a. 10 most important publications

1. Nașcu, I., Diangelakis, N. A., Muñoz, S. G. and Pistikopoulos, E. N. (2023) 'Advanced model predictive control strategies for evaporation processes in the pharmaceutical industries', Computers & Chemical Engineering, 173, 108212.
2. Nașcu, Ioana, Daniel Sebastia-Saez, Tao Chen, Ioan Nascu, and Wenli Du. 2022. Global Sensitivity Analysis for a Perfusion Bioreactor based on CFD Modelling, Computers \& Chemical Engineering, Volume 163, July 2022, https://doi.org/10.1016/j.compchemeng.2022.107829
3. Nașcu, I., Oberdieck, R., & Pistikopoulos, E. N. (2017). Explicit hybrid model predictive control strategies for intravenous anaesthesia. Special issue of Computers and Chemical Engineering, vol. 106, pp. 814-825. doi:10.1016/j.compchemeng.2017.01.033
4. Nașcu, I., & Pistikopoulos, E. N. (2017). Modeling, estimation and control of the anaesthesia process. Special issue in Computers and Chemical Engineering in honor of Prof. Rafiq Gani, vol. 107, pp. 318-332. doi:10.1016/j.compchemeng.2017.02.016
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6. Nascu, I., A. Krieger, C. M. Ionescu and E. N. Pistikopoulos (2015). "Advanced Model-Based Control Studies for the Induction and Maintenance of Intravenous Anaesthesia." IEEE Transactions on Biomedical Engineering, vol. 62(3):pp. 832-841
7. Pistikopoulos, E. N., N. A. Diangelakis, R. Oberdieck, M. M. Papathanasiou, I. Nascu and M. Sun (2015). "PAROC-An integrated framework and software platform for the optimisation and advanced model-based control of process systems." Chemical Engineering Science., vol. 136, pp. 115-138
8. Oberdieck, R.; Diangelakis, N. A.; Papathanasiou, M. M.; Nascu, I.; Pistikopoulos, E. N. "POP - Parametric Optimization Toolbox". Industrial \& Engineering Chemistry Research 2016, vol. 55 (33), pp. 8979-8991.
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10. Harja, G., I. Nascu, C. Muresan and I. Nascu (2016). "Improvements in Dissolved Oxygen Control of an Activated Sludge Wastewater Treatment Process." Circuits, Systems and Signal Processing vol. 35(6): pp. 2259-2281

b. PhD Thesis

Imperial College London, London, UK
Department of Chemical Engineering Centre of Process System Engineering
PhD in Chemical Engineering
PhD Thesis Title: "Advanced Multiparametric Optimization and Control Studies for Anaesthesia"

PhD Thesis Advisor: Prof. Stratos Pistikopoulos

d. Books and book chapters:

1. Pistikopoulos, E. N., I. Nascu and E. Velliou (2018). Modelling Optimization and Control of Biomedical Systems, John Wiley & Sons Ltd.
2. E. Velliou, I. Nascu, Stamatina Zavitsanou, Eleni Pefani, Alexandra Krieger, Michael C. Georgiadis, and Efstratios N. Pistikopoulos, Framework and Tools: A Framework for Modelling, Optimization and Control of Biomedical Systems, 2017, pp. 1-11, DOI:10.1002/9781118965580.ch1, John Wiley & Sons Ltd.
3. Naşcu, I., Oberdieck, R., Lambert, R., Rivotti, P. and Pistikopoulos, E.N., Computational Tools and Methods. In Modelling Optimization and Control of Biomedical Systems (eds E.N. Pistikopoulos, I. Naşcu and E.G. Velliou). https://doi.org/10.1002/9781118965580.ch2, John Wiley & Sons Ltd.
4. A. Krieger, I. Naşcu, N. Panoskaltsis, A. Mantalaris, M. C. Georgiadis, and E. N. Pistikopoulos, Volatile Anaesthesia," in Modelling Optimization and Control of Biomedical Systems, 2017, pp. 67-102, DOI:10.1002/9781118965580.ch3, John Wiley & Sons Ltd.
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6. Papathanasiou, M. M., M. Onel, I. Nascu and E. N. Pistikopoulos, Computational tools in the assistance of personalized healthcare. Quantitative Systems Pharmacology. ISBN 978-0444639646. DOI 10.1016/b978-0-444-63964-6.00006-4, Elsevier
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8. Ruben Cris, an, Ioana Nas, cu, Continuous process control systems (in Roumanian) , U.T. PRESS, Cluj Napoca, 2013, ISBN 978-973-662-794-1
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e. Full Journal Publications:

1. Nascu, Ioana, N. A. Diangelakis, Yan-Shu Huang and Zoltan K. Nagy. 2032. 'Advanced Optimisation and Control Strategies for a Rotary Tablet Press in Pharmaceutical Industry', Computers and Chemical Engineering, draft
2. Naşcu, I., Diangelakis, N. A., Muñoz, S. G. and Pistikopoulos, E. N. (2023) 'Advanced model predictive control strategies for evaporation processes in the pharmaceutical industries', Computers & Chemical Engineering, 173, 108212.
3. Naşcu, Ioana, Daniel Sebastia-Saez, Tao Chen, Ioan Nascu, and Wenli Du. 2022. Global Sensitivity Analysis for a Perfusion Bioreactor based on CFD Modelling,

Computers \& Chemical Engineering, Volume 163, July 2022, https://doi.org/10.1016/j.compchemeng.2022.107829

4. Ghita, Mihaela, Isabela Birs, Dana Copot, Ioana Nascu, and Clara-Mihaela Ionescu. 2022. 'Impedance Spectroscopy Sensing Material Properties for Self-Tuning Ratio Control in Pharmaceutical Industry', Applied Sciences, 12: 509.
5. Jinquan Zheng , Wenli Du , Ioana Nascu , Yuanming Zhu , Weimin Zhong. “An interval type-2 fuzzy controller based on data driven parameters extraction for cement calciner process”, Institute of Electrical and Electronics Engineers (IEEE), 2020, doi: 10.1109/ACCESS.2020.2983476
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7. Nașcu, I., Oberdieck, R., & Pistikopoulos, E. N. (2017). Explicit hybrid model predictive control strategies for intravenous anaesthesia. Special issue of Computers and Chemical Engineering, vol. 106, pp. 814-825. doi:10.1016/j.compchemeng.2017.01.033
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12. Oberdieck, R.; Diangelakis, N. A.; Papathanasiou, M. M.; Nascu, I.; Pistikopoulos, E. N. “POP - Parametric Optimization Toolbox”. Industrial \& Engineering Chemistry Research 2016, vol. 55 (33), pp. 8979-8991.
13. Oberdieck, R., N. A. Diangelakis, I. Nascu, M. M. Papathanasiou, M. Sun, S. Avraamidou and E. N. Pistikopoulos (2016). "On multi-parametric programming and its applications in process systems engineering." Chemical Engineering Research and Design vol. 116: pp. 61-82.
14. Harja, G., I. Nascu, C. Muresan and I. Nascu (2016). "Improvements in Dissolved Oxygen Control of an Activated Sludge Wastewater Treatment Process." Circuits, Systems and Signal Processing vol. 35(6): pp. 2259-2281
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f. Conference Publications:

1. Nascu, Ioana, N. A. Diangelakis, Yan-Shu Huang and Zoltan K. Nagy. 2023. 'Multiparametric Model Predictive Control Strategies for a Rotary Tablet Press in Pharmaceutical Industry', 33nd European Symposium on Computer Aided Process Engineering; Computer Aided Chemical Engineering.

2. Nașcu, I., Du, W. and Ioan, N. (2022) 'An Auto-tuning method for aeration control in activated sludge wastewater treatment processes', in IEEE 2022 International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME 2022), Male, 16-18 nov.2022,

3. Nascu, Ioana, N. A. Diangelakis, and E. Pistikopoulos. 2022. 'Multiparametric Model Predictive Control Strategies for Evaporation Processes in Pharmaceutical Industries', 32nd European Symposium on Computer Aided Process Engineering; Elsevier, 2016;, Computer Aided Chemical Engineering.

4. Nascu, Ioana, Ioan Nascu, and W. Du. 2022. 'Optimization and Control of a Perfusion Bioreactor System in Tissue Engineering', Proceedings of 2022 IEEE-TTTC International Conference on Automation, Quality and Testing, Robotics, AQTR, in press.

5. Nascu, Ioana, Tao Chen, and Wenli Du. 2021. 'Global Sensitivity Analysis for a perfusion bioreactor system in tissue engineering', IFAC-PapersOnLine, 54: 550-55

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7. Nascu, I., D. Sebastia-Saez, T. Chen, and W. Du. 2021. "A combined computational-fluid-dynamics model and control strategies for perfusion bioreactor systems in tissue engineering." In IFAC-PapersOnLine, 324-29

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20. Nascu, I.; Oberdieck, R.; Pistikopoulos, E. N. "An explicit Hybrid Model Predictive Control Strategy for Intravenous Anaesthesia". 9th IFAC Symposium on Biological and Medical Systems (BMS); 2015;, IFAC-PapersOnLine vol. 48 pp 58-63.

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24. Nascu, I.; Lambert, R. S. C.; Pistikopoulos, E. N. "A combined estimation and multi-parametric model predictive control approach for intravenous anaesthesia". IEEE International Conference on Systems, Man and Cybernetics; 2014; pp 2458-2463.

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27. Nașcu, I., R. De Keyser, I. Nașcu and T. Buzdugan (2010). Modeling and simulation of a level control system. 2010 IEEE International Conference on Automation, Quality and Testing, Robotics, AQTR 2010 – Proceedings, , vol.1, pp:181-186, ISBN 978-1-4244-6722-8, IEEEXplore DOI: 10.1109/AQTR.2010.5520894

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29. Ioan Nașcu, Robin De Keyser, Grigore Vlad, Ioana Nascu, Modelling and Control Aspects of Wastewater Treatment Processes, Ecoterra, nr.18, year V, September 2008, Pag.27, ISSN:154- 7071

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Conference on Automation, Quality and Testing, Robotics (AQTR) Pp: 1 - 6, DOI: 10.1109/AQTR.2016.7501327

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33. Papathanasiou, M. M.; Steinebach, F.; Stroehlein, G.; Müller-Späth, T.; Nascu, I.; Oberdieck, R.; Morbidelli, M.; Mantalaris, A.; Pistikopoulos, E. N. A control strategy for periodic systems - application to the twin-column MCSGP. 12th International Symposium on Process Systems Engineering and 25th European Symposium on Computer Aided Process Engineering; Elsevier, 2015;, Computer Aided Chemical Engineering 37 pp 1505-1510.

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g. Oral Presentations:

1. Nașcu, I., Sebastia-Saez, D, Chen, T. and Du, W., A Combined Computational-Fluid-Dynamics Model and Advanced Control Strategies for Direct Perfusion Bioreactor Systems, AIChE 2020, Virtual AIChE Annual Meeting, Oral presentation

2. Nașcu, I., N. A. Diangelakis, S. Garcia-Munoz and E.N. Pistikopoulos, Advanced, Material-Aware Model Predictive Control Strategies for Evaporation Processes in the Pharmaceutical Industries, AIChE 2018, Pittsburgh, USA, Oral presentation

3. Nașcu, I., R. Oberdieck, and E.N. Pistikopoulos, A Robust Hybrid Model Predictive Control Framework for Hill curve Model Based Systems, AIChE 2016, San Francisco, USA, Oral presentation

4. Nașcu, I., R. Oberdieck, and E.N. Pistikopoulos, A framework for State Estimation and Robust Hybrid Multi-Parametric Model Predictive Control in Anaesthesia, AIChE 2015, Salt Lake City, USA, Oral presentation

5. Nașcu, I., Romain S. C. Lambert, Efstratios N. Pistikopoulos, A framework for Model Reduction, State Estimation and Multi-Parametric Model Predictive Control in Anaesthesia, AIChE 2014, Atlanta, USA,