

Zoznam uchádzačových pôvodných publikovaných vedeckých prác

1. Knihy / Monografie

1 x AAA

Paulen, R. [50%] – Fikar, M. [50%]. Optimal Operation of Batch Membrane Processes, 978-3-319-20475-8, Springer, 2016

2. Článok v časopise

30 x ADC

1. Maidi, A. [70%] – **Paulen, R. [15%]** – Corriou, J. [15%]: Zeroing Dynamics-Based Stabilizing Controller Design of Diffusion-Reaction Systems. *International Journal of Robust and Nonlinear Control*, vol. 36, pp. 572–584, 2026. Impact Factor: 3.20
2. Wadinger, M. [50%] – Fáber, R. [20%] – Pavlovičová, E. [20%] – **Paulen, R. [10%]**: Carbon neutral greenhouse: Economic model predictive control framework for education. *European Journal of Control*, vol. 83, pp. 101297, 2025. Impact Factor: 2.97
3. Ahmad, A. [55%] – **Paulen, R. [20%]** – Valo, R. [5%] – Fikar, M. [10%] – Engell, S. [10%]: Iterative real-time optimization of a membrane pilot plant. *Control Engineering Practice*, vol. 147, pp. 105907, 2024. Impact Factor: 4.6
4. Maidi, A. [70%] – **Paulen, R. [15%]** – Corriou, J. [15%]: Velocity control design of hyperbolic distributed parameter systems using zeroing dynamics and zeroing-gradient dynamics methods. *Journal of Process Control*, vol. 138, pp. 103210, 2024. Impact Factor: 3.9
5. Mojto, M. [40%] – Ľubušký, K. [10%] – Fikar, M. [10%] – **Paulen, R. [40%]**: Data-Based Design of Multi-Model Inferential Sensors. *Computers & Chemical Engineering*, vol. 178, 2023. Impact Factor: 4.0
6. Subramanian, S. [40%] – Lucia, S. [30%] – **Paulen, R. [20%]** – Engell, S. [10%]: Tube-enhanced multi-stage model predictive control for flexible robust control of constrained linear systems with additive and parametric uncertainties. *International Journal of Robust and Nonlinear Control*, no. 9, vol. 31, pp. 4458–4487, 2021. Impact Factor: 3.20
7. Mojto, M. [40%] – Ľubušký, K. [10%] – Fikar, M. [20%] – **Paulen, R. [30%]**: Data-based design of inferential sensors for petrochemical industry. *Computers & Chemical Engineering*, vol. 153, pp. 107437, 2021. Impact Factor: 4.0
8. Gottu Mukkula, A. R. [20%] – Mateáš, M. [5%] – Fikar, M. [5%] – **Paulen, R. [70%]**: Robust multi-stage model-based design of optimal experiments for nonlinear estimation. *Computers & Chemical Engineering*, vol. 155, pp. 107499, 2021. Impact Factor: 4.0
9. Kusumo, K. [30%] – Gomoescu, L. [25%] – **Paulen, R. [15%]** – García Muñoz, S. [5%] – Pantelides, C. C. [5%] – Shah, N. [5%] – Chachuat, B. [15%]: Bayesian Approach to Probabilistic Design Space Characterization: A Nested Sampling Strategy. *Industrial & Engineering Chemistry Research*, no. 6, vol. 59, pp. 2396–2408, 2020. Impact Factor: 3.9
10. Thangavel, S. [75%] – **Paulen, R. [15%]** – Engell, S. [10%]: Robust Multi-Stage Nonlinear Model Predictive Control Using Sigma Points. *Processes*, no. 7, vol. 8, pp. 0851, 2020. Impact Factor: 3.5
11. Sharma, A. [60%] – Valo, R. [5%] – Kalúz, M. [5%] – **Paulen, R. [10%]** – Fikar, M. [20%]: Implementation of optimal strategy to economically improve batch membrane separation. *Journal of Process Control*, vol. 76, pp. 155–164, 2019. Impact Factor: 3.9
12. **Paulen, R. [95%]** – Fikar, M. [5%]: Dynamic real-time optimization of batch processes using Pontryagin's minimum principle and set-membership adaptation. *Computers & Chemical Engineering*, vol. 128, pp. 488–495, 2019. Impact Factor: 4.0
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16. Thangavel, S. [30%] – Lucia, S. [30%] – **Paulen, R. [30%]** – Engell, S. [10%]: Dual robust nonlinear model predictive control: A multi-stage approach. *Journal of Process Control*, vol. 72, pp. 39–51, 2018. Impact Factor: 3.9
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2. Tran, T. B. L. [60%] – Törngren, M. [10%] – Nguyen, H. D. [5%] – **Paulen, R. [10%]** – Gleason, N. W. [10%] – Duong, T. H. [5%]: Trends in preparing cyber-physical systems engineers. Cyber-Physical Systems, no. 2, vol. 5, pp. 65–91, 2019.

3. Článok zo zborníka a monografie

67 x AFC

1. Fáber, R. [50%] – Vaccari, M. [8%] – Bacci di Capaci, R. [8%] – Ľubušký, K. [2%] – Pannocchia, G. [8%] – **Paulen, R. [24%]**: Soft-Sensor-Enhanced Monitoring of an Alkylation Unit via Multi-Fidelity Model Correction. V Systems and Control Transactions, vol. 4, pp. 1389–1395, 2025.
2. Fáber, R. [50%] – Mojto, M. [5%] – Ľubušký, K. [5%] – **Paulen, R. [40%]**: From Data to Alarms: Data-driven Anomaly Detection Techniques in Industrial Settings. Editor(i): Flavio Manenti, G.V. Rex Reklaitis, V 34th European Symposium on Computer Aided Process Engineering /15th International Symposium on Process Systems Engineering, vol. 53, pp. 2857–2862, 2024.
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4. Ružička, M. [35%] – Helgeland, I. [5%] – **Paulen, R. [60%]**: Modelling and Simulation of a Forward Osmosis Process. Editor(i): Flavio Manenti, G.V. Rex Reklaitis, V 34th European Symposium on Computer Aided Process Engineering /15th International Symposium on Process Systems Engineering, vol. 53, pp. 319–324, 2024.
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6. Mojto, M. [45%] – Ľubušký, K. [5%] – Fikar, M. [10%] – **Paulen, R. [40%]**: Design of Multi-Model Linear Inferential Sensors with SVM-based Switching Logic. V IFAC World Congress 2023, Yokohama, Japan, pp. 2545–2550, 2023.
7. Valero, C. E. [50%] – **Paulen, R. [50%]**: Zonotope Order Reduction in Robust Estimation. V 23rd International Carpathian Control Conference, IEEE, vol. 23, pp. 392–397, 2022.
8. Gottu Mukkula, A. R. [40%] – **Paulen, R. [60%]**: Robust Design of Optimal Experiments Considering Consecutive Re-Designs. Editor(i): Luis Ricardez-Sandoval, Jesus Pico, V 13th IFAC Symposium on Dynamics and Control of Process Systems, including Biosystems, IFAC, pp. 14–19, 2022.
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11. Mojto, M. [40%] – Ľubušký, K. [10%] – Fikar, M. [20%] – **Paulen, R. [30%]**: Data-based Industrial Soft-sensor Design via Optimal Subset Selection. Editor(i): Metin Türkay, Rafiqul Gani, V 31st European Symposium on Computer Aided Process Engineering, Elsevier, vol. 31, pp. 1247–1252, 2021.
12. Valiauga, P. [25%] – Feng, X. [25%] – Villanueva, M. [20%] – **Paulen, R. [20%]** – Houska, B. [10%]: Set-membership Estimation using Ellipsoidal Ensembles. Editor(i): Jong Min Lee, V 16th IFAC Symposium on Advanced Control of Chemical Processes ADCHEM 2021, Elsevier, pp. 596–601, 2021.

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V Bratislave, dňa 31. 1. 2026

prof. Ing. Miroslav Fikar, DrSc.

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meno a podpis riaditeľa ústavu

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podpis uchádzača

prof. Ing. Milan Polakovič, CSc.

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