

**Autorul tezei de abilitare: Șef lucr. dr. ing. Lucian Mihai ITU**

**Titlul tezei de abilitare: Metode Computaționale în Medicina Cardiovasculară Personalizată**

**Domeniul: Ingineria Sistemelor**

## LISTA DE LUCRĂRI

### LUCRĂRI RELEVANTE

1. Itu, L. M., Sharma, P., Passerini T., Kamen, A., D., Suci, C., Comaniciu, D., A Parameter Estimation Framework for Patient-specific Hemodynamic Computations, *Journal of Computational Physics*, Vol. 281, Jan, 2015, pp. 316-333, ISSN 0021-9991, DOI: 10.1016/j.jcp.2014.10.034 (ISI journal, WOS:000346429300018, FI: 2.556).
2. Itu, L. M., Sharma, P., Ralovich, K., Mihalef, V., Ionasec, R., Everett, A., Ringel, R., Kamen, A., Comaniciu, D., Non-invasive Hemodynamic Assessment of Aortic Coarctation: Validation with in-vivo Measurements, *Annals of Biomedical Engineering*, Vol. 41, April, 2013, pp. 669-681, ISSN: 1573-9686, DOI: 10.1007/s10439-012-0715-0 (ISI journal, WOS:000316566400002, FI: 2.887).
3. Itu, L. M., Sharma, P., Kamen, A., D., Suci, C., Comaniciu, D., Graphics Processing Unit Accelerated One-Dimensional Blood Flow Computation in the Human Arterial Tree, *International Journal on Numerical Methods in Biomedical Engineering*, Vol. 29, December, 2013, pp. 1428 – 1455, ISSN: 2040-7947, DOI: 10.1002/cnm.2585 (ISI journal, WOS:000327732300008, FI: 1.849).
4. Itu, L. M., Rapaka, S., Passerini T., Georgescu, B., Schwemmer, C., Schoebinger, M., Flohr, T., Sharma, P., Comaniciu, D., A Machine Learning Approach for Computation of Fractional Flow Reserve from Coronary Computed Tomography, *Journal of Applied Physiology*, Vol. 121, July 2016, pp. 42-52, ISSN: 8750-7587, DOI: 10.1152/jappphysiol.00752.2015 (ISI journal, WOS:000372013600004, FI: 3.004).
5. Itu, L. M., Sharma, P., Suci, C., Moldoveanu, F., Comaniciu, D., Personalized Blood Flow Computations: A Hierarchical Parameter Estimation Framework for Tuning Boundary Conditions, *International Journal on Numerical Methods in Biomedical Engineering*, Vol. 33, March 2017, pp. e02803, ISSN: 2040-7947, DOI: 10.1002/cnm.2803 (ISI journal, WOS:000395407900006, FI: 1.849).
6. Itu, L. M., Sharma, P., Kamen, A., D., Suci, C., Comaniciu, D. A Novel Coupling Algorithm for Computing Blood Flow in Viscoelastic Arterial Models, *Proc. of the 35th Annual Inter. Conf. of the IEEE Engineering in Medicine & Biology Society - EMBC 2013*, Osaka, Japan, July 3-7, 2013, pp. 727-730, ISSN: 1557-170X (ISI Proceedings, IEEE Xplore, WOS:000341702101054).
7. Itu, L. M., Sharma, P., Mihalef, V., Kamen, A., Suci, C., Comaniciu, D., A Patient-specific Reduced-order Model for Coronary Circulation, *Proc. of the IEEE Inter. Symp. On Biomedical Imaging - ISBI 2012*, Barcelona, Spain, May 2-5, 2012, pp. 832-835, ISSN: 1945-7928, ISBN: 978-1-4577-1857-1 (ISI Proceedings, IEEE Xplore, WOS:000312384100209).
8. Itu, L. M., Suci, C. A method for modeling surrounding tissue support and its global effects on arterial hemodynamics, *Proc. of IEEE International Conference on Biomedical and Health Informatics – BHI 2014*, Valencia, Spain, June 1-4, 2014, pp. 1-4, ISSN: 2168-2194 (ISI Proceedings, IEEE Xplore, WOS:000346504900141).
9. Itu, L. M., Sharma, P., Georgescu, B., Kamen, A., D., Suci, C., Comaniciu, D. Model Based Non-invasive Estimation of PV Loop from Echocardiography, *Proc. of the 36th*

Annual Inter. Conf. of the IEEE Engineering in Medicine & Biology Society - EMBC 2014, Chicago, USA, August 26-30, 2014, pp. 6774-6777, ISSN: 1094-687X (ISI Proceedings, IEEE Xplore, WOS:000350044706186).

## TEZA DE DOCTORAT

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*Utilizarea procesării paralele în modelarea multiscalară a hemodinamicii coronariene*, 2013.

Îndrumător: Prof. dr. ing. Florin-Dumitru Moldoveanu

Domeniu: Ingineria Sistemelor

Universitate Transilvania din Braşov

## BREVETE

---

1. Sharma, P., Itu, L.M., Georgescu, B., Mihalef, V., Kamen, A., Comaniciu, D., Method and system for multi-scale anatomical and functional modeling of coronary circulation, US Patent Application PCT/US2012/064604, May 2013.
2. Sharma, P., Itu, L.M., Kamen, A., Georgescu, X., Zheng, Y., Tek, H., Comaniciu, D., Bernhardt, D., Vega-Higuera, F., Scheuring, M. Method and System for Non-Invasive Functional Assessment of Coronary Artery Stenosis, US Patent Application 20130246034, September 2013.
3. Ralovich, K., Itu, L.M., Mihalef, V., Sharma, P., Ionasec, R.I., Vitanovski, D., Krawtschuk, W., Comaniciu, D., Method and System for Hemodynamic Assessment of Aortic Coarctation from Medical Image Data, US Patent Application 20130243294, September 2013.
4. Itu, L.M., Sharma, P., Zheng, X., Kamen, A., Suciu, C., Comaniciu, D., A Framework for Personalization of Coronary Flow Computations During Rest and Hyperemia, World Patent Application WO/2013/138428, September 2013.
5. Sharma P., Zheng, X., Kamen, A., Itu, L.M., Georgescu, B., Comaniciu, D. Computation of Hemodynamic Quantities From Angiographic Data, US Patent Application US 13/937,313, January 2014.
6. Itu, L.M., Sharma, P., Kamen, A., Comaniciu, D., Viscoelastic modeling of blood vessels, US Patent Application US 14/025,039, May 2014.
7. Itu, L.M., Sharma, P., Kamen, A., Comaniciu, D. Patient-specific automated tuning of boundary conditions for distal vessel tree, US Patent Application US 14/167,120, August 2014.
8. Sharma, P., Itu, L.M. Method and system for non-invasive functional assessment of coronary artery stenosis using flow computations in diseased and hypothetical normal anatomical models, World Patent Application PCT/US2015/025853, November 2015.
9. Sharma, P., Itu, L.M. Method and system for hemodynamic computation in coronary arteries, World Patent Application WO/2015/164086, September 2015.
10. Itu, L.M., Sharma, P., Redel, T., Georgescu, B. Method and System for Non-Invasive Computation of Hemodynamic Indices for Coronary Artery Stenosis, US Patent Application 61990775, November 2015.
11. Sharma, P., Itu, L.M., Rapaka, S., Sauer, F. System and method for mapping patient data from one physiological state to another physiological state, European Patent Application, EP 2949268 A1, Dec. 2015.
12. Itu, L.M., Passerini, T., Rapaka, S., Sharma, P., Schwemmer, C., Schoebinger, M., Redel, T., Comaniciu, D. Synthetic data-driven hemodynamic determination in medical imaging, US Patent Application US20160148372, May 2016.

13. Itu, L.M., Sharma, P., Sauer, F. Method and system for prediction of post-stenting hemodynamic metrics for treatment planning of arterial stenosis, European Patent Application EP 2963574 A3, January 2016.
14. Itu, L.M., Passerini, T., Rapaka, S., Schwemmer, C., Schöbinger, M., Sharma, P. Method and system for purely geometric machine learning based fractional flow reserve, World Patent Application WO 2016075331, May 2016.
15. Itu, L.M., Passerini, T., Sharma, P. Method and System for Personalized Non-Invasive Hemodynamic Assessment of Renal Artery Stenosis from Medical Images, US Patent Application US 20160166209 A1, June 2016.
16. Mansi, T., Itu, L.M., Mihalef, V., Neumann, D., Passerini, T., Sharma, P., Comaniciu, D. Personalized whole-body circulation in medical imaging, US Patent Application 20160196384, July 2016.
17. Georgescu, B., Itu, L.M., Kamen, A., Mansi, T., Mihalef, V., Passerini, T., Rapaka, S., Sharma, P. Three-dimensional quantitative heart hemodynamics in medical imaging, US Patent Application 20160228190 A1, August 2016
18. Itu, L.M., Passerini, T., Sharma, P., Redel, T. Method and System for Enhancing Medical Image-Based Blood Flow Computations Using Physiological Measurements, US Patent Application US 20170032097, February 2017.

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## CĂRȚI / CAPITOLE DE CĂRȚI

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1. Itu, L.M., Sharma, P., Suci, C. (Eds.) Patient-specific Hemodynamic Computations: Application to Personalized Diagnosis of Cardiovascular Pathologies, Springer, Heidelberg, Germany, 2017, 234 pag., ISBN: 78-3-319-56852-2, DOI: 10.1007/978-3-319-56853-9.
2. Margineanu, I., Cobeanu, I., Itu, L.M., Utilizarea Calculatoarelor in Controlul Proceselor. Aplicatii, Editura Universității Transilvania din Brașov, 2010, 193 pag., ISBN: 978-973-598-726-8 (Cod CNCIS 81).
3. Itu, L.M., Modelarea personalizata a sistemului cardiovascular, Editura Universității Transilvania din Brașov, 2015, 186 pag., ISBN: 978-606-19-0580-5 (Cod CNCIS 81).
4. Margineanu, I., Itu, L.M., Ștefan, I., Itu, A., Programarea aplicațiilor de timp real, Editura Universității Transilvania din Brașov, 2016, 353 pag., ISBN: 978-606-19-0751-9 (Cod CNCIS 81).
5. Margineanu, I., Itu, L.M., Ștefan, I., Itu, A., Automate Programabile. Aplicații, Editura Universității Transilvania din Brașov, 2016, pag., ISBN: 978-606-19-0862-2 (Cod CNCIS 81).
6. Suci, C., Itu, L.M., Introducere în Rețele Industriale de Comunicație, Editura Universității Transilvania din Brașov, 2016, 98 pag., ISBN: (Cod CNCIS 81).

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## ARTICOLE ÎN REVISTE

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1. Itu, L. M., Sharma, P., Passerini T., Kamen, A., D., Suci, C., Comaniciu, D., A Parameter Estimation Framework for Patient-specific Hemodynamic Computations, Journal of Computational Physics, Vol. 281, Jan, 2015, pp. 316-333, ISSN 0021-9991, DOI: 10.1016/j.jcp.2014.10.034 (ISI journal, WOS:000346429300018, FI: 2.556).
2. Itu, L. M., Sharma, P., Ralovich, K., Mihalef, V., Ionasec, R., Everett, A., Ringel, R., Kamen, A., Comaniciu, D., Non-invasive Hemodynamic Assessment of Aortic Coarctation: Validation with in-vivo Measurements, Annals of Biomedical Engineering, Vol. 41, April, 2013, pp. 669-681, ISSN: 1573-9686, DOI: 10.1007/s10439-012-0715-0 (ISI journal, WOS:000316566400002, FI: 2.887).

3. Itu, L. M., Sharma, P., Kamen, A., D., Suci, C., Comaniciu, D., Graphics Processing Unit Accelerated One-Dimensional Blood Flow Computation in the Human Arterial Tree, *International Journal on Numerical Methods in Biomedical Engineering*, Vol. 29, December, 2013, pp. 1428 – 1455, ISSN: 2040-7947, DOI: 10.1002/cnm.2585 (ISI journal, WOS:000327732300008, FI: 1.849).
4. Ralovich, K, Itu, L.M., Vitanovski, D., Sharma, P., Ionasec, R., Mihalef, V., Krawtschuk, W., Zheng, Y., Everett, A., Pongiglione, G., Leonardi, B., Ringel, R., Navab N., Heimann, T., Comaniciu, D., Noninvasive hemodynamic assessment, treatment outcome prediction and follow-up of aortic coarctation from MR imaging, *Medical Physics*, Vol. 42, April 2015, pp. 2143-2156, ISSN: 2473-4209, DOI: 10.1118/1.4914856 (ISI journal, WOS:000354776800006, FI: 2.496).
5. Tröbs, M., Achenbach, S., Röther, J., Redel, T., Scheuring, M., Winneberger, D., Klingenberg, K., Itu, L.M., Passerini, T., Kamen, A., Sharma, P., Comaniciu, D., Schlundt, C., Comparison of Fractional Flow Reserve Based on Computational Fluid Dynamics Modeling Using Coronary Angiographic Vessel Morphology versus Invasively Measured Fractional Flow Reserve, *The American Journal of Cardiology*, Vol. 1117, Jan 2016, pp. 29-35, ISSN: 0002-9149, DOI: 10.1016/j.amjcard.2015.10.008 (ISI journal, WOS:000368048900005, FI: 3.154).
6. Coenen, A., Lubbersa, M., Kurata, A., Kono, A., Dedic, A., Chelu, R., Dijkshoorn, M., van Geuns, R.J., Schoebinger, M., Itu, L.M., Sharma, P., Nieman, K., Coronary CT angiography derived fractional flow reserve: Methodology and evaluation of a point of care algorithm, *Journal of Cardiovascular Computed Tomography*, Vol. 10, March–April 2016, pp. 105–113, ISSN: 1934-5925, DOI: 10.1016/j.jcct.2015.12.006 (ISI journal, , FI: 2.472).
7. Itu, L. M., Rapaka, S., Passerini T., Georgescu, B., Schwemmer, C., Schoebinger, M., Flohr, T., Sharma, P., Comaniciu, D., A Machine Learning Approach for Computation of Fractional Flow Reserve from Coronary Computed Tomography, *Journal of Applied Physiology*, Vol. 121, July 2016, pp. 42-52, ISSN: 8750-7587, DOI: 10.1152/jappphysiol.00752.2015 (ISI journal, WOS:000372013600004, FI: 3.004).
8. Itu, L. M., Sharma, P., Suci, C., Moldoveanu, F., Comaniciu, D., Personalized Blood Flow Computations: A Hierarchical Parameter Estimation Framework for Tuning Boundary Conditions, *International Journal on Numerical Methods in Biomedical Engineering*, Vol. 33, March 2017, pp. e02803, ISSN: 2040-7947, DOI: 10.1002/cnm.2803 (ISI journal, WOS:000395407900006, FI: 1.849).
9. Neumann, D., Mansi, T., Itu, L.M., Georgescu, B., Kayvanpour, E., Sedaghat-Hamedani, F., Amr, A., Haas, J., Katus, H., Meder, B., Steidl, S., Hornegger, J., Comaniciu, D., A Self-Taught Artificial Agent for Multi-Physics Computational Model Personalization, *Medical Image Analysis*, Vol. 34, Dec. 2016, pp. 52–64, ISSN: 1361-8415, DOI: 10.1016/j.media.2016.04.003 (ISI journal, WOS:000385320800006, FI: 4.565).
10. Schlundt, C., Redel, T., Scheuring, M., Groke, D., Klingenberg, K., Itu, L.M., Sharma, P., Kamen, A., Comaniciu, D., Achenbach, S. Model-Based Determination of Fractional Flow Reserve Based on Coronary Angiography–Initial Validation by Invasively Measured FFR, *Journal of the American College of Cardiology*, Vol. 64, September 2014, pp. B96-B97, ISSN: 0735-1097, DOI: 10.1016/j.jacc.2014.07.380 (ISI Journal, WOS:000359649700330, FI: 17.759).
11. Calmac, L., Niculescu, R., Badila, E., Weiss, E., Zamfir, D., Itu, L.M., Lazar, L., Carp, M., Itu, A., Suci, C., Passerini, T., Sharma, S., Georgescu, B., Comaniciu, D., Image-Based Computation of Instantaneous Wave-free Ratio from Routine Coronary Angiography - Initial Validation by Invasively Measured Coronary Pressures, *Journal of the American College of Cardiology*, Vol. 66, October 2015, pp. B17-B18, ISSN: 0735-1097, DOI: 10.1016/j.jacc.2015.08.087 (ISI Journal, WOS:000363329000041, FI: 17.759).
12. Itu, L.M., Passerini, T., Calmac, L., Niculescu, R., Badila, E., Weiss, E., Zamfir, D., Penes, D., Lazar, L., Carp, M., Itu, A., Suci, C., Sharma, S., Georgescu, B., Comaniciu, D.,

- Image-Based Computation of Instantaneous Wave-free Ratio from Routine Coronary Angiography - Evaluation of a Hybrid Decision Making Strategy with FFR, *Journal of the American College of Cardiology*, Vol. 67, April 2016, pp. 328, ISSN: 0735-1097, DOI: 10.1016/S0735-1097(16)30329-1 (ISI Journal, WOS:000375188701172, FI: 17.759).
13. Calmac, L., Niculescu, R., Badila, E., Weiss, E., Zamfir, D., Penes, D., Itu, L.M., Lazar, L., Carp, M., Itu, A., Suciu, C., Passerini, T., Sharma, S., Georgescu, B., Comaniciu, D., A data-driven approach combining image-based anatomical features and resting state measurements for the functional assessment of coronary artery disease, *Journal of the American College of Cardiology*, Vol. 68, November 2016, pp. B212-B213, ISSN: 0735-1097, DOI: 10.1016/j.jacc.2016.09.664 (ISI Journal, WOS:000398590400054, FI: 17.759).
  14. Mărgineanu, I., Itu, L.M., Gap Determination for Clinker Preparation Kilns, *Recent, România*, Vol. 10, July, 2009, pp. 127-130, ISSN: 1582-0246 (Google Scholar).
  15. Margineanu, I., Itu, L.M., The Automation of the Unloading or Recycling Process of the Fly Ash from the Silos in Cement Mills, *Bulletin of the Transilvania University of Brasov - Series I Engineering Sciences*, July, 2009, Vol. 51, pp. 287-292, ISSN: 2065-2119 (EBSCO).
  16. Itu, L.M., Margineanu, I., Geodesic Monitoring Systems: A Critical Analysis of Instruments and Sensors Used, *Bulletin of the Transilvania University of Brasov - Series I Engineering Sciences*, July, 2010, Vol. 52, pp. 251-259, ISSN: 2065-2119 (Google Scholar).
  17. Itu, L.M., Suciu, C., Moldoveanu, F., Postelnicu, A., Comparison of Single and Double Floating Point Precision Performance for Tesla Architecture GPUs, *Bulletin of the Transilvania University of Braşov*, Vol. 4(53), No. 2, 2011, Series I, Engineering Sciences, Electrical Engineering, Electronics and Automatics, pp. 131÷138, ISSN: 2065-2119 (EBSCO).
  18. Itu, L.M., Suciu, C., Moldoveanu, F., Postelnicu, A., GPU Enhanced Stream-Based Matrix Multiplication, *Bulletin of the Transilvania University of Braşov*, Vol. 5(54), No. 2, 2012, Series I, Engineering Sciences, Electrical Engineering, Electronics and Automatics, pp. 79÷86, ISSN: 2065-2119 (EBSCO).
  19. Niţă, C., Itu, L. M., Suciu, C. GPU Accelerated Fluid Flow Computations using the Lattice Boltzmann Method, *Bulletin of the Transilvania University of Brasov - Series I, Engineering Sciences*, Vol. 55, pp. 67–74, 2013, ISSN: 2065-2119 (EBSCO).
  20. Itu, L. M., Sharma, P., Gulsun, M. A., Mihalef, V., Kamen, A., Greiser, A., Determination of Time-varying Pressure Field from Phase Contrast MRI Data, *Journal of Cardiovascular Magnetic Resonance*, Vol. 14, February 2012, pp. 36, ISSN: 1097-6647, DOI: 10.1186/1532-429X-14-S1-W36 (US National Library of Medicine).

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#### **ARTICOLE PUBLICATE IN VOLUME ALE CONFERINTELOR INTERNAŢIONALE**

---

1. Cobeanu, I., Margineanu, I., Catrinescu, C., Itu, L.M., WLAN Roaming Wireless Simulator, *Proc. of the 12th Inter. Conf. on Optimization of Electrical and Electronic Equipment - OPTIM 2010*, Brasov, Romania, May 20-22, 2010, pp. 825-830, ISBN: 978-973-131-028-2 (ISI Proceedings, IEEE Xplore, WOS:000291967300119).
2. Itu, L.M., Margineanu, I., Cobeanu, I., Gîrbea, A., Positioning Systems for Geodesic Monitoring Devices, *Proc. of the 9th RoEduNet Inter. Conf. – RoEduNet 2010*, Sibiu, Romania, June 24-26, 2010, pp. 67-72, ISSN: 2068-1038 (ISI Proceedings, IEEE Xplore, WOS:000290548400010)
3. Itu, L.M., Suciu, C., Postelnicu, A., Moldoveanu, F., Analysis of Outflow Boundary Condition Implementations for 1D Blood Flow Models, *Proceedings of the 3rd IEEE International Conference on e-Health and Bioengineering – EHB 2011*, Iaşi, Romania, November 24÷26, 2011, pp. 467÷470, ISBN: 978-1-4577-0292-1 (ISI Proceedings, IEEE Xplore, WOS:000304806300095).

4. Itu, L. M., Sharma, P., Mihalef, V., Kamen, A., Suciu, C., Comaniciu, D., A Patient-specific Reduced-order Model for Coronary Circulation, Proc. of the IEEE Inter. Symp. On Biomedical Imaging - ISBI 2012, Barcelona, Spain, May 2-5, 2012, pp. 832-835, ISSN: 1945-7928, ISBN: 978-1-4577-1857-1 (ISI Proceedings, IEEE Xplore, WOS:000312384100209).
5. Sharma, P., Itu, L. M., Zheng, X., Kamen, A., Bernhardt, D., Suciu, C., Comaniciu, D., A Framework for Personalization of Coronary Flow Computations During Rest and Hyperemia, Proc. of the 34th Annual Inter. Conf. of the IEEE Engineering in Medicine & Biology Society - EMBC 2012, San Diego, California, USA, Aug. 28-Sept. 1, 2012, pp. 6665 - 6668, ISSN: 1557-170X, ISBN: 978-1-4244-4119-8 (ISI Proceedings, IEEE Xplore, WOS:000313296506209).
6. Niță, C., Itu, L. M., Suciu, C. GPU Accelerated Blood Flow Computation using the Lattice Boltzmann Method, 17th IEEE High Performance Extreme Computing Conference, Waltham, MA, USA, Sept. 10-12, 2013, pp. 1-6, ISBN: 978-1-4799-1364-0 (ISI Proceedings, IEEE Xplore, WOS:000332186600009).
7. Itu, L. M., Sharma, P., Zheng, X., Mihalef, V., Kamen, A., Suciu, C., Patient-Specific Modeling and Hemodynamic Simulation in Healthy and Diseased Coronary Arteries, Proc. of the ASME 2012 Summer Bioengineering Conference - SBC 2012, Fajardo, Puerto Rico, June 20-23, 2012, ISBN 978-0-7918-4480-9 (ISI Proceedings, Google Scholar, WOS:000325036600291)
8. Itu, L. M., Sharma, P., Kamen, A., D., Suciu, C., Comaniciu, D. A Novel Coupling Algorithm for Computing Blood Flow in Viscoelastic Arterial Models, Proc. of the 35th Annual Inter. Conf. of the IEEE Engineering in Medicine & Biology Society - EMBC 2013, Osaka, Japan, July 3-7, 2013, pp. 727-730, ISSN: 1557-170X (ISI Proceedings, IEEE Xplore, WOS:000341702101054).
9. Ralovich, K., Itu, L.M., Mihalef, V., Sharma, P., Ionasec, R., Vitanovski, D., Krawtschuk, W., Everett, A., Ringel, R., Navab, N., Comaniciu D. Hemodynamic assessment of pre- and post-operative aortic coarctation from MRI, Proc. of Medical Image Computing and Computer Assisted Interventions – MICCAI 2012, Nice, France, October 1-5, 2012, pp. 486-493, ISBN: 978-3-642-33417-7 (ISI Proceedings, Springerlink, WOS:000371316700060).
10. Itu, L. M., Suciu, C. A method for modeling surrounding tissue support and its global effects on arterial hemodynamics, Proc. of IEEE International Conference on Biomedical and Health Informatics – BHI 2014, Valencia, Spain, June 1-4, 2014, pp. 1-4, ISSN: 2168-2194 (ISI Proceedings, IEEE Xplore, WOS:000346504900141).
11. Itu, L. M., Suciu, C. An external tissue support model for the arterial wall based on in vivo data, Proc. of IEEE International Symposium on Medical Measurements and Applications – MeMeA 2014, Lisbon, Portugal, June 11-12, 2014, pp. 1-6, ISBN: 978-1-4799-2922-1 (ISI Proceedings, IEEE Xplore, WOS:000346747000029).
12. Itu, L. M., Sharma, P., Georgescu, B., Kamen, A., D., Suciu, C., Comaniciu, D. Model Based Non-invasive Estimation of PV Loop from Echocardiography, Proc. of the 36th Annual Inter. Conf. of the IEEE Engineering in Medicine & Biology Society - EMBC 2014, Chicago, USA, August 26-30, 2014, pp. 6774-6777, ISSN: 1094-687X (ISI Proceedings, IEEE Xplore, WOS:000350044706186).
13. Neumann, D., Mansi, T., Itu, L.M., Georgescu, B., Kayvanpur, E., Sedaghat-Hamedani, F., Haas, J., Katus, H., Meder, B., Steidl, S., Hornegger, J., Comaniciu, D., Vito - A Generic Agent for Multi-Physics Model Personalization: Application to Heart Modeling, Proc. of the 18th Inter. On Medical Image Computing and Computer Assisted Intervention - MICCAI 2015, Munich, Germany, Oct. 5-9, 2015, pp. 442-449, ISBN: 978-3-319-24570-6 (ISI Proceedings, Springerlink, ).
14. Nita, C., Itu, L. M., Mihalef, V., Sharma, P., Rapaka, S., GPU-accelerated model for fast, three-dimensional fluid-structure interaction computations, Proc. of the 37th Annual Inter.

- Conf. of the IEEE Engineering in Medicine & Biology Society - EMBC 2015, Milano, August 25-29, 2015, pp. 965-968, ISSN: 1094-687X (ISI Proceedings, IEEE Xplore, WOS:000366206800053).
15. Chen, W., Itu, L. M., Sharma, P., Kamen, A. Uncertainty Quantification in Medical Image-Based Hemodynamic Computations, Proc. of the IEEE Inter. Symp. On Biomedical Imaging - ISBI 2014, Beijing, China, April 29 - 2 May, 2014, pp. 1-6, ISSN: 1945-7928 (ISI Proceedings, WOS:000392750900108)
  16. Vizitiu, A., Itu, L.M., Nita, C., Suciu, C. Optimized Three-Dimensional Stencil Computation on Fermi and Kepler GPUs, 18th IEEE High Performance Extreme Computing Conference, Waltham, MA, USA, Sept. 9-11, 2014, pp. 78-83, ISBN: 978-1-4799-6232-7 (ISI Proceedings, WOS:000380479300026).
  17. Stroia, I., Itu, L., Niță, C., Lazăr, L., Suciu, C. GPU Accelerated Geometric Multigrid Method: Comparison with Preconditioned Conjugate Gradient, 19th IEEE High Performance Extreme Computing Conference, Waltham, MA, USA, Sept. 15-17, 2015, pp. 1-6, ISBN: 978-1-4673-9287-7 (ISI Proceedings, WOS:000380543000044)
  18. Iacob, A., Itu, L.M., Sasu, L., Moldoveanu, F., Suciu, C., GPU Accelerated Information Retrieval Using Bloom Filters, Proceedings of the 19th International Conference on System Theory, Control and Computing – ICSTCC 2015, Cheile Grădiștei – Fundata, Romania, October 14÷16, 2015, pp. 872÷876, ISBN: 978-1-4799-8481-7 (ISI Proceedings, WOS:000382384100145)
  19. Vizitiu, A., Itu, L., Joyseeree, R., Depeursinge, A., Muller, H., Suciu, C. GPU–Accelerated Texture Analysis Using Steerable Riesz Wavelets, 24th Euromirco International Conference on Parallel, Distributed, and Network-Based Processing – PDP 2016, Heraklion Crete, Greece, February 17-19, 2016, pp. 56-61, ISSN: 2377-5750 (ISI Proceedings, WOS:000381810900066)
  20. Nita, C., Stroia, I., Itu, L.M., Suciu, C., Mihalef, V., Datar, M., Rapaka, S., Sharma, P. GPU accelerated, robust method for voxelization of solid objects, 20th IEEE High Performance Extreme Computing Conference, Waltham, MA, USA, Sept. 13-15, 2016, pp. 50-55, ISBN: 978-1-5090-3526-7 (ISI Proceedings, WOS:000391407100006)
  21. Stroia, I., Itu, L., Niță, C., Lazăr, L., Suciu, C. GPU Accelerated Geometric Multigrid Method: Performance Comparison on Different Architectures, 19th Inter. Conf. on System Theory, Control and Computing - ICSTCC 2015, Sinaia, Romania, October 14-16, 2015, pp. 175-179, ISBN: 978-1-4799-8482-4 (ISI Proceedings, WOS:000382384100030)
  22. Itu, L.M., Suciu, C., Moldoveanu, F., Postelnicu, A., Optimized GPU Based Simulation of the Incompressible Navier-Stokes Equations on a MAC Grid, Proceedings of the 10th IEEE RoEduNet International Conference on Networking in Education and Research – RoEduNet’11, Iași, Romania, June 23÷25, 2011, pp. 82÷85, ISBN: 978-1-4577-1233-3, ISSN: 2068-1038 (IEEE Xplore).
  23. Itu, L.M., Suciu, C., Moldoveanu, F., Postelnicu, A., GPU Optimized Computation of Stencil Based Algorithms, Proceedings of the 10th IEEE RoEduNet International Conference on Networking in Education and Research – RoEduNet’11, Iași, Romania, June 23÷25, 2011, pp. 86÷91, ISBN: 978-1-4577-1233-3, ISSN: 2068-1038 (IEEE Xplore).
  24. Itu, L.M., Suciu, C., Moldoveanu, F., Postelnicu, A., GPU Accelerated Simulation of Elliptic Partial Differential Equations, Proceedings of the 6th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications – IDAACS’11, Prague, Czech Republic, September 15÷17, 2011, pp. 238÷242, ISBN: 978-1-4577-1426-9, DOI: 10.1109/DAACS.2011.6072748 (IEEE Xplore).
  25. Itu, L.M., Suciu, C., Moldoveanu, F., Postelnicu, A., GPU Optimized Computation of the Artificial Compressibility Method, Proceedings of the 15th International Conference on System Theory, Control and Computing – ICSTCC 2011, Sinaia, Romania, October 14÷16, 2011, pp. 282÷287, ISBN: 978-973-621-322-9, ISSN: 2068-0465 (IEEE Xplore).

26. Itu, L.M., Sharma P., Kamen, A., Suciu, C., Postelnicu, A., Moldoveanu, F., GPU Accelerated Simulation of the Human Arterial Circulation, Proceedings of the 13th International Conference on Optimization of Electrical and Electronic Equipment – OPTIM 2012, Braşov, Romania, May 24-26, 2012, pp. 1478-1485, ISSN: 1842-0133 (IEEE Xplore).
27. Mihalef, V., Rapaka, S., Gulsun, M., Scorza, A., Sharma, P., Itu, L. M., Kamen, A., Barker, A., Markl, M., Comaniciu, D., Model Based Estimation of 4D Relative Pressure Map from 4D Flow MR Images, Statistical Atlases and Computational Models of the Heart. Imaging and Modelling Challenges, Lecture Notes in Computer Science, Ed. Springer, Vol. 8330, 2013, pp. 236-243, ISBN 978-3-642-54267-1 (Springerlink).
28. Tache, I. A., Itu, L.M., Niculescu, R. Transit Time Estimations from Coronary Angiograms, Proc. of the 18th Inter. Conf. on System Theory, Control and Computing - ICSTCC 2014, Sinaia, Romania, October 15-17, 2014, pp. 10-15, ISBN: 978-1-4799-4602-0 (IEEE Xplore).
29. Vizitiu, A., Itu, L.M., Lazar, L., Suciu, C. Double precision stencil computations on Kepler GPUs, Proc. of the 18th Inter. Conf. on System Theory, Control and Computing - ICSTCC 2014, Sinaia, Romania, October 15-17, 2014, pp., 25-29, ISBN: 978-1-4799-4602-0 (IEEE Xplore).
30. Calmac, L., Niculescu, R., Badila, E., Weiss, E., Zamfir, D., Penes, D., Itu, L.M., Lazar, L., Carp, M., Itu, A., Suciu, C., Passerini, T., Sharma, S., Georgescu, B., Comaniciu, D., From rest to hyperaemia: initial validation of a data-driven approach for functional assessment of coronary lesions, Proc. of EuroPCR 2016, Paris, France, May 17-20, 2016 (PCR Online).

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