

# Prof. Dr. habil. Levente Adalbert Kovács

Full professor

electric engineer, biomedical engineer

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<http://physcon.uni-obuda.hu/?q=en/>

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## 1. PERSONAL DATA

Date of birth: 12 of April 1977

Place of birth: Resita, Romania

## 2. SCIENTIFIC DEGREES

- 2000 **MSc in electrical engineering**, "Politehnica" University of Timișoara, Faculty of Control Engineering and Computer Science, specialization: Automation and Industrial Informatics.
- 2001 **Postgradual training in Industrial Control**, "Politehnica" University of Timișoara, Automation and Industrial Informatics.
- 2011 **MSc in Biomedical Engineering**, Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics.
- 2008 **PhD**, Budapest University of Technology and Economics, Electric Engineering Doctoral School. Supervisor: Prof. Dr. Zoltán Benyó.  
PhD thesis title: *New principles and adequate control methods for insulin dosage in case of diabetes.*
- 2013 **habilitation**, Obuda University, title: *Model-based control algorithms for optimal therapy of high-impact diseases.*

## 3. TEACHING ACTIVITY (2000-present)

- 2016 – Obuda University (OE), *full professor*.  
John von Neumann Faculty of Informatics, vice dean for education
- 2012 – 2016 Obuda University (OE), *associate professor*.
- 2011 – 2012 Budapest University of Technology and Economics (BME), *associate professor*.
- 2008 – 2011 Budapest University of Technology and Economics (BME), *senior lecturer*.
- 2005 – 2008 Budapest University of Technology and Economics (BME), *teacher assistant*.
- 2000 – 2006 "Politehnica" University of Timișoara (TME), *teacher assistant*.
- 2006 – 2007 "Politehnica" University of Timișoara (TME), *invited lecturer*.
- 2001 – 2004 Partium Christian University of Oradea (PKE), *part time teacher assistant*.

## 4. LECTURES

- In Hungarian: Systems and Control Theory (OE), Development management of medical devices (OE), Process Control (BME), Introduction to biomedical engineering (OE, BME), Biomedical process simulation (BME), Chemical and biomedical measurements (BME), Project Laboratory (BME), Computer architecture (PKE).
- In English: Basics of Information Systems (OE), Intelligent Systems (OE), Analysis and Simulation of Physiological Control Systems (BME), Control Engineering (OE, BME), Biomedical Engineering (BME).
- In Romanian: Process Control (TME), Control Theory (TME), Introduction in Control Theory (TME).

## 5. SPECIALTY

- Physiological Modeling and Control
- Modern Robust Control Theory
- Cyber-Medical Systems
- Biomedical Engineering

## 6. RESEARCH SUPERVISORY OVERVIEW

- Development of a Hungarian artificial pancreas algorithm (2010-)
- Development and biostatistical evaluation of new control methods for optimal control of cancer (2011-)
- Control of peristaltic pumps in hemodialysis machines (2013-2015)
- Development of classical and modern control algorithms for effective telesurgical applications (2011-2104)
- Development of robust blood glucose control for ICU (2010-2012)
- Patient motion compensation in surgical robotics (2010-2012)
- Electromagnetic noise and error measurement, calibration and tool integration in surgical robotics (2010-2012)
- Development of robust control algorithms for insulin injection in case of type 1 diabetes mellitus (2007-2010)
- Development of new methods for the risk estimation of obese population (2007-2010)
- Design of NFC based mobile applications (2006-2009)
- Human factor in controlled vehicle systems (2004-2008)
- Medical information system for diagnosing and monitoring diabetes mellitus in children (2003-2004)
- Medical information system for diagnosing hearing disorder in children (2003-2005)
- Temperature control with industrial DeltaV system (2002-2004)
- Control of the Three Tank System (2001-2002)

## 7. DEFENDED PHD STUDENTS

- 2017 György Eigner (title: *Closed-Loop Controller Design Possibilities for Nonlinear Physiological Systems*), OE Applied Informatics and Applied Mathematics Doctoral School
- 2015 Johanna Sájevicsné Sápi (title: *Controller-managed automated therapy and tumor growth model identification in the case of antiangiogenic therapy for most effective, individualized treatment*), OE Applied Informatics and Applied Mathematics Doctoral School
- 2013 Tamás Ferenci (title: *Two Applications of Biostatistics in the Analysis of Pathophysiological Processes*), OE Applied Informatics Doctoral School

## 8. PHD SUPERVISOR

- Péter Piros (2016-), full time PhD
  - Topic: Big Data applications with artificial intelligence methods
- Róbert Pethes (2015-), full-time PhD
  - Topic: Modeling infection propagation
- Zoltán Garaguly (2015-), full-time PhD
  - Topic: Holographic imaging and image reconstruction on high-resolution digital microscopy
- József Klespitz (2014-), full-time PhD
  - Topic: Development of high level code generating tools for medical devices
- Péter Szalay (2010-), full-time PhD
  - Topic: Computer analysis of nonlinear physiological processes
- András György (2009-2010), full-time PhD
  - Topic: Control- and computer-based investigation of physiological processes

- o Interrupted after successful PhD admission to the Massachusetts Institute of Technology (MIT), Boston, USA

## 9. PHD REVIEWER ACTIVITY

▪ Bernadett Ács	2017, Peter Pazmany Catholic University.
▪ Márton Németh	2017, Budapest University of Technology and Economics.
▪ Alexandra Szöllösi	2017, Budapest University of Technology and Economics.
▪ Dongfei Fu	2016, Ghent University, Belgium.
▪ Ho Yick Wai Yvonne	2016, National University Singapore, Singapore.
▪ Matthew Chua	2015, National University Singapore, Singapore.
▪ Dániel Vizer	2015, Budapest University of Technology and Economics.
▪ Liza Pelyhe	2015, Budapest University of Technology and Economics.
▪ Alexandru Codrean	2015, Politehnica University Timisoara, Romania.
▪ Yang Tao	2015, National University Singapore, Singapore.
▪ Lee Chun Siong	2015, National University Singapore, Singapore.
▪ Fatanah Mohamad Suhaimi	2012, University of Canterbury, Christchurch, New Zealand.
▪ József Kopják	2013, Széchenyi István University, Győr, Hungary.

## 10. PROJECTS INVOLVED

- H2020 MSCA-RISE project „Dynamics” („*Contributions to codimension  $k$  bifurcations in dynamical systems theory*”, No. 777911, 2018-2022), project manager for Óbuda University consortia partner, 1 012 500 EUR.
- ERC StG 2015 project “Tamed Cancer” (“*Personalized Cancer Therapy by Model-based Optimal Robust Control Algorithm*”, No. 679681, 2016-2021), principal investigator, 1 015 900 EUR.
- TÁMOP 4.2.2.D-15/1/KONV-2015-0002 project, “*Development of smart technologies for supporting high-tech industrial areas*” (2015), project manager and researcher.
- TÁMOP 4.2.2.A-11/1/KONV-2012-0073 project, „*Telemedicine Oriented Research in the Fields of Mathematics, Informatics and Medical Sciences*” (2012-2015), researcher.
- TÁMOP 4.1.1C-12/1/KONV-2012-0003 project „*Hungarian Online University*” (2013-2015), researcher.
- National Development Agency, GOP-2011-1.1.1 program, GOP-1.1.1-11-2012-0055 project, „*DIALOGIC – Mathematical model-based decision support system to improve diabetes health management*” (2012-2013), project manager for Óbuda University consortia partner, 664 998 225 Ft.
- National Development Agency, GOP-2011-1.1.1 program, GOP-1.1.1-11-2012-... project, „*ROBOT-X – Robot design kit development for educational, hobby and research and development purposes*” (2013-2014), researcher.
- “*Critical infrastructure defense research*”, New Széchenyi Plan (Project ID: TÁMOP-4.2.1/B-11/2/KMR-2011/0001) (2012-2013), researcher.
- Austrian-Hungarian Research and Educational Foundation, OMAA 82öu11 project, „*Symbolic Computation and Automated Reasoning for the Numeric Analysis of Diabetes Models*” (2011-2012), project co-leader, 2 462 000 Ft.
- “*Development of quality-oriented and harmonized R+D+I strategy and functional model at BME*” project, New Széchenyi Plan (Project ID: TÁMOP-4.2.1/B-09/1/KMR-2010-0002) (2010-2012), researcher.
- Hungarian National Scientific Research Foundation, OTKA 82066, “*Novel methods for the improvement of medical diagnostics*” (2010-2014), professional coordinator of one research task, 17 004 703 Ft;
- Hungarian National Scientific Research Foundation, OTKA 80316, “*Quality and safety improvements of image guided surgical procedures and nuclear medical imaging using advanced computer science*” (2010-2013), professional coordinator of two research tasks, 37 203 500 Ft;
- Hungarian National Scientific Research Foundation, OTKA T69055, “*Development of new measurement and control methods, and their bioinformatics applications, for early diagnosis*”

and optimal treatment of metabolic diseases” (2007-2010), professional coordinator, 10 785 000 Ft;

- Hungarian National Office for Research and Technology (NKTH), RET-04/2004, “*Electronic Vehicle and Vehicle Control*” (2004-2008), professional coordinator, 30 000 000 Ft;
- Hungarian National Office for Research and Technology (NKTH), TECH\_08-A2/2, “*DIAD\_NFC Independent Dynamic NFC Applications – Concept and implementation*” (2009-2012), researcher;
- EU 6th Framework IST project, “*StoLPaN - Store Logistics and Payment with NFC*” (2006-2009), researcher;
- Hungarian National Office for Research and Technology (NKTH), TeraTomo project, “*Developing teraflop capacity image reconstruction system built in tomography devices with different modality medical diagnostics*” (2009-2012), researcher;
- Hungarian National Scientific Research Foundation, OTKA T042990, “*Diagnostic-purpose Research of Biological Signals using System Theory*” (2002-2006), PhD student;
- Romanian National University Research Council (CNCSIS), 36681/ 3/ 2000, “*Investigating the development of new system stability analyzing methods of fuzzy control for energetic processes*” (2000-2002), researcher.
- Romanian National University Research Council (CNCSIS), 34977/ 35/ 2001, “*Investigating the development of robust control fuzzy system methods based on parameter sensitivity*” (2001-2003), researcher.
- Romanian National University Research Council (CNCSIS), 34977/ 34/ 2001, “*Investigating new stability methods for Takagi-Sugeno type fuzzy control systems*” (2001-2003), researcher.

## 11. PROFESSIONAL AFFILIATIONS AND CONTRIBUTIONS

### a. International and Hungarian Committees:

IEEE Control System Society Hungary Chapter founder and chair	2018-
IEEE SMC Society CyberMedical Systems Technical Committee chair	2016-
IEEE SMC Hungary chapter chair	2015-
IEEE Hungary Section board member	
<ul style="list-style-type: none"> <li>• Chair</li> </ul>	2017-
<ul style="list-style-type: none"> <li>• Vice Chair</li> </ul>	2013-2016
<ul style="list-style-type: none"> <li>• Membership Development officer</li> </ul>	2010-2016
IEEE member (90492405)	2009-
<ul style="list-style-type: none"> <li>• Engineering in Medicine and Biology Society member</li> </ul>	2012-
<ul style="list-style-type: none"> <li>• Systems, Man, and Cybernetics Society member</li> </ul>	2012-
<ul style="list-style-type: none"> <li>• Control System Society member</li> </ul>	2013-
National Institute of Pharmacy and Nutrition, Directorate for Device Testing and Clinical Engineering consultant	2015-
Obuda University Habilitation and Doctoral School member	2014-
Obuda University, Applied Informatics and Applied Mathematics Interdisciplinary Doctoral School board member	2014-
Obuda University, Ethical Committee member	2014-2016
IFAC member	
<ul style="list-style-type: none"> <li>• TC 8.2 “Biological and Medical Systems” member</li> </ul>	2010-
<ul style="list-style-type: none"> <li>• TC 9.4 “Control Education” member</li> </ul>	2017-
Hungarian Diabetes Association member (13201)	2010-
Hungarian Artificial Pancreas working group leader	2010-

Hungarian Academy of Science, Section of Engineering Sciences,  
corresponding member (18768)

- Committee on Automation and Computer Science 2008-2014
- Committee on Computer Engineering 2015-

MATE (Measuring Technology, Automation and Computer Science  
Engineering Society):

- member 2007-2016
- Control Theory section, member of management board (9007) 2007-2012

SRAIT (Romanian Society of Control Engineering and Technical Informatics)  
member 2000-2006

EMT (Transylvanian Technical Society) member 2000-2002

## **b. Reviewer activities**

Reviewer of International conferences:

- 56th IEEE Conference on Decision and Control (CDC) 2017.
- IFAC World Congress 2011, 2014, 2017.
- 16th International Conference on Intelligent Software Methodologies, Tools, and Techniques (SOMET) 2017.
- 12th IEEE Conference on Industrial Electronics and Applications (ICIEA) 2017.
- 2016 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2016).
- 2015 IEEE International Conference on Systems, Man, and Cybernetics (SMC 2015).
- 10th Asian Control Conference (ASCC) 2015.
- IEEE International Conference on System Science and, Engineering (ICSSE) 2015.
- 2014 International Conference on Fuzzy Theory and Its Applications (iFUZZY) 2014.
- 14th IEEE International Conference on Robotics and Automation (ICRA) 2014.
- IEEE International Work Conference on Bio-inspired Intelligence (IWOB) 2014.
- IEEE Mediterranean Conference on Control and Automation (MED) 2013-.
- 16th IFAC Symposium on System Identification (SYSID) 2012.
- IFAC World Congress 2011, 2014, 2017.
- IFAC symposium on Biological and Medical Systems, 2009, 2012, 2015.
- 5th European Conference of the International Federation for Medical and Biological Engineering (EMBEC) 2011.
- IEEE International Symposium on Computational Intelligence and Informatics (CINTI), 2013-.
- IEEE International Symposium on Intelligent Systems and Informatics (SISY) 2013-.
- IEEE International Symposium on Logistics and Industrial Informatics (LINDI) 2013-.
- IEEE International Conference on Intelligent Engineering Systems (INES) 2013-.
- IEEE International Symposium on Applied Machine Intelligence and Informatics (SAMI) 2011-.
- IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI) 2011-.
- IEEE International Joint Conferences on Computational Cybernetics and Technical Informatics (ICCC-CONTI) 2010-.
- 9th International Workshop on Robotics in Alpe-Adria-Danube Region (RAAD) 2010.
- IEEE Engineering in Medicine and Biology Conference (EMBC) 2009-.
- International Symposium on Bio- and Medical Informatics (BMIC) 2008-2016.
- IFAC Symposium on Robust Control Design (ROCOND) 2006.
- International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics (MACRo) 2011.

Reviewer of International journals:

- Acta Astronautica

- Acta Polytechnica Hungarica
- Ain Shams Engineering Journal
- Applied Soft Computing
- Asian Journal of Control
- Biomedical Engineering Online
- Biomedical Signal Processing and Control
- Computer Methods and Programs in Biomedicine
- Computer Methods in Biomechanics and Biomedical Engineering
- Control Engineering Practice
- European Journal of Control
- Hindawi Journal of Industrial Engineering
- Hindawi Mathematical Problems in Engineering
- Hindawi Computational and Mathematical Methods in Medicine
- IEEE Transactions on Automation Science and Engineering
- IEEE Transactions on Automatic Control
- IEEE Transactions on Biomedical Engineering
- IEEE Transactions on Fuzzy Systems
- IEEE Transactions on Mechatronics
- IET Healthcare Technology Letter
- International Journal of Biomedical Engineering and Technology
- Journal of Control
- Journal of Control Science and Engineering
- Journal of Diabetes Science and Technology
- Journal of Healthcare Engineering
- Journal of Medical and Biological Engineering
- Journal of Theoretical Biology
- Knowledge-Based Systems
- Measurement Science and Technology
- Optimal Control Applications and Methods
- Open Medical Informatics Journal
- Periodica Polytechnica, Electrical Engineering
- PLOS ONE
- Serbian Journal on Electrical Engineering
- Springer Medical & Biological Engineering & Computing

Journal editorial board member / track chair

- Acta Politechnica Hungarica (2012-)
- Infocommunications Journal (2015-)
- International Journal of Diabetes & Clinical Diagnosis (2015-)

Grant reviewer

- H2020 Future and Emerging Technologies (FET).
- Industrial Research Fund, K.U. Leuven, Belgium.
- NKTH Baross Gábor Program Hungary – Regional Innovative Developments.
- National Office for Research and Technology Hungary.
- Romanian National Authority for Scientific Research and Information.

### **c. Conference organization**

- General / Honorary Chair:
  - INES 2018 – 20th IEEE International Conference on Intelligent Engineering Systems, Las Palmas, Spain.
  - SACI 2018 – 12th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania.
  - SAMI 2018 – IEEE International Symposium on Applied Machine Intelligence and Informatics, Herlany, Slovakia.
  - NC30 – IEEE 30th Jubilee Neumann Colloquium, Budapest, Hungary, 2017.

- INES 2017 – 19th IEEE International Conference on Intelligent Engineering Systems, Larnaca, Cyprus.
- SISY 2017 – 15th IEEE International Symposium on Intelligent Systems and Informatics, Subotica, Serbia.
- Local Organizing Committee / Technical Organizing Committee:
  - INES 2018 – 20th IEEE International Conference on Intelligent Engineering Systems, Las Palmas, Spain – TPC Chair.
  - INES 2017 – 19th IEEE International Conference on Intelligent Engineering Systems, Larnaca, Cyprus – TPC Chair.
  - SMC 2016 – IEEE International Conference on Systems, Man, and Cybernetics, Budapest, Hungary – Local Arrangements Chair.
  - INES 2016 – 19th IEEE International Conference on Intelligent Engineering Systems, Budapest, Hungary – TPC Chair.
  - EAI International Conference on Mobile Medical Multimedia Technologies, Applications and Services 2016, Budapest, Hungary – TPC Co-Chair.
  - CINTI 2015 – 16th IEEE International Symposium on Computational Intelligence and Informatics, Budapest, Hungary – TPC Chair.
  - INES 2015 – 19th IEEE International Conference on Intelligent Engineering Systems, Bratislava, Slovakia – TPC Chair.
  - CINTI 2014 – 15th IEEE International Symposium on Computational Intelligence and Informatics, Budapest, Hungary – TPC Chair.
  - INES 2014 – 18th IEEE International Conference on Intelligent Engineering Systems, Tihany, Hungary – TPC Chair.
  - IFAC BMS 2012 – 8th IFAC Symposium on Biological and Medical Systems, Budapest, Hungary – editor.
  - EMBEC 2011 – 5th European Conference of the International Federation for Medical and Biological Engineering, Budapest – LOC member.
  - 10 years of Biomedical Engineering education in Hungary, Budapest, Hungary, July 20-21, 2005 – LOC member.
  - International Scientific Student Conference of Hungarian Students, Timisoara, Romania, 2000 – General Chair.
  - International Scientific Student Conference of Hungarian Students, Timisoara, Romania, 1999 – General Chair.
- Technical Committee member:
  - IFAC PID 2018 – 3rd IFAC Conference on Advances in Proportional-Integral-Derivative Control, Ghent, Belgium, 2018.
  - SMC 2017 – IEEE International Conference on Systems, Man, and Cybernetics, Banff, Canada – Poster Session Chair.
  - IEEE SMC 2017 – 2017 IEEE International Conference on Systems, Man, and Cybernetics, Banff, Canada, 2017.
  - 14th International Conference Informatics, Poprad, Slovakia, 2017.
  - BMS 2015 – 9th IFAC Symposium on Biological and Medical Systems, Berlin, Germany, 2015.
  - CogInfoCom 2015 – 6th IEEE Conference on Cognitive Infocommunications, Győr, Hungary, 2015.
  - ICACOMIT 2015 – International Conference on Automation, Cognitive Science, Optics, Micro Electro-Mechanical System, and Information Technology, Bandung, Indonesia, 2015.
  - ENCY 2015 – First European Biomedical Engineering Conference for Young Investigators, IPC member, Budapest, Hungary, 2015.
  - IFAC WC 2014 – 19th World Congress of the International Federation of Automatic Control, IPC Technical Associated Editor, Cape Town, South Africa, 2014.
  - INES – IEEE International Conference on Intelligent Engineering Systems, 2012-.
  - SACI – IEEE International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania, 2011-.
  - SAMI – IEEE International Symposium on Applied Machine Intelligence and Informatics, Smolenice, Slovakia, 2011-.
  - SYSI – IEEE International Symposium on Intelligent Systems and Informatics, Subotica, Serbia, 2010-.

- CHUSER – IEEE Colloquium on Humanities, Science and Engineering Research, 2012-2016.
- LINDI – IEEE International Symposium on Logistics and Industrial Informatics, 2012.
- MACRo– International Conference on Recent Achievements in Mechatronics, Automation, Computer Sciences and Robotics, Targu-Mures, Romania, 2010.
- ICC-CONTI – IEEE International Joint Conferences on Computational Cybernetics and Technical Informatics, Timisoara, Romania, 2010.
- SSC 2010 – 8th Student Science Conference, Budapest.
- Budamed’08, Hungarian Biomedical Conference, Budapest, Hungary, 2008.
- Special / Invited Session Organizer:
  - “*Modern control methodologies and modeling techniques*” IEEE AQTR 2018 – International Conference on Automation, Quality and Testing, Robotics, Cluj-Napoca, Romania.
  - “*Individualization and optimization of therapies*” IEEE CDC 2017 – 56th IEEE Conference on Decision and Control, Melbourne, Australia.
  - “*Recent advances in biomedical engineering and robotics*” IEEE INES 2017 – 19th IEEE International Conference on Intelligent Engineering Systems, Larnaca, Cyprus.
  - “*Drug Assist Devices for Personalised Healthcare*” IEEE SMC 2017 - IEEE International Conference on Systems, Man, and Cybernetics, Banff, Canada.
  - “*Computational and Medical Cybernetics*” IEEE SMC 2017 - IEEE International Conference on Systems, Man, and Cybernetics, Banff, Canada.
  - “*Control and data-driven modelling in biomedicine*” Open Invited Track, IFAC World Congress 2017, Toulouse, France.
  - “*Tensor Product Applications*” IEEE SMC 2016 - IEEE International Conference on Systems, Man, and Cybernetics, Budapest, Hungary.
  - “*Model-based Healthcare I-II*” IEEE SMC 2016 - IEEE International Conference on Systems, Man, and Cybernetics, Budapest, Hungary.
  - “*Women in Engineering*” Workshop, IEEE SMC 2016 - IEEE International Conference on Systems, Man, and Cybernetics, Budapest, Hungary.
  - “*Tensor Product Applications*” IEEE SMC 2015 - IEEE International Conference on Systems, Man, and Cybernetics, Hong Kong.
  - “*Intelligent Healthcare*” IEEE SMC 2015 - IEEE International Conference on Systems, Man, and Cybernetics, Hong Kong.
  - “*Model-based healthcare*”, IEEE SMC 2014 - IEEE International Conference on Systems, Man, and Cybernetics, San Diego, USA.
  - “*Recent nonlinear control methodologies in medical and biological systems with special focus on anesthesia and diabetes*”, IFAC WC 2014 – 19th World Congress of the International Federation of Automatic Control, Cape Town, South Africa.
  - “*Nonlinear and robust methods for identification and control of biological and medical systems*”, IFAC BMS 2012 – 8th IFAC Symposium on Biological and Medical Systems, Budapest.
  - “*Recent Advances in Biomedical Engineering*”, MACRo 2011 – International Conference on Recent Achievements in Mechatronics, Automation, Computer Sciences and Robotics, Targu-Mures, Romania.
  - “*Special Session on Biomedical Engineering*”, SACI 2009 – 5th International Symposium on Applied Computational Intelligence and Informatics, Timisoara, Romania.
  - “*Special Session on Biomedical Engineering*”, CONTI 04 – 6th International Conference on Technical Informatics, Timisoara, Romania.

#### **d. Invited speaker**

- Deakin University and IEEE SMC Australia Chapter, 2017.12.12, *invited speaker*.
- National University of Singapore and IEEE Singapore EMBS & SMC, 2017.12.04, *invited speaker*.
- Hungarian Diabetes Association’s 10<sup>th</sup> jubilee Eastern Hungarian Symposium, 2017.10.07, *invited speaker*.



- Óbuda University, 10-year jubilee of the European Research Council's ERC Starting and Advanced Grant program, 2017.03.03, *invited speaker*.
- Universidad Nacional del Litoral, Santa Fe, Argentina, 2016.11.30, *invited speaker*.
- Óbuda University, University Research and Innovation Center (EKIK) day, 2016.09.22, *invited speaker*.
- Hungarian Academy of Sciences, ERC day, 2016.09.16, *invited speaker*.
- IEEE Ottawa IM, EMB, CI/SMC, CompSoc Chapters, 2016.07.28, *invited speaker*.
- IEEE Singapore EMBS & A\*STAR, 2016.06.06, *invited speaker*.
- Óbuda University Biomaterials Institute opening, 2015.11.12, *invited speaker*.
- IEEE Singapore EMBS, 2015.10.12, *invited speaker*.
- Ghent University, Belgium, International Summer School on Multivariable Control, July 2015, *invited speaker*.
- Young Health Informatics Scientists Organization's Meeting, Budapest, Hungary, December 2014, *invited speaker*.
- Ghent University, Belgium, International Summer School on Multivariable Control, July 2014, *invited speaker*.
- IEEE Singapore EMBS, 2014.06.01, *invited speaker*.
- Óbuda University University Research and Innovation Center (EKIK) opening, Budapest, Hungary, 2013.11.19, *invited speaker*.
- Óbuda University Biotech-lab opening, Budapest, Hungary, 2013.11.19, *invited speaker*.
- Institute of Systems Analysis and Computer Science "A. Ruberti" (IASI-CNR), Rome, Italy, 2012 10.22, *invited speaker*.

#### **e. Plenary talks**

- 6th International Conference on Recent Achievements in Mechatronics, Automation, Computer Sciences and Robotics (MACRo 2017), Targu Mures, Romania, October 2017.
- 15th IEEE International Symposium on Intelligent Systems and Informatics (SISY 2017), Subotica, Serbia, September 2017.
- 20th IEEE Jubilee International Conference on Intelligent Engineering Systems (INES 2016), Budapest, Hungary, June 2016.
- 11th IEEE International Symposium on Applied Computational Intelligence and Informatics (SACI 2016), Timisoara, Romania, May 2016.
- First European Biomedical Engineering Conference for Young Investigators (ENCY 2015), Budapest, Hungary, May 2015.
- 11<sup>th</sup> IEEE International Symposium on Applied Machine Intelligence and Informatics (SAMI 2013), Herlany, Slovakia, January 2013.

#### **f. Public activities**

- National Student Competition, Computer Science Section, Co-chair, Obuda University, 2019.
- founder of IEEE Hungary Section's Rudolf Kalman award, 2017.
- IEEE Hungary Section 30<sup>th</sup> jubilee anniversary organizer, 2017.11.23.
- IEEE Region 8 2017 Congress, Stockholm, Sweden, 2017.03.24-26.
- IEEE POCO 2016 – Annual Panel of Conference Organizers, Montreal, Quebec, Canada, 2016.07.28-30.
- IEEE POCO 2012 – 7th Annual Panel of Conference Organizers, Budapest, Hungary, 2012. 07. 19-21.
- ERASMUS bilateral agreement for higher education:
  - OE (HU) – Gwangju University (SKOR) (2017-2019);
  - OE (HU) – Biskra University (ALG) (2017-2019);
  - OE(HU) – Ghent University Belgium (B) (2017-2021);
  - OE(HU) – Antwerpen University Belgium (B) (2016-2021);

- OE(HU) – University of Cyprus (CY) (2016-2018, 2019-2021);
- OE(HU) – Sapientia–Hungarian University of Transylvania (RO) (2016-2018);
- OE(HU) – National University Singapore (SG) (2016-2018);
- OE (HU) – Universitatea Tehnica Cluj Napoca (RO) (2016-2017);
- BME (HU) – Universitatea Politehnica Timisoara (RO) (2010-2013).
- TECHNÉ (Hungarian University Teachers Society form Timisoara) founder and vice-president (2002-2004).
- CEEPUS coordinator, H-140, (2002).
- BME, Biomedical Engineering Education web-page editor (2003-2007).

#### **g. Awards, trainings**

- Dean’s award, Obuda University, John von Neumann Faculty of Informatics, 2016.
- Institute award, Obuda University, John von Neumann Faculty of Informatics, Biomatics Institute, 2016.
- János Bolyai Research Fellowship certificate of merit for outstanding research, Hungarian Academy of Sciences, 2016.
- 20th jubilee IEEE INES conference Budapest, Hungary, certificate of merit for outstanding contributions 1997-2016.
- John von Neumann publication award, Obuda University, 2016.
- Antal Bejczy Student Publication Award as supervisor, International Bejczy Day, Budapest, 2016.
- **ERC StG laureate 2015.**
- XXIII National Student Conference, Engineering Section, certificate of merit for review work, Budapest, 2016.
- Researcher of the year, Obuda University, 2014.
- Dean’s award, Obuda University, John von Neumann Faculty of Informatics, 2013.
- János Bolyai Research Fellowship, Hungarian Academy of Sciences, 2012-2015.
- IEEE Hungary Section 25th anniversary award, 2012.
- MATE award (60th jubilee), 2012.
- R+D project knowledge, New Széchenyi plan program, BME, 2012.
- MATE diploma prize, IIIrd prize, 2011.
- BME rector’s award for student conference and scientific work coordination, 2009.
- Hungarian Pro Scientia diploma for scientific work coordination, 2009.
- Sanofi-Aventis/ Chinoin science award memorial certificate, 2009.
- SRAIT (Romanian Society of Control Engineering and Technical Informatics) diploma for best graduate 2000.

#### **h. Visiting research**

- Sapientia Hungarian University from Transylvania, Targu Mures, Romania, 25-30 October, 2017.
- Harbin Institute of Technology, Harbin, China, 5-13 January, 2017.
- Universidad Nacional del Litoral, Santa Fe, Argentina (Erasmus mobility), 28 November – 3 December, 2016.
- Technical University of Cluj-Napoca, Cluj-Napoca, Romania (Erasmus mobility), 20 May – 16 May, 2016.
- National University of Singapore, Department of Mechanical Engineering, Singapore, 12-17 October, 2015.

- Tsinghua University, Department of Mechanical Engineering, Beijing, China, March 23-29, 2015.
- National University of Singapore, Department of Mechanical Engineering, Singapore, June – September 2014 (3 months).
- Ghent University, SYSTeMS research group, Belgium, April 3-8, 2014.
- Nanyang Technological University, School of Mechanical & Aerospace Engineering, Singapore, November 20-29, 2011.
- Delft Center for System and Control, Netherlands, Delft, November 20-27, 2008.
- Research Institute for Symbolic Computation (RISC) Linz fellowship, May, 2006.
- Tempus fellowship – Amira GmbH, Duisburg, Germany, February, 2001 (1 month)

## 12. FOREIGN LANGUAGES

- **English** intermediate (FCE diploma);
- **German** beginner;
- **Romanian** native.

**Prof. Dr. habil. Levente Adalbert Kovács**

**Budapest, 14 January 2018.**