



## **Ing. Marek Kliment, PhD.**

Researcher  
Secretary of the department  
*contact*

Technical University of Kosice  
Faculty of Mechanical Engineering  
Institute of Industrial Engineering,  
Management and Environmental  
Engineering,  
Department of Industrial and Digital  
Engineering  
Park Komenskeho 9, 042 00 Kosice,  
Slovakia

**tel:** + 421 55 602 32 43

**email:** marek.kliment@tuke.sk

### ***CURRICULUM***

2007-2012: Ing. Technical University in Košice, Faculty of Mechanical Engineering

2012-2015: PhD, in the field of industrial engineering

2015-2016: Manager of research and development projects, Slovak Legal Metrology

2016-2017: Technologist, Slovomag Lubeník

2017-2019: Production manager, Halmat s. r. o.

2019- : Researcher

### ***LANGUAGE SKILLS***

English language, German language

### ***SCIENTIFIC ACTIVITIES***

- Implementation of PLM software solutions in experimental modeling of production systems
- Digitization
- Industrial engineering
- Digital engineering
- Digital enterprise
- Virtual and mixed reality

## ***PEDAGOGICAL ACTIVITIES***

- Digitization and virtualization of production
- Semester project
- Diploma project
- Laboratory training
- Teamwork
- Digital enterprise

## ***PROJECTS***

- 1 APVV-17-0258 Application of elements of digital engineering in innovation and optimization of production flows (co-investigator)
- 2 VEGA 1/0708/16 Development of new research methods for the purpose of simulation, assessment, evaluation and quantification of advanced production methods. (co-investigator)
- 3 KEGA 030TUCE - 4/2017 Implementation of innovative tools for improving the quality of higher education in the field of study 5.2.52 Industrial Engineering (co-investigator)
- 4 VEGA 1/0438/20 Interaction of digital technologies to support the software and hardware communication platform of an advanced manufacturing system (co-investigator)
- 5 KEGA 001TUCE-4/2020 Modernization of the teaching of industrial engineering to develop the skills of the existing educational program in specialized laboratory (co-investigator)
- 6 APVV-19-0418 Intelligent solutions to increase the innovative capacity of companies in the process of their transformation into intelligent companies (co-investigator)
- 7 VEGA 1/0508/22 Innovative and digital technologies in production and logistics processes and systems (co-investigator)
- 8 KEGA 020TUCE-4/2023 "Systematic development of the competence profile of industrial and digital engineering students in the process of higher education" (Deputy Project Leader)

## ***FOREIGN STAYS***

- University of West Bohemia in Pilsen, Faculty of Mechanical Engineering, Department of Industrial Engineering and Management

## ***MEMBERSHIPS, AWARDS***

- Member of the Editorial Board of the journal Transfer of Innovations

***NUMBER OF PUBLICATIONS: more than 140***

## **NUMBER OF CITATIONS: more than 300**

### **SELECTED PUBLICATION**

- Case Study: 3D Modelling and Printing of a Plastic Respirator in Laboratory Conditions / Miriam Pekarčíková ... [et al.] Spôsob prístupu: <https://doi.org/10.3390/app12010096...> - 2022. In: Applied sciences. - Bazilej (Švajčiarsko) : Multidisciplinary Digital Publishing Institute Roč. 12, č. 1 (2022), s. [1-15] [online]. - ISSN 2076-3417 (online) [PEKARČÍKOVÁ, Miriam - TREBUŇA, Peter - KLIMENT, Marek - KRAL, Štefan]
- Milk run testing through tecnomatix plant simulation software / Miriam Pekarčíková ... [et al.] Spôsob prístupu: <https://doi.org/10.2507/IJSIMM21-1-593...> - 2022. In: International Journal of Simulation Modelling = IJSIMM. - Wolkersdorf im Weinviertel (Rakúsko) : DAAAM International Vienna Roč. 21, č. 1 (2022), s. 101-112 [print]. - ISSN 1726-4529 [PEKARČÍKOVÁ, Miriam - TREBUŇA, Peter - KLIMENT, Marek - SCHMACHER ABDULLAH KARL, Benjamin]
- Solution of Bottlenecks in the Logistics Flow by Applying the Kanban Module in the Tecnomatix Plant Simulation Software / Miriam Pekarčíková ... [et al.] Spôsob prístupu: <https://doi.org/10.3390/su13147989...> - 2021. In: Sustainability. - Bazilej (Švajčiarsko) : Multidisciplinary Digital Publishing Institute Roč. 13, č. 14 (2021), s. [1-21] [online]. - ISSN 2071-1050 (online) [PEKARČÍKOVÁ, Miriam - TREBUŇA, Peter - KLIMENT, Marek - DIC, Michal]
- Application of testbed 4.0 technology within the implementation of industry 4.0 in teaching methods of industrial engineering as well as industrial practice / Marek Kliment ... [et al.] Spôsob prístupu: <https://doi.org/10.3390/su13168963...> - 2021. In: Sustainability. - Bazilej (Švajčiarsko) : Multidisciplinary Digital Publishing Institute Roč. 13, č. 16 (2021), s. [1-16] [online]. - ISSN 2071-1050 (online) [KLIMENT, Marek - PEKARČÍKOVÁ, Miriam - TREBUŇA, Peter - TREBUŇA, Martin]
- Legal Metrology and its Development in the Field of Calibration and Verification of Fuel Dispensers and their Application in the Mining Industry / Peter Trebuňa ... [et al.] Spôsob prístupu: <https://doi.org/10.21496/ams.2020.023...> - 2021. In: Acta Mechanica Slovaca : journal published by Faculty of Mechanical Engineering, the Technical University in Košice. - Košice (Slovensko) : Strojnícka fakulta Roč. 25, č. 1 (2021), s. 20-27 [print]. - ISSN 1335-2393 [TREBUŇA, Peter - KRAL, Štefan - ŠVANTNER, Tomáš - KLIMENT, Marek - ROSOCHA, Ladislav]
- Reduction of the Gaseous Emissions in the Marine Diesel Engine Using Biodiesel Mixtures / Michal Puškár ... [et al.] Spôsob prístupu: <https://doi.org/10.3390/jmse8050330...> - 2020. In: Journal of Marine Science and Engineering. - Basel (Švajčiarsko) : Multidisciplinary Digital Publishing Institute Roč. 8, č. 5 (2020), s. [1-11] . - ISSN 2077-1312 [PUŠKÁR, Michal - KOPAS, Melichar - SABADKA, Dušan - KLIMENT, Marek - ŠOLTÉSOVÁ, Marieta]
- roduction efficiency evaluation and products' quality improvement using simulation / Marek Kliment ... [et al.] Spôsob prístupu: <https://doi.org/10.2507/IJSIMM19-3-528...> - 2020. In: International Journal of Simulation Modelling = IJSIMM. - Wolkersdorf im Weinviertel (Rakúsko) : DAAAM International Vienna Roč. 19, č. 3 (2020), s. 470-481 [print]. - ISSN 1726-4529 [KLIMENT, Marek - TREBUŇA, Peter - PEKARČÍKOVÁ, Miriam - STRAKA, Martin - TROJAN, Jozef - DUDA, Richard]
- Material flow optimization through e-kanban system simulation / Miriam Pekarčíková ... [et al.] Spôsob prístupu: <https://doi.org/10.2507/IJSIMM19-2-513...> - 2020. In: International Journal of Simulation Modelling = IJSIMM. - Wolkersdorf im Weinviertel

(Rakúsko) : DAAAM International Vienna Roč. 19, č. 2 (2020), s. 243-254 [print]. - ISSN 1726-4529 [PEKARČÍKOVÁ, Miriam - TREBUŇA, Peter - KLIMENT, Marek - ROSOCHA, Ladislav]

- Modelovanie v priemyselnom inžinierstve / Peter Trebuňa ... [et al.] - 1. vyd. - Košice : TU - 2015. - 195 s.. - ISBN 978-80-553-1953-7. [TREBUŇA, Peter - MARKOVIČ, Jaromír - KLIMENT, Marek - HALČINOVÁ, Jana]
- Computer simulation as means of urban traffic elements design / Martin Straka ... [et al.] - 2015. In: Theoretical and Empirical Researches in Urban Management. Vol. 10, no. 4 (2015), p. 40-53. - ISSN 2065-3913 Spôsob prístupu: <http://www.um.ase.ro/no104/3.pdf>...[STRAKA, Martin - TREBUŇA, Peter - STRAKOVÁ, Dominika - KLIMENT, Marek]
- Optimization and Elimination of Bottlenecks in the Production Process of a Selected Company / Peter Trebuňa, Marek Kliment, Milan Fil'o - 2014. In: Applied Mechanics and Materials : Applied Mechanics and Mechatronics. - Switzerland : TTP, 2014 Vol. 611 (2014), p. 370-375. - ISBN 978-3-03835-189-4 - ISSN 1660-9336 [TREBUŇA, Peter - KLIMENT, Marek - FILO, Milan]
- Basics of model creation in simulation program Extend / Miriam Pekarčíková ... [et al.] - 2015. In: Applied Mechanics and Materials volume 816 : Applied Mechanics and Mechatronics 2. - Zurich : TTP, 2015 P. 369-374. - ISBN 978-3-03835-602-8 - ISSN 1660-9336 [PEKARČÍKOVÁ, Miriam - TREBUŇA, Peter - KLIMENT, Marek - POPOVIČ, Radko - MARKOVIČ, Jaromír]
- Material flow optimization through modelling and simulation in the software tool Tx Plant Simulation / Peter Trebuňa ... [et al.] - 2016. In: Acta Simulatio. Roč. 2, č. 2 (2016), s. 1-10. - ISSN 1339-9640 Spôsob prístupu: [http://www.actasimulatio.eu/issues/2016/II\\_2016\\_01\\_Trebuna\\_Pekarcikova\\_Petrikova\\_Popovic\\_Kliment.pdf](http://www.actasimulatio.eu/issues/2016/II_2016_01_Trebuna_Pekarcikova_Petrikova_Popovic_Kliment.pdf)... [TREBUŇA, Peter - PEKARČÍKOVÁ, Miriam - PETRIKOVÁ, Andrea - POPOVIČ, Radko - KLIMENT, Marek]
- PLM systems and Tecnomatix Plant Simulation, a description of the environment, control elements, creation simulations and models / Milan Fil'o ... [et al.] - 2013. In: American Journal of Mechanical Engineering. Vol. 1, no. 7 (2013), p. 165-168. - ISSN 2328-4102 [FILO, Milan - MARKOVIČ, Jaromír - KLIMENT, Marek - TREBUŇA, Peter]
- PLM systems, their history and application today in business process modeling / Peter Trebuňa ... [et al.] - 2013. In: Mechanics : Scientific researches and methodical development. No. 7 (2013), p. 129-133. - ISSN 2227-1104 [TREBUŇA, Peter - KLIMENT, Marek - FILO, Milan - MARKOVIČ, Jaromír - HALČINOVÁ, Jana]