Curriculum vitae

PERSONAL DATA

Name: Dr. Drexler, Dániel András

Place and date of birth: Budapest, 2nd of March, 1985.

Address: H-1034 Budapest, Bécsi street 96/b. BA.3.26

Phone number: +3616665530

Email-address:drexler.daniel@uni-obuda.hu,
drexler.daniel@nik.uni-obuda.hu,
drexler.daniel@gmail.com

RESEARCH INTERESTS

Physiological modeling and control, control of nonlinear systems, control of chemical reactions, robot kinematics, singularities in robot kinematics.

AFFILIATIONS

- 2009-2012   **PhD student**, Budapest University of Technology and Economics, Department of Control Engineering and Information Technology
- 2012-2014   **research assistant**, Budapest University of Technology and Economics, Department of Control Engineering and Information Technology
- 2014-2015   **assistant lecturer**, Budapest University of Technology and Economics, Department of Control Engineering and Information Technology
- 2015-2016   **senior lecturer**, Budapest University of Technology and Economics, Department of Control Engineering and Information Technology
- 2016-   **senior lecturer**, Óbuda University, John von Neumann Faculty of Informatics, Institute of Biomatics, Physiological Controls Research Center
- 2016-   **researcher**, Óbuda University, Research, Innovation and Service Center of Óbuda University, Physiological Controls Research Center
- 2019-   **vice deputy head**, Óbudai University, Physiological Controls Research Center
- 2020-   **associate professor**, Óbudai University, John von Neumann Faculty of Informatics, Institute of Biomatics and Applied Artificial Intelligence

STUDIES

- 1999-2004 Trefort Ágoston Bilingual Secondary School, bilingual studies, specialization in electronics
- 2004-2009 **M. Sc. in electrical engineering (undivided 5 year program)**, Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics, title of the thesis: *Symbolic modeling and simulation of open-loop kinematic chains in Matlab environment*, supervisor: Dr. Harmati, István
- 2008-2011 **M. Sc. in biomedical engineering (3 year graduate program)**, Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics, title of the

thesis: Optimal control of tumor diseases using chemotherapy, supervisors: Dr. Harmati, István, Dr. Kovács, Levente
- 2009-2012 **PhD studies,** Budapest University of Technology and Economics, Doctoral School of Electrical Engineering Sciences, title of the thesis: *New Methods for Solving the Inverse Kinematics Problem of Serial Robot Manipulators*, supervisor: Dr. Harmati, István, defended in 2015
- 2012-2014 **M. Sc. in applied mathematics**, Budapest University of Technology and Economics, Mathematics Institute, title of the thesis: Analysis and control of polynomial systems, supervisor: Dr. Tóth, János

LANGUAGES
- 2004 English, type "C" (written and spoken) advanced language exam
- 2009 German, type "B" (written) basic language exam

SCHOLARSHIPS AND AWARDS
- 2007 Elcoteq „Unfold yourself" competition, second place
- 2008 BME TDK (Scientific Student Conference) honors
- 2009 BME University Scholarship
- 2009-2012 Scholarship for PhD students
- 2012-2014 Scholarship for PhD candidates
- 2018 Excellent Young Researcher of the Year, Óbuda University
- 2022 Starting Excellence Researcher award, Óbuda University

REVIEWER ACTIVITIES
- conferences:
  - ACC 2020,2023,2024 (American Control Conference)
  - ASCC 2022 (Asian Control Conference)
  - CDC 2020, 2021,2022 (IEEE International Conference on Decision and Control)
  - CINTI 2014- (IEEE International Symposium on Computational Intelligence and Informatics)
  - COSY 2022 (IFAC Workshop on Control of Complex Systems)
  - ECC 2020 (European Control Conference)
  - ICCC 2024 (IEEE International Conference on Computational Cybernetics and Cyber-Medical Systems)
  - ICIEA 2017 (IEEE International Conference on Industrial Electronics and Applications)
  - ICRA 2017 (IEEE Internation Conference on Robotics and Automation)
  - IFAC 2014, 2017 (International Federation of Automatic Control)
  - IFAC BMS 2012, 2015, 2021 (International Federation of Automatic Control, Symposium of Biological and Medical Systems)
  - INES 2015- (IEEE International Conference on Intelligent Engineering Systems)
  - MMAR 2017- (International Conference on Methods and Models in Automation and Robotics)
  - PC 2023 (International Confernce on Process Control)
  - PID 2018 (IFAC Conference on Advances in Proportional-Integral-Derivative Control)
  - SACI 2016- (IEEE International Symposium on Applied Computational Intelligence and Informatics)
  - SACI 2019- Informatics Track chair

- o SAMI 2023 (IEEE International Symposium on Applied Machine Intelligence and Informatics)
- o SISY 2015- (IEEE International Symposium on Intelligent Systems and Informatics)
- o SMC 2014- (IEEE International Conference on Systems, Man, and Cybernetics)
- o SMC 2016 Junior Track Chair
- o IEEE Space Robotics Workshop 2015

- journals:
  - o Acta Polytechnica Hungarica, alszerkesztő 2014-
  - o AIMS Mathematics
  - o Applied Mathematical Modelling
  - o Applied Sciences
  - o Applied Soft Computing
  - o ASME
  - o ASOC
  - o Automatica
  - o Biomedical Signal Processing and Control
  - o Complexity
  - o Computer Methods and Programs in Biomedicine
  - o Computer Methods in Biomechanics and Biomedical Engineering
  - o Complexity
  - o Control Engineering Practice
  - o GCMB
  - o IEEE Access
  - o IEEE Robotics and Automation Letters
  - o IEEE Transactions on Control Systems Technology
  - o IEEE Transactions on Industrial Electronics
  - o IEEE Transactions on Robotics
  - o IEEE Transactions on System, Man, and Cybernetics, Part B
  - o IET Systems Biology
  - o International Journal of Advanced Robotic Systems
  - o IJMOR
  - o International Journal of Robust and Nonlinear Control
  - o Journal of Advanced Transportation
  - o Journal of Dynamic Systems, Measurement and Control
  - o Machines
  - o Mathematics
  - o Medical Engineering &Physics
  - o OCAM
  - o Periodica Polytechnica, Electrical Engineering
  - o Plos Computational Biology
  - o Robotics
  - o Robotics and Autonomous Systems
  - o Sensors
  - o SIAM Journal on Matrix Analysis and Applications
  - o Symmetry

- TDK (Scientific Student Conference) theses, B. Sc. and M. Sc. theses (Faculty of Electrical Engineering and Informatics, Mathematics Institute)

- Ph. D. theses (Óbuda University, Budapest University of Technology and Economics, Pázmány Péter Catholic University, Universitat Politécnica de València, University of Canterbury)
- OTKA (Hungarian Scientific Research Funds) grants

SUPERVISOR ACTIVITIES
- Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics, Electrical engineering B. Sc., B. Sc. theses (19)
- Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics, Electrical engineering M. Sc., M. Sc. theses (5)
- Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics, Software engineering M. Sc., M. Sc. theses (2)
- Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics, Biomedical engineering M. Sc., M. Sc. theses (4)
- Budapest University of Technology and Economics, Mathematics Institute, Mathematician B. Sc., B. Sc. thesis (1)
- Óbuda University, John von Neumann Faculty of Informatics, Computer Science Engineering B. Sc., B. Sc. theses (>16)
- Óbuda University, John von Neumann Faculty of Informatics, Computer Science Engineering M. Sc., M. Sc. theses (>8)
- Óbuda University, Doctoral School of Applied Informatics and Applied Mathematics, supervisor (4)

TEACHING ACTIVITIES
- Basic laboratory 1. (for electrical engineering students, BMEVIMIA304), instructor
- Basic laboratory 2. (for electrical engineering students, BMEVIMIA304), instructor
- Control Engineering (BMEVIIIA303), demonstrator
- Control Engineering and Image Processing laboratory 1. (for electrical engineering students, BMEVIIIMA11), course coordinator
- Control Engineering and Image Processing laboratory 2. (for electrical engineering students, BMEVIIIMB03), course coordinator, instructor
- Measurement laboratory 3. (for software engineering students, BMEVIMIA312), instructor
- Nonlinear and robust control (VIIIM211), lecturer and demonstrator
- Process Control laboratory (for electrical engineering students, BMEVIIIA312), instructor
- Intelligent Robots and Vehicles laboratory (for electrical engineering students, BMEVIIIMB04), instructor
- Programmable Control Devices and Sensor Networks laboratory (for electrical engineering students, BMEVIIIA352), instructor
- Control Engineering (NAIIT0SAND), lecturer, demonstrator, course coordinator
- Control Theory in Robotics (NBIRI2CREM in Hungarian, NBIRI2ERNM in English), lecturer, course coordinator
- Robot control (NAIRI1SUND in Hungarian, NAIRI1SEND in English), lecturer, course coordinator
- System theory (NIXRE1HBNE and NIXRE1HBEE), lecturer, demonstrator, course coordinator
- Control Engineering (NAXIT3IBNE) lecturer, demonstrator, course coordinator
- Infokommunication techniques (NNXIK1HBNE, NNXIK1EBNE, NNXIK1PBNE and NNXIK1HBEE), course coordinator
- Modern robust control and nonlinear control systems (OAIRNKE1ND), lecturer
- Robot control (NBERI1IBNE), lecturer, demonstrator, course coordinator

RESEARCH PROJECTS

- 2010-2012: OTKA-K 72611, „ Research of synthesis algorithms for special-purpose multiprocessing systems with task-dependent architecture", researcher
- 2011-2012: OTKA-K 71762, „ Advanced Control Theory and Artificial Intelligence Techniques of Autonomous Ground, Aerial, and Marine Robots", researcher
- 2011: TÁMOP-4.2.1/B-09/1/KMR-2010-0002, „ Development of quality-oriented and harmonized R+D+I strategy and functional model at BME", researcher
- 2013: GOP-1.1.1-11-2012-0076, „Dentmio-Development of adaptive decision support system", researcher
- 2014-2015: TÁMOP-4.2.2.C-11/1/KONV-2012-0004, „National research center for development and market introduction of advanced infocommunication technologies" grant, „III. „Future Internet" technologies: Distributed and cloud computing, Internet of Things" subproject „III.4. Development of design methodologies for task-dependent pipelined multiprocessing systems and their application in high-speed embedded target systems", researcher
- 2015-2016: FP7-PEOPLE-2012-IRSES-316338 "Dynamical Systems and Applications", local coordinator, researcher
- 2016- : European Research Council Starting Grant ERC-StG 67968 "Tamed Cancer", researcher
- 2017-2018 : Hungarian-Slovenian Scientific and Technological Cooperation, TÉT_16-1-2016-0070, „Computer efficient methods for studying biochemical and technical models described by ordinary differential equations", researcher
- 2018- : Hungarian-Slovenian Scientific Cooperation, SNN 125739, "Algebraic methods for the application of differential equations", researcher
- 2020-: 2019-1.3.1-KK – FOUNDATION OF COMPETENCE CENTERS, INFRASTRUCTURE DEVELOPMENT, „Creation of "service basis for cybermedical system development focusing on diagnostics, therapy and research, 2019-1.3.1-KK-2019-00007, subproject manager, leading researcher
- 2022-: TKP2021-NKTA-36 project „Innovative and digital development and evaluation of cybermedical technologies" , researcher
- 2022-: „Starting Excellence Researcher" program of Óbuda University, principal investigator, researcher

FOREIGN GUEST RESEARCHER ACTIVITIES

- Shanghai Jiao Tong University, Department of Mathematics, from 31th of March, 2016 to 30th of June, 2016, Shanghai, China (FP7-PEOPLE-2012-IRSES-316338)
- Center for Applied Mathematics and Theoretical Physics, University of Maribor, from 24th of June, 2018 to 1st of July, 2018, Maribor, Slovenia (TÉT_16-1-2016-0070)
- University of Sao Paulo at Sao Carlos, Brazil, 1st of March, 2020 to 31st of March, 2020
- ACMIT, Wiener Neustadt, 19th of January to 18th of February, 2024

SOCIETIES

- 2016- IEEE member (membership number: 93839394)

- 2016- IEEE Systems, Man, and Cybernetics Society member
- 2016- IEEE Robotics and Automation Society member
- 2017- IEEE Hungary Section Membership Development Officer
- 2017- IEEE Control Systems Society member
- 2021- IEEE Hungary Section vice chair

PUBLICATION STATISTICS

117 scientific publication: 31 international journal papers published abroad, 8 international journal papers published in Hungary, 1 journal paper in Hungarian, 3 book chapters in English, 72 publications in proceedings of international conferences, 2 publication in proceedings of a Hungarian conference.

Scientific statistics (based on google scholar):

- Citations: 1120
- h-index: 17

List of publications at
https://m2.mtmt.hu/gui2/?type=authors&mode=browse&sel=10042067&view=simpleList

Updated: February 2, 2024