**Tache Irina Andra**
**Conferențiar**
Universitatea POLITEHNICA Bucureşti
Facultatea Automatică și Calculatoare
Departamentul Automatică și Ingineria Sistemelor

# L I S T A
## lucrărilor ştiinţifice în domeniul disciplinelor din postul didactic

### A. Teza de doctorat

Tache I.A., *Estimation of Hemodynamic Parameters of Cardiac and Cerebral Vessels from Angiograms*, 2015, Lucrare de Doctorat în Ingineria Sistemelor, Universitatea Politehnica Bucuresti

### B. Cărţi si capitole în cărţi publicate în ultimii 10 anii

1 Tache I.A., Medical Imagistics of the Vascular Diseases, Horizons in World Cardiovascular Research, Volume 20, Nova Medicine and Health, August 2020, ISBN: 978-1-53618-310-8

2 Tache I.A., Three Dimensional Reconstruction and Hemodynamic Information Extraction from Monoplane Angiography, Patient-specific Hemodynamic Computations: Application to Personalized Diagnosis of Cardiovascular Pathologies, 2017, pp. 153-175, Springer International Publishing, Print ISBN 978-3-319-56852-2, Online ISBN 978-3-319-56853-9, DOI 10.1007/978-3-319-56853-9_6, 153–175 pp

3 Tache, I. A. Olteanu, S. C. (2026). 3D Reconstruction of Cardiovascular Anatomy for Investigating the Etiology of Congenital Heart Disease. In R. Raghavan (Ed.), The Multifactorial Etiology of Congenital Heart Disease: Insights from Teratology, Genetics, and Exposomics, IGI Global Scientific Publishing, pp. 339-374, ISBN: 9798337337357, EISBN13: 9798337337371, https://doi.org/10.4018/979-8-3373-3735-7.ch011

4 Tache, I.A., Popescu, D. (2024). Medical Decision Support System for Lung Damage Classification. In: Balas, V.E., Dzemyda, G., Belciug, S., Kacprzyk, J. (eds) Decision Making and Decision Support in the Information Era. Studies in Systems, Decision and Control, vol 534. Springer, Cham., Print ISSN 2198-4182 pp 119-130

5 Tudoran, C., Dumache, R., Erdoes, G., Voiță-Mekeres, F., Tache, I. A., (2025). Insights in thrombosis and haemostasis: from a biological, clinical and genetic perspective. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-8325-6631-2, 124 p. WOS:001533266100001

6 Tache I.A., Muntean S., Effectiveness evaluation of relaxation techniques for anxious students through heart rate monitoring, Promoting Mindfulness, Flourishing, and Wellness in Higher Education Through the Arts, pp. 1 -25, IGI Global Scientific Publishing, 2026, DOI: 10.4018/979-8-3373-3877-4, ISBN13: 9798337338774, EISBN13: 9798337338798

7 Tache, I.A., Mihăescu, A.G. (2026). Explainable Machine Learning Approaches for Cardiovascular Disease Detection: A Comparative Study on the UCI Heart Disease Dataset. In: Khalifa, N.E.M., Taha, M.H.N. (eds) Next-Gen Healthcare. Springer, Cham. pp 121–148 https://doi.org/10.1007/978-3-032-07267-2_5

8 Tache I.A., Introducere in sistemele medicale inteligente, ed. Politehnica Press, 2023, 222 p. ISBN: 978-606-9608-49-4,

### C. Lucrări indexate ISI/BDI publicate în ultimii 10 anii

1. Patrascu, A., Ion, A., Vislapuu, M., Husebo, B. S., Tache, I. A., Reithe, H., Patrascu, M. Digital phenotyping from heart rate dynamics: Identification of zero-poles models with data-driven evolutionary learning. Computers

in Biology and Medicine, 186, 109596. https://doi.org/10.1016/j.compbiomed.2024.109596 (2025) (Q1 - 6.3)

2. Hatfaludi, CA., Tache, IA., Ciusdel, C.-F., Puiu, A., Stoian, D., Calmac, L., Popa-Fotea, N.-M., Bataila, V., Scafa-Udriste, A., Itu, L. M., Co-registered optical coherence tomography and X-ray angiography for the prediction of fractional flow reserve. Int J Cardiovasc Imaging, WOS:001169635300002 (2024) (Q3 IF – 1.5)
3. Tache, IA., Hatfaludi, CA., Puiu, A., Itu, L. M., Popa-Fotea, N.-M., Calmac, L., Scafa-Udriste, A. Assessment of the functional severity of coronary lesions from optical coherence tomography based on ensembled learning. BioMed Eng OnLine 22, 127, WOS:001125588700001, 2023 (Q2)
4. Nitescu B., Pavel B., Tache I.A., Pop I.A., Balan C.I., Arama S.S., Isac S., Streinu-Cercel A., Daniela T., Daniela P., Arama V., Predictive values of presepsin and c-reactive protein on prognosis in severe burns, Farmacia, 71 (3), pp. 511 - 517, WOS:001025500200008 (2023) Q4
5. Tache, I.A.; Glotsos, D.; Stanciu, S.M. Classification of Pulmonary Damage Stages Caused by COVID-19 Disease from CT Scans via Transfer Learning. Bioengineering 2023, 10, 6, https://doi.org/10.3390/bioengineering10010006, WOS:000914297300001 (Q2 IF 5.046)
6. I. A. Tache, Statistical Evaluation of Velocity Estimations from Temporal Fluoroscopic Angiography, *2022 IEEE 20th International Power Electronics and Motion Control Conference (PEMC)*, Brasov, Romania, 2022, pp. 256-260, ISBN 978-1-6654-9681-0, WOS:001338023800038 (ISI Proceedings)
7. Hatfaludi C-A, Tache I-A, Ciușdel CF, Puiu A, Stoian D, Itu LM, Calmac L, Popa-Fotea N-M, Bataila V, Scafa-Udriste A. Towards a Deep-Learning Approach for Prediction of Fractional Flow Reserve from Optical Coherence Tomography. Applied Sciences; 12(14):6964, 2022, ISSN 2076-3417, WOS:000833844300001 (Q2 IF 2.838)
8. Popa-Fotea, N.-M., Calmac, L., Micheu, M.-M., Cosmin, M., Scarlatescu, A., Zamfir, D., Itu, L. M., Tache, I. A, Stoian, D., Hatfaludi, C.-A., Fossan, F. E., Hellevik, L. R., Weiss, E., Scafa-Udriste, A. A cloud-based platform for clinical decision support in acute coronary syndrome patients: Study methodology. Kardiologia Polska, 80(5), 604–607, WOS:000825201600001, 2022 (Q1 - IF 3.7)
9. Calmac, L.; Popa-Fotea, N.-M.; Bataila, V.; Ploscaru, V.; Turea, A.; Tache, I.A.; Stoian, D.; Itu, L.; Badila, E.; Scafa-Udriste, A.; Dorobantu, M. Importance of Visual Estimation of Coronary Artery Stenoses and Use of Functional Evaluation for Appropriate Guidance of Coronary Revascularization—Multiple Operator Evaluation. Diagnostics 2021, 11, 2241 WOS:000736886700001 (Q2 IF 3.706)
10. Tache, I.A., Estimation of Blood Velocity from Cardiac Angiography, 8th European Medical and Biological Engineering Conference. EMBEC 2020. IFMBE Proceedings, vol 80. pp. 495-501, 2021, Springer, Cham. WOS:001327090600055 (ISI Proceedings)
11. Silviu Stanciu, Tache I.A, Magdalena Gurzun, Alexandru Sorici, Alexandru Croitoru, Dragos Cuzino, Diana L. Tudor, Sorin Lazar, Artificial intelligence in cardiovascular medical imaging, *Romanian Journal of Military Medicine*, Vol. CXXIII, No. 4/2020, ISSN-L1222-5126; eISSN 2501-2312, WOS:000627116100012 (ISI Proceedings)
12. Tache I.A, D. Glotsos, Vessel Segmentation and Stenosis Quantification from Coronary X-ray Angiograms, Medical Imaging and Computer Aided Diagnosis, *Lecture Notes in Electrical Engineering* (LNEE, vol. 633), pp. 27-34, 2020, Print ISBN 978-981-15-5198-7, doi 10.1007/978-981-15-5199-4_4 (ISI Proceedings) WOS:001491669600004
13. Tache I.A, Temporal Pixel Intensity Processing from Fluoroscopic Angiography, E-Health and Bioengineering Conference (EHB), Iasi, Romania, 2019, pp. 1-4, 2019, doi: 10.1109/EHB47216.2019.8970096. WOS:000558648300223 (ISI Proceedings)
14. Tache I.A, M. Dragoicea, E. Apostol and C. Truica, Text Mining of Medical Records, E-Health and Bioengineering Conference (EHB), Iasi, Romania, 2019, pp. 1-4, 2019, doi: 10.1109/EHB47216.2019.8969943. WOS:000558648300075 (ISI Proceedings)
15. Tache I.A, D. Popescu, R. Codreanu, Fractal Matrix and Morphological Analysis of Retinal Vascular Regions, 22nd International Conf on Control Systems and Computer Science, Bucharest, May 2019, pp. 515-520, DOI: 10.1109/CSCS.2019.00094 ISBN:978-1-7281-2331-8, WOS:000491270300087 (ISI Proceedings)
16. Tache I.A., Olteanu S.C., 3D Vessel Modelling and Experimental Platform of Blood Flow, Studies in Informatics and Control, ISSN 1220-1766, vol. 27(4), pp. 453-460, 2018, WOS:000455090400009 (Q3 IF 1.826)
17. Tache I.A, Identification of arteries and veins in cerebral angiography fluoroscopic images, Journal of Physics: Conference Series 931 (1), 012024, 2017, DOI:10.1088/1742-6596/931/1/012024, WOS:000439583000024 (ISI Proceedings)
18. Tache I.A., Vessel Segmentation of Coronary X-ray Angiograms, 20th Int. Conf. on System Theory, Control and Computing, pp. 727-731, Sinaia, Romania, 2016, WOS:000391609900123 (ISI Proceedings)
19. Tache I.A., Contour and Centreline Tracking of Vessels from Angiograms using the Classical Image Processing Techniques, Buletinul Institutului Politehnic din Iaşi, Secţia Automatică şi Calculatoare, Vol. 62 (66), Nr. 3, pp. 51-62, 2016, ISSN 1220-2169 (Dblp)

**D. Lucrări publicate în ultimii 10 anii în reviste şi volume de conferinţe cu referenţi (neindexate)**

**Reviste**

1. Tache, I.A., Review of blood vessels velocity estimations, Annals of Academy of Romanian Scientists - Series on Science and Technology of Information, vol 14 no 1-2, pp. 5-11, ISSN 2066 – 8562, 2021, https://doi.org/10.56082/annalsarsciinfo.2021.1-2.5
2. R. R. Bond, K. Rjoob, D. Finlay, V. McGilligan, S J Leslie, C Knoery, A Iftikhar, A McShane, I.A. Tache, P. Biglarbeigi, M. Manktelow, A. Peace, Near future artificial intelligence in interventional cardiology: new opportunities and challenges to improve the care of STEMI patients, *European Heart Journal Digital Health (Virtual Journal)*, 2020
3. Pavel B., Corbu M., Tache I.A., New Theories on the Anesthetics Mechanism of Action, Archives of Emergency Medicine and Intensive Care, Volume 1 Issue 2, 2018, ISSN: 2638-5007
4. Adrian POPESCU, George ENCIU, Emilia POPESCU, Tache I.A., Architecture of the RFID systems used in production systems, Proceedings in Manufacturing Systems, Volume 12, Issue 4, 2017, pp. 161- 167**,** 2015, ISSN 1223-2076 Printed version, e-ISSN 2247-2061, Bucharest, Romania

**E. Brevete obţinute în întreaga activitate**

-

**Data: 21.01.2026** **Semnătura:**