide movements*, Sensor Review, vol. 35, no. 3, pp. 296-302 (2015)
2. C. Fosalau, C. Damian, C. Zet, *A high performance strain gage based on the stressimpedance effect in magnetic amorphous wires*, Sensors and Actuators A 191 (2013) 105– 110
3. C. Zet, C. Fosalau, *Magnetic nanowire based sensors*, Digest Journal of Nanomaterials and Biostructures, Vol. 7, No. 1, January - March 2012, p. 299 – 306
4. C. Damian, C. Foşalău, *Sources of indoor noise and options to minimize adverse human health effects*, Environmental Engineering and Mangement Journal, March 2011, vol.10, nr.1, p. 393-400
5. C. Foşalău, C.Damian, C.Zet, *Pspice Model for Simulating the Giant Magnetoimpedance Effect in Magnetic Amorphous Wires*, Metrology and Measurement Systems, Vol. XVI (2009), no.1, pp. 171-182
6. E.Vremera, C.Fosalau, L.Brunetti, *Instrumentation set-up for characterisation of the sensors based on amorphous wires*, Measurement, Elsevier, Vol. 41 (2008), pp. 327 – 333.
7. C. Foşalău, M. Creţu, O. Postolache, *A Circular Displacement Sensor Using Magnetostrictive Amorphous Wires*, IEEE Transactions on Magnetics, nr. 3, vol. 36, May 2000, 557-560.

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1. C.Zet, C.Fosalau, *Design of a high current transducer based on GMR effect in multilayered nanowire*, Proceedings of the 21st IMEKO TC-4 International Symposium on Understanding the World through Electrical and Electronic Measurement, September 7-9, 2016, Budapest, p. 7-10, ISBN 978-615-5270-28-4.
2. C.Fosalau, I.Hogas, C.Zet, D.Petrisor, *A PSpice Model for Sensors Based on Stressimpedance Effect*, Proceedings of the 21st IMEKO TC-4 International Symposium on Understanding the World through Electrical and Electronic Measurement, September 7-9, 2016, Budapest, ISBN 978-615-5270-28-4.
3. D.Petrisor, C.Zet, C.Fosalau, *Data Consistency and Fault Management in Local Sensor Networks used for Landslide Surveillance*, Proceedings of the 21st IMEKO TC-4 International Symposium on Understanding the World through Electrical and Electronic Measurement, September 7-9, 2016, Budapest, p. 113-116, ISBN 978-615-5270-28-4.
4. I.Hogas, C.Fosalau, C.Zet, *A New Strain Sensor Based on Electrospinning and Thin Film Technologies*, 2016 International Conference and Exposition on Electrical and Power Engineering (EPE 2016), 20-22 October, Iasi, Romania, ISBN 978-1-5090-6128-0.
5. C.Fosalau, C.Zet, D.Petrisor, I.Hogas, *Study of the power consumption of a landslide sensor node*, 7th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference, 20-22 October 2016, New York, USA, pp.444-448.
6. D.Petrisor, C.Fosalau, C.Zet, *Optimized Data Flow Management in Event Driven Wireless Sensor Networks*, 7th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference, 20-22 October 2016, New York, USA, pp. 715-721.
7. C.Fosalau, C.Zet, D.Petrisor, *Implementation of a Landslide Monitoring System as a Wireless Sensor Network*, 7th IEEE Annual Ubiquitous Computing, Electronics & Mobile Communication Conference, 20-22 October 2016, New York, USA, pp. 695-700.

8. Catalin Ionescu, Cristian Fosalau, Daniel Petrisor, Cristian Zet, *A Pupil Center Detection Algorithm Based on Eye Color Pixels Differences*, IEEE E-Health and Bioengineering EHB 2015, November 19-21, 2015, Iasi, Romania, Paper ID: 202.
9. C.Zet, C.Fosalau, D.Petrisor, *Pore water pressure sensor for landslide prediction*, IEEE Sensors 2015, Busan Coreea, 1-4 nov. 2015, pp. 1-4.
10. D.Petrișor, C.Foșalău, C. Zet, *Remote Measurement and Surveillance Grid for Landslide Risk Assessment and Mitigation*, 38th International Conference on Telecommunications and Signal Processing, TSP 2015, July 9-11, 2015, Prague, pp. 154-158.
11. S. Silion, C.Foșalău, *Wet Road Surfaces Detection by Measuring the Infrared Reflected Radiation*, 2014 International Conference and Exposition on Electrical and Power Engineering, EPE 2014, 16-18 October 2014, Iasi, Romania, p.738-743.
12. S. Silion, C.Foșalău, *Wet Road Surfaces Detection by Measuring the Air Humidity in Two Points*, 2014 International Conference and Exposition on Electrical and Power Engineering, EPE 2014, 16-18 October 2014, Iasi, Romania, p.744-747.
13. C.Foșalău, S. Silion, C.Zet, *A Low Frequency Current Transducer Using Amorphous Materials*, 2014 International Conference and Exposition on Electrical and Power Engineering, EPE 2014, 16-18 October 2014, Iasi, Romania, p.801-904 .
14. C.Ionescu, C.Fosalau, D.Petrisor, *A study of changes in image contrast with various algorithms*, 2014 International Conference and Exposition on Electrical and Power Engineering, EPE 2014, 16-18 October 2014, Iasi, Romania, p. 100-104 .
15. M.Albu, D.Sticea, C.Fosalau, G. Chiriac, *Low-Cost Low-Power Microgrid with Photovoltaic Panels*, 2014 International Conference and Exposition on Electrical and Power Engineering, EPE 2014, 16-18 October 2014, Iasi, Romania, p.941-947 .
16. C.Zet, C.Ionescu, C.Foșalău, *Automated Electrospinning System*, 2014 International Conference and Exposition on Electrical and Power Engineering, EPE 2014, 16-18 October 2014, Iasi, Romania, p.857-862 .
17. D.Petrișor, C.Foșalău, *Visual attention communication method for impaired people by eye and eyelid movements: A framework for real world scenarios*, 9th IEEE International Symposium on Medical Measurements and Applications, IEEE MeMeA 2014; Lisbon; Portugal; 11-12 June 2014 pp. 627-632.
18. C. Fosalau, C. Zet, D.Petrișor, C.Damian, *A New Type of Highly Sensitive Strain Gage Based on Microstructured Magnetic Materials*, IEEE International Symposium on Robotic and Sensors Environments ROSE 2013, Washington DC, USA, October 21-23, 2013, pp. 102-106.
19. Felix Măriuț, Cristian Foșalău, Daniel Petrișor, *Traffic Sign Recognition using Wireless Communication*, 2012 International Conference and Exposition on Electrical and Power Engineering (EPE 2012), 25-27 October, Iasi, Romania, 59-63.
20. Monica Sălcianu, Cristian Foșalău, *A New CAN Diagnostic Fault Simulator Based on UDS Protocol*, 2012 International Conference and Exposition on Electrical and Power Engineering (EPE 2012), 25-27 October, Iasi, Romania, 820-824.
21. C. Damian, C. Foșalău, José Miguel Dias Pereira, Octavian Postolache, Pedro Silva Girão, *Sensor Network for Water Quality Assesment*, 2012 International Conference and Exposition on Electrical and Power Engineering (EPE 2012), 25-27 October, Iasi, Romania, 849-852.
22. Daniel Petrișor, Cristian Foșalău, Felix Măriuț, *Video Acquisition Framework for High Speed Video Measurements of Human Eyelid Mobility*, 2012 International Conference and Exposition on Electrical and Power Engineering (EPE 2012), 25-27 October, Iasi, Romania, 857-860.

23. Ioan Toma, Mihai Doruș, Cristian Foșalău, *Implementation of a Biogas Plant at Apavital Iasi*, 2012 International Conference and Exposition on Electrical and Power Engineering (EPE 2012), 25-27 October, Iasi, Romania, 867-870.
24. Daniel Petrișor, *Lane Mark Detection Using Hough Transform*, 2012 International Conference and Exposition on Electrical and Power Engineering (EPE 2012), 25-27 October, Iasi, Romania, 871-875.
25. F. Mariut, C. Fosalau, C. Zet, D. Petrisor, *Experimental Traffic Sign Detection using I2V Communication*, 35th International Conference on Telecommunications and Signal Processing (TSP 2012), July 3-4, 2012, Prague, Czech Republic, p. 141-145.
26. D. Petrisor, C. Fosalau, C. Zet, D. Petrisor, F. Mariut, *High Speed Video Monitoring System for Eyelid Movement Measurements*, 35th International Conference on Telecommunications and Signal Processing, July 3-4, 2012, Prague, Czech Republic, p. 730-734 .
27. R. Ciobotariu, C. Fosalau, C. Rotariu, *Virtual Instrumentation on Mobile Devices for Measuring the Pulse Wave Velocity*, 35th International Conference on Telecommunications and Signal Processing, July 3-4, 2012, Prague, Czech Republic, p. 570-573 .
28. D.Petrișor, C.Foșalău, F.Măriuț, *Measurement algorithm for amplitude, duration and velocity of upper eyelid movements*, E-Health and Bioengineering Conference (EHB), Iași, November 24-26, 2011, p. 439-442 .
29. F. Măriuț, C.Foșalău, M. Avila, D. Petrișor, *Detection and Recognition of Traffic Signs Using Gabor Filters*, 34th International Conference on Telecommunications and Signal Processing, August 18-20, 2011, Budapest, Hungary, p. 554-558 .
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31. C.Foșalău, C.Zet, *Including nanotechnologies in e-learning applications*, the 7th International Conference Management of Technological Changes – MTC 2011, Alexandroupolis, Sept. 1 – 3, 2011, vol. 2, pp. 345-348 ISBN 978-960-99486-3-0 .
32. I.Tudosă, C.Foșalău, C.Zet, *A new adaptive tool for recovering information from noise*, the 7th International Conference Management of Technological Changes – MTC 2011, Alexandroupolis, Sept. 1 – 3, 2011, vol. 1, pp. 625-628 ISBN 978-960-99486-3-0 .
33. I.Tudosă, C.Zet, C.Foșalău, *Migrating from software to hardware in digital signal processing*, the 7th International Conference Management of Technological Changes – MTC 2011, Alexandroupolis, Sept. 1 – 3, 2011, vol. 1, pp. 629-632 ISBN 978-960-99486-3-0 .
34. C.Zet, C.Fosalau, C.Damian, *Nanomaterials – a new challenge in building miniaturized measurement devices*, Proceedings of the 6th International Conference on Management of Technological Changes, September 3-5, 2009, Alexandroupolis, Greece, pp.489-492 .
35. C.Damian, C.Fosalau, C.Zet, *Efficient implementation of digital signal processing algorithms with field programmable gate arrays*, Proceedings of the 6th International Conference on Management of Technological Changes, September 3-5, 2009, Alexandroupolis, Greece, pp. 613-616 .
36. C.Zet, C.Damian, C.Fosalau, *Creating templates for preparing nanosensors*, Proceedings of the 6th International Conference on Management of Technological Changes, September 3-5, 2009 Alexandroupolis, Greece, pp. 761-764 .
37. C.Damian, C.Zet, C.Fosalau, *Hybride networks for remote measurements and control in restricted areas*, Proceedings of the 6th International Conference on Management of Technological Changes, September 3-5, 2009, Alexandroupolis, Greece, pp. 481-484 .
38. D.Luca, M.L. Craus, Nicoleta Cornei, C.Fosalau, Carmen Mita, M. Lozovan, *The  $La_{0.54}Sm_{0.11}Ca_{0.35}MnO_3$  Perovskites Doped with Cu for the Magnetoresistive Sensor*. International

Conference „Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies – ATOM-N 2008”, August 28-31 2008, Constanta, 2008.

39. C. Fosalau, C.Sarmasanu, M.Cretu, C.Donciu, V.Ilie, *Virtual laboratories – tools for improving the quality of distance technical learning*, Proceeding of the 5th International Conference on the Management of Technological Changes, Alexandroupolis, Greece, August 25-26, 2007, pp. 501-507.
40. C.Sarmasanu, C.Fosalau, *Several methods for interfacing pressure sensors to microcomputers*, Proceeding of the 5th International Conference on the Management of Technological Changes, Alexandroupolis, Greece, August 25-26, 2007, pp. 357-363.
41. C. Zet, C. Foşalău, C. Damian, *Advances in remote monitoring*, Proceeding of the 5th International Conference on the Management of Technological Changes, Alexandroupolis, Greece, August 25-26, 2007, pp. 147 - 156.
42. A. Trandabat, M. Pislaru, M. Branzila, C. Schreiner, C. Fosalau, *Distributed Measurement System Dedicated to Peculiar Areas with Increased Risk for Environment Safety*, Proceedings of the 4-th International Conference on the Management of the Technological Changes, Chania, Greece, August 19-20, 2005, vol. II, pp. 121-124 ISBN 960-8475-05-8.
43. C. Temneanu, C. Fosalau, D. Socotar, *Fuzzy Library for Labview Applications*, Proceedings of the 4-th International Conference on the Management of the Technological Changes, Chania, Greece, August 19-20, 2005, vol. II, pp. 107-110 ISBN 960-8475-05-8.
44. C. Sarmasanu, C. Fosalau, M. Cretu, *New Methods to Perform Fuzzy-Symbolic Measurements*, Proceedings of the 4-th International Conference on the Management of the Technological Changes, Chania, Greece, August 19-20, 2005, vol. II, pp. 101-106 ISBN 960-8475-05-8.
45. A. Trandabat, M. Branzila, M Pislaru, R.Ciobanu, C.Fosalau, *High Altitude Air Quality Mapping System for Large Area Using GPS Technology and Distributed Measurement System*, Proceedings of the 4-th International Conference on the Management of the Technological Changes, Chania, Greece, August 19-20, 2005, vol. I, pp. 431-434 ISBN 960-8475-05-8.
46. C. Fosalau, C. Sarmasanu, M. Cretu, *New Technologies in Sensors Construction*, Proceedings of the 4-th International Conference on the Management of the Technological Changes, Chania, Greece, August 19-20, 2005, vol. I, pp. 121-126 ISBN 960-8475-05-8.
47. C. Zet, C.Damian, C.Foşalău, I.Enculescu, *Remote automated system for nanowire electrodeposition* Proceedings of the 11th International Conference on Optimization of Electrical and Electronic Equipment, OPTIM 2008, 22-24 May 2008, Brasov, pp. 101 – 106.

## V. Papers published in journals indexed in international databases

1. Lacramioara Iftode, C. Fosalau, *Analysis of data transmitted between the server and the client through different types of communication*, Buletinul Institutului Politehnic din Iasi, Secția Electrotehnica, Energetica, Electronica, publicat de Universitatea Tehnica „Gheorghe Asachi” din Iasi, Tomul LIX (LXIII), Fasc. 1, 2013, pp. 105 - 118, ISSN 1223-8139 (IndexCopernicus, Ulrich’s)
2. Lacramioara Iftode, C. Fosalau, *Study of parameter variation under the influence of temperature in diodes using virtual instrumentation*, Buletinul Institutului Politehnic din Iasi, Secția Electrotehnica, Energetica, Electronica, publicat de Universitatea Tehnica „Gheorghe Asachi” din Iasi, Tomul LVIII (LXII), Fasc. 1, 2012, pp. 81 - 91, ISSN 1223-8139 (IndexCopernicus, Ulrich’s)
3. Lacramioara Iftode, C. Fosalau, *Use of modern IT in the study of resonance in a parallel RLC circuit*, Buletinul Institutului Politehnic din Iasi, Secția Electrotehnica, Energetica, Electronica,

publicat de Universitatea Tehnica „Gheorghe Asachi” din Iasi, Tomul LVIII (LXII), Fasc. 1, 2012, pp. 93 - 104, ISSN 1223-8139 (IndexCopernicus, Ulrich's)

4. I. Tudosa, C. Fosalau, M. Albu, C. Zet, *Harmonics and interharmonics measurement using an new adaptive filtering method based on LMS algorithm*, Buletinul Institutului Politehnic din Iasi, Secția Electrotehnica, Energetica, Electronica, publicat de Universitatea Tehnica „Gheorghe Asachi” din Iasi, Tomul LVII (LXI), Fasc. 4, 2011, pp. 99-109 , ISSN 1223-8139 (IndexCopernicus, Ulrich's)
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6. I. Tudosa, C. Fosalau, C. Zet, *Adaptive Filtering Real-Time Algorithm Using PXI Platform*, Buletinul Institutului Politehnic din Iasi, Secția Electrotehnica, Energetica, Electronica, publicat de Universitatea Tehnica „Gheorghe Asachi” din Iasi, Tomul LVII (LXI), Fasc. 3, 2011, pp. 79-86, ISSN 1223-8139 (IndexCopernicus, Ulrich's)
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8. Monica Sălcianu, C. Foșalău, Anamaria Hariton *A new can simulator for a rain sensing system using LabVIEW* Buletinul Institutului Politehnic din Iasi, Secția Electrotehnica, Energetica, Electronica, Tomul LVII (LXI), Fasc. 5, 2011, pp. 69-78 (IndexCopernicus, Ulrich's)
9. Lăcrămioara Iftode, C. Foșalău, *Teaching DC measurements using modern computer techniques*, Buletinul Institutului Politehnic din Iasi, Secția Electrotehnica, Energetica, Electronica, Tomul LVII (LXI), Fasc. 5, 2011, pp. 123-136 (IndexCopernicus, Ulrich's)
10. D.Costineanu, C.Zet, C.Foșalău, I.Tudosă, *An Angular Position Sensor Using Multilayer Nanowires*, Buletinul Institutului Politehnic Iași, Tomul LV (LIX), Fasc. 3, 2009, pp. 57-66 (IndexCopernicus, Ulrich's)
11. C. Foșalău, O. Postolache, *Computer aided measurement of quality parameters in electric power systems*, Buletinul Institutului Politehnic din Iași, tomul XLVI(IL), fasc. 3-4, 1999, 97-101 (INSPEC & GEOBASE)..
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## **VI. Papers published in proceedings of conferences indexed in international databases**

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2. C. Zet, C.Fosalau, I.Hogas, *A magnetic amorphous wire weighting scale*, IEEE SENSORS 2017, Oct. 30 – Nov. 2, 2017, Glasgow, Scotland, pp. 325-327 (IEEEExplore).

3. C.Fosalau, C. Zet, D. Petrisor, *A new landslide inclinometer using highly sensitive gauges*, Proceedings of the 8th International Conference on Sensing Technology ICST 2014, 2-4 September, 2014, Liverpool, UK, pp. 220-224, publicat în International Journal on Smart Sensing and Intelligent Systems ISSN 1178-5680, (SCOPUS, Engineering Village, INSPEC, EBSCO).
4. C. Zet, C.Fosalau, D. Petrisor, *Study of the sensitivity and stability of a landslide sensor based on magnetic amorphous wires*, Proceedings of the 8th International Conference on Sensing Technology ICST 2014, 2-4 September, 2014, Liverpool, UK, pp. 216-219, publicat în International Journal on Smart Sensing and Intelligent Systems ISSN 1178-5680, (SCOPUS, Engineering Village, INSPEC, EBSCO).
5. D. Petrișor, C. Foșalău, C. Zet, C. Damian, *Measurement of Landslide Displacement and Orientation using Strain Gauges Based on Amorphous Magnetic Microwires*, 19th Symposium IMEKO TC 4 Symposium and 17th IWADC Workshop, Barcelona, July 18-19, 2013, pp. 655-660, ISBN-13: 978-84-616-5438-3 (SCOPUS).
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11. D.Costineanu, C.Fosalau, C.Damian, O.Plopa *Triangulation-based 3D image processing method and system with compensating shadowing errors* Proceedings of the 16th IMEKO-TC4 Symposium, Florence, Italy, Sept. 19-21, 2008, pp. 460-463. (SCOPUS)
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13. A.S. Fiorillo, C.Fosalau, G.Scarfone, C.Damian, *A remote web system for testing PVDF sensors*, Proceedings of the 15th IMEKO-TC4 Symposium, Iasi, Romania, Sept. 22-24, 2007, vol 2, pp.509-513. (SCOPUS)
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16. E.Vremeră, C.Foșalău, L.Brunetti, *Design requirements for sensors based on amorphous wires resulting from measurements and simulation* XVIII IMEKO WORLD CONGRESS Metrology for a Sustainable Development, September, 17 – 22, 2006, Rio de Janeiro, Brazil. (CD-ROM). (SCOPUS).

17. M. Brinzila, C. Fosalau, C. Donciu, M. Cretu, *Virtual Library Included in LabVIEW Environment for a New DAS with Data Transfer by LPT*, Proceedings of the 14th International Symposium IMEKO TC4, Gdynia/Jurata, Poland, 12-15 September 2005, pp. 535-540 ISBN 83-89786-37-0. (SCOPUS)
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