

Curriculum vitae

PERSONAL DATA

Name: Dr. Drexler, Dániel András

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

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RESEARCH INTERESTS

Physiological 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 Biomatrix, Physiological Controls Research Center
- 2016- **researcher**, Óbuda University, Research and Innovation Center of Óbuda University, Physiological Controls Research Center

STUDIES

- 1999-2004 Trefort Ágoston Bilingual Secondary School, bilingual studies, specialization in electronics
- 2004-2009 **M. Sc. in electrical engineering**, 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**, 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

REVIEWER ACTIVITIES

- conferences:
 - CINTI 2014, 2015 (IEEE International Symposium on Computational Intelligence and Informatics)
 - ICIEA 2017 (IEEE International Conference on Industrial Electronics and Applications)
 - IFAC 2014, 2017 (International Federation of Automatic Control)
 - IFAC BMS 2012, 2015 (International Federation of Automatic Control, Symposium of Biological and Medical Systems)
 - INES 2015 (IEEE International Conference on Intelligent Engineering Systems)
 - SACI 2016, 2018 (IEEE International Symposium on Applied Computational Intelligence and Informatics)
 - SISY 2015, 2017 (IEEE International Symposium on Intelligent Systems and Informatics)
 - SMC 2014, 2016 (IEEE International Conference on Systems, Man, and Cybernetics)
 - SMC 2016 Junior Track Chair
 - IEEE Space Robotics Workshop 2015
 - MMAR 2017 (International Conference on Methods and Models in Automation and Robotics)
- journals:
 - Acta Polytechnica Hungarica, associate editor from 2014
 - Applied Soft Computing
 - Biomedical Signal Processing and Control
 - Control Engineering Practice
 - IEEE Robotics and Automation Letters
 - IEEE Transactions on Robotics
 - IEEE Transactions on System, Man, and Cybernetics, Part B
 - International Journal of Advanced Robotic Systems
 - Periodica Polytechnica, Electrical Engineering
 - Robotics and Autonomous Systems
 - SIAM Journal on Matrix Analysis and Applications

- TDK (Scientific Student Conference) theses, B. Sc. and M. Sc. theses (Faculty of Electrical Engineering and Informatics, Mathematics Institute)
- 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 (2)
- 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 (5)
- Óbuda University, John von Neumann Faculty of Informatics, Computer Science Engineering M. Sc., M. Sc. theses (3)

TEACHING ACTIVITIES

- Basic laboratory 1. (for electrical engineering students, BMEVIMIA304), instructor
- Basic laboratory 2. (for electrical engineering students, BMEVIMIA304), instructor
- Control Engineering (BMEVIMIA303), demonstrator
- Control Engineering and Image Processing laboratory 1. (for electrical engineering students, BMEVIMIA11), course coordinator
- Control Engineering and Image Processing laboratory 2. (for electrical engineering students, BMEVIMIA03), course coordinator, instructor
- Measurement laboratory 3. (for software engineering students, BMEVIMIA312), instructor
- Nonlinear and robust control (VIMIM211), lecturer and demonstrator
- Process Control laboratory (for electrical engineering students, BMEVIMIA312), instructor
- Intelligent Robots and Vehicles laboratory (for electrical engineering students, BMEVIMIA04), instructor
- Programmable Control Devices and Sensor Networks laboratory (for electrical engineering students, BMEVIMIA352), instructor
- Control Engineering (NAITOSAND), 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

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

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).

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

PUBLICATION STATISTICS

56 scientific publication: 12 international journal papers published abroad, 5 international journal papers published in Hungary, 4 book chapters in English, 34 publications in proceedings of international conferences, 1 publication in proceedings of a Hungarian conference.

Scientific statistics (based on google scholar):

- Citations: 286
- h-index: 9

List of publications at <https://vm.mtmt.hu/www/index.php?AuthorID=10042067>.