



Melánia Puskás

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EDUCATION

Óbuda University | Budapest

(2023 – Present)

Doctoral School of Applied Informatics and Applied Mathematics

Óbuda University | Budapest

(2021 – 2023)

Master's degree – Computer Science Engineering, specializing in Cyber Medical Systems

Óbuda University | Budapest

(2016 – 2021)

Bachelor's degree – Computer Science Engineering, specializing in IoT, embedded systems and robotics



EXPERIENCE

Óbuda University | Researcher and teaching assistant

2020-Present

- Participation in research projects.
- MATLAB programming.
- Writing documentation and publications.
- Teaching assistant: lecture note writing, managing exams, instructor of control systems and technology subjects.
- PhD student from 2023
 - Doctoral topic title: Parameter estimation of physiological systems and simulator development.
 - Continuation of the teaching work done during BSc and MSc studies as a PhD student.
 - Co-consultation and preparation of two BSc and one MSc students for Scientific Student Conferences.

Logiscool | Instructor

2019-2022

- Teaching programming for elementary schoolers.

Enteos Kft. | Irodai adminisztrátor

2018 – 2020

- Administration of invoice data in German and translation into Hungarian.



MEMBERSHIP

2020-Present:

- Member of the IEEE (membership number: 97222406)
- IEEE Control Systems Society
- IEEE Robotics and Automation Society
- IEEE Systems, Man, and Cybernetics Society
- IEEE Women in Engineering



AWARDS

2023.

- IEEE HS Student Paper Contest MSc Studies - 2nd place
- National Students' Scientific Association Conference (Technical Science Section, Faculty of Health Science) - 1st place
- Scholarship of the New National Excellence Program of Ministry for Innovation and Technology

2022.

- IEEE HS Student Paper Contest MSc Studies - 1st place
- Excellence Award of John von Neumann Faculty of Informatics
- Students' Scientific Association Conference Faculty of Informatics - 2nd place
- National Gradual Studies Scholarship
- Óbuda University Scholarship
- Scholarship of the New National Excellence Program of Ministry for Innovation and Technology
- Youth Award in Soft Computing Youth Award in Soft Computing (Issued by Hungarian Fuzzy Association)
- Students' Scientific Association Conference Faculty of Informatics - 1st place

2021.

- IEEE HS Student Paper Contest BSc Studies - 1st place
- National Students' Scientific Association Conference (Technical Science Section, Faculty of Medical Informatics) - 1st place
- Students' Scientific Association Conference Faculty of Informatics - 1st place
- Excellence Award of John von Neumann Faculty of Informatics
- „Pro Scientia et Futuro” Scholarship
- Scholarship of the New National Excellence Program of Ministry for Innovation and Technology

- Óbuda University Scholarship
- Scholarship of the Carpathian Talent Research Foundation
- National Gradual Studies Scholarship

2020.

- Students' Scientific Association Conference Faculty of Informatics - 2nd place (2x)
- Students' Scientific Association Conference Faculty of Informatics - 3rd place
- Óbuda University Scholarship

2019.

- Students' Scientific Association Conference Faculty of Informatics - 1st place



PUBLICATION LIST

- **Melánia Puskás** and Dániel András Drexler: Parameter identification of a tumor model using artificial neural networks. *In Proceedings of the 19th IEEE World Symposium on Applied Machine Intelligence and Informatics (SAMI 2021)*, 2021, Budapest, Magyarország : IEEE Hungary Section (2021) 507 p. pp. 000443-000448. , 6 p.
- **Melánia Puskás** and Dániel András Drexler: Tumor model parameter estimation for therapy optimization using artificial neural networks, *In Proceedings of the 2021 IEEE International Conference on Systems, Man, and Cybernetics (IEEE SMC 2021)*, 2021, Melbourne, Ausztrália : IEEE (2021) pp. 1254-1259. , 6 p.
- Erzsébet Nagy, **Melánia Puskás** and Dániel András Drexler: Comparison of artificial neural network and ANFIS for parameter estimation of a tumor model, *In Proceedings of the 20th IEEE World Symposium on Applied Machine Intelligence and Informatics (SAMI 2022)*, 2022, Poprad, Szlovákia : IEEE (2022) 507 p. pp. 133-139. , 7 p.
- **Melánia Puskás**, Borbála Gergics, Alexander Ládi and Dániel András Drexler: Parameter estimation from realistic experiment scenario using artificial neural networks, *In Proceedings of the the IEEE 16th International Symposium on Applied Computational Intelligence and Informatics (SACI 2022)*, 2022, Temesvár, Románia: IEEE (2022) pp. 161-168. , 8 p.
- Lilla Kisbenedek, **Melánia Puskás**, Levente Kovács and Dániel Aandrás Drexler, "Indirect supervised fine-tuning of a tumor model parameter estimator neural network," *2023 IEEE 17th International Symposium on Applied Computational Intelligence and Informatics (SACI)*, Timisoara, Romania, 2023, pp. 109-116
- Martin Ferenc Dömény, **Melánia Puskás**, Levente Kovács and Dániel András Drexler, "In silico chemotherapy optimization with genetic algorithm," *2023 IEEE 17th International Symposium on Applied Computational Intelligence and Informatics (SACI)*, Timisoara, Romania, 2023, pp. 97-102

- Tamás Dániel Szűcs, **Melánia Puskás**, Dániel András Drexler and Levente Kovács, "Model predictive fuzzy control in chemotherapy optimization," *2023 IEEE 17th International Symposium on Applied Computational Intelligence and Informatics (SACI)*, Timisoara, Romania, 2023, pp. 103-108
- **Melánia Puskás**, Borbála Gergics, Balázs Gombos, András Füredi, Gergely Szakács, Levente Kovács, Dániel, András Drexler, „Noise modeling of tumor size measurements from animal experiments for virtual patient generation”, 2023 IEEE 27th International Conference on Intelligent Engineering Systems (INES), Nairobi, Kenya, 2023, pp. 53-60
- Borbála Gergics, Flóra Vajda, **Melánia Puskás**, András Füredi, Dániel András Drexler, „Mathematical modeling of phototoxicity during fluorescent imaging of tumor spheroids”, 2023 IEEE 27th International Conference on Intelligent Engineering Systems 2023 (INES), Nairobi, Kenya, 2023 pp. 291-296
- Lilla Kisbenedek, **Melánia Puskás**, Levente Kovács, Dániel András Drexler, „Clustering-based parameter estimation of a tumor model”, 2023 IEEE 21st International Symposium on Intelligent Systems and Informatics (SISY), Pula, Croatia, 2023 pp, 43-48
- Martin Ferenc Dömény, **Melánia Puskás**, Levente Kovács, Dániel András Drexler, „Population-based chemotherapy optimization using genetic algorithm”, 2023 IEEE 21st International Symposium on Intelligent Systems and Informatics (SISY), Pula, Croatia, 2023 pp. 23-2

Scientific statistics (based on google scholar):

- Citations: 48
- h-index: 5

List of publications at

<https://m2.mtmt.hu/gui2/?type=authors&mode=browse&sel=10076632>



LANGUAGE

German: B2 level

English: B2 level



SKILLS

MATLAB/Simulink, C#, LaTeX

Updated: May 14, 2024

