

PERSONAL INFORMATION

Iuliu SZEKELY

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POSITION
IOSUD UTBV

PhD Coordinator
Doctoral studies field: Electronic Engineering, Telecommunications and Information Technology
Since 2000

EXPERTISE FIELD AND
RESEARCH INTEREST AREAS

Power Electronics, Digital Electronics, Signal Processing, Measurements and Data Acquisition, Sensors and Smart Sensor Networks, Mobile Communications

WORK EXPERIENCE

2017 – prezent, Sapientia University of Cluj Napoca, Department of Electrical Engineering, Tg. Mureş, emeritus university professor. www.ms.sapientia.ro
2009-2017, Sapientia University of Cluj Napoca, Department of Electrical Engineering, Tg. Mureş, university professor – lectures on Digital Electronics, Electrical, Electronic Measurements and Sensors, Information Theory and Coding, dean (2010-2013), vice-rector (2013-2017) www.ms.sapientia.ro
1993-2009, Transilvania University of Braşov, Department of Electronics and Computers, university professor – lectures on Electrical Measurements, Electronic Instrumentation, Sensors and Transducers, Digital Signal Processing, Data Acquisition Systems, head of the department. www.unitbv.ro
1990-1993, Transilvania University of Braşov, Department of Electronics and Computers, associate professor – lectures on Electrical and Electronic Measurements, Industrial Electronics and Automation, vice-dean Faculty of Electrical Engineering (1990-1992), head of department (since 1992)
1983-1990, University of Braşov, Department of Electrotechnics, lecturer – lectures and design on Electrical and Electronic Measurements, Data Acquisition, Industrial Electronics and Automation
1976-1983, University of Braşov, Department of Electrical Drives and Automation, lecturer
1972-1976, Polytechnic Institute of Braşov, Department of Electrotechnics, assistant;
1968-1972, Polytechnic Institute of Braşov, Department of Electrotechnics, associate assistant

EDUCATION AND TRAINING

Graduation diploma

PhD in Engineering
University of Braşov, 1978

Engineer (master) in Electromechanics
Polytechnic Institute of Braşov, 1963-1968

Graduation Diploma
„Unirea” Theoretical Highschool of Braşov, 1959-1963

PERSONAL SKILLS

Mother tongue(s)

Hungarian / Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English language	Level C1	Level C1	Level B2	Level C1	Level C1
Replace with name of language certificate. Enter level if known.					
French language	Level B1	Level C1	Level B1	Level B1	Level C1
Replace with name of language certificate. Enter level if known.					

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills

- Good communication skills due to own experience as university professor in international / European co-operation programs (TEMPUS, Leonardo da Vinci) and courses in English language at the Electrical Engineering and Computers study programme

Organisational / managerial skills

- Leadership in research activity – research contracts and programs
- Leadership and membership in inter-university international programs
- Leadership in management of university units and organizational structures (head of department, dean, vice-rector)

Job-related skills

- Knowledge in measurement and data acquisition technics

Digital skills	SELF-ASSESSMENT				
	Information processing	Communication	Content creation	Safety	Problem solving
	Independent user	Independent user	Enter level	Enter level	Enter level

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

Replace with name of ICT-certificates

Other skills

ADDITIONAL INFORMATION

- Projects** Energetically optimized electrical systems for terrestrial transportation using batteries and supercaps– TRANS-SUPERCAP. Project nr. 21-018 / 2007, PNII / P4, CNMP,value 2 mil RON
 Platform for innovative technologies PLADETINO, nr. 10923/ 2006, valoare 500.000 EUR
- Honours and awards** Honorary citizen of Braşov City (2008)
 Doctor Honoris Cauza at „Gh. Asachi” Technical University of Iaşi (2009)
- Memberships** Institute of Electrical and Electronics Engineers (IEEE), Hungarian Technical-Scientific Society of Transilvania (EMT), external member of the Hungarian Academy of Science (MTA-KAB)
- Scientific books / papers** 155 papers in journals, proceedings of scientific conferences
 4 books at national publishing houses
 13 books of courses/laboratory/design for students

LIST OF RELEVANT PUBLICATIONS /RESEARCH (selection)

1. Sandu F., **Szekely I.**, Robu D.N., Balica A. – Performance Measurement for Mobile Data Streaming revista: Computer Standards & Interfaces - The International Journal on the Development and Application of Standards for Computers, Software Quality, Data Communications, Interfaces and Measurement - Elsevier Publications, Volume 32 , Issue 3 (March 2010), pag. 73-85
issn:09205489 isbn:092http://www.sciencedirect.com/science/article/pii/S0920548909000932
2. Hajdu, S., Brassai, S.T., **Szekely, I.** Complementary filter based sensor fusion on FPGA platforms (2017) Proceedings - 2017 International Conference on Optimization of Electrical and Electronic Equipment, OPTIM 2017 and 2017 Intl Aegean Conference on Electrical Machines and Power Electronics, ACEMP 2017, art. no. 7975076, pp. 851-856, ISBN 978-1-5090-4489-4
3. Turos,L.,**Szekely,I.** , Csernath,G., György,K., , Offline Battery Pack Model Optimization. In EPE 2014 - 8th Edition, International Conference and Exposition on Electrical and Power Engineering, Iași, 16-18 Oct. 2014, ISBN 978-1-4799-5848-1, IEEE Catalog Number CFP1447S-USB
4. Coliban,R.M., Ivanovici,M., **Szekely,I.**, Texture characterization and Image Segmentation Using Haar patterns and evolutionary processes. Proceedings of 14th International Conference on Optimizati on of Electrical and Electronic Equipment OPTIM 2014, Brasov, May 22-24, pp.986 – 992, ISBN 978-1-4799-5183-3/14.
5. Stanca, A.C., Sandu V., **Szekely I.**, Embedded System for Vehicles Start-of-ICE with Hybrid Battery-Supercapacitor. Proceedings of the 10th International Conference on Development And Application Systems – DAS 2010”, Suceava, Section C, ID 121, pp. 308-313, ISSN 1844-5020
6. Nedelcu,A.V., Talabă,D., **Szekely,I.**, Stoianovici,V.C., Machedon-Pisu,M., „Conceptual Integration of Wireless Sensor Network with 3D Virtual Environment”. Proceedings of 2010 IEEE International Conference on Wireless Communications, Networking and Information Security, WCNIS'2010, Beijing, China, June, 2010, IEEE Press, Vol. 2, pag. 446-450, ISBN 978-1-4244-5851-6
7. Mueller,Ch., **Szekely,I.**, Noack,A., “Ethernet Communication for Detection of Emergency Locations and Dynamic Evacuation in Underground Infrastructures”. 12th International Conference on Optimization of Electrical and Electronic Equipment, OPTIM 2010, Brasov, May, pag. 1046-1051, ISSN 1842-0133, ISBN 978-973-131-080-0
8. Bakó, L, **Székely, I.**, “Challenges for implementations of delay-coded neuromorphic neural networks on embedded digital hardware”. 2nd. INCF Congress of Neuroinformatics, Pilsen, Czech Republic, 2009, pag. 132-133
9. **Szekely, I.**, Turos, L., Hegyi, I., Csernath, G., SEPIC Based Solar Array Simulator, Acta Electrotehnica, Volume 55, Number 3-4, 2014, pp. 135-141, Academy of Technical Sciences of Romania, Technical University Of Cluj-Napoca, Romania, ISSN 2344-5637. <http://catalog.viniti.ru/si.asp>
10. Molnár,L., András,Sz., Kotta,I., **Szekely,I.**, „New Approaches Analyzing Usage of the Telecommunication Services”. Acta Universitatis Sapientiae, Electrical and Mechanical Engineering, Volume 5, 2013, pp 21-43. ISSN 2065-5916.
11. Pușcaș, A.M., Borza, P.N., Mușat, R., **Szekely, I.**, “Embedded structure used in the starting and regenerative braking processes of a mobile system”. Bulletin of the Transilvania University of Brașov, vol 4 (53), nr. 2, 2011, pp. 139-145, ISSN 2065-2119. EBSCO
12. Machedon-Pisu, M., **Szekely, I.**, Stoianovici, V., „Valuation of the Industrial Areas with High Particulate Concentration Using a Wireless Approach”. In Buletinul Institutului Tehnic „Gh. Asachi” din Iași, Tomul LVII, Fasc. 2, Secția Electrotehnică, Energetică, Electronică. Ed. Politehniun, 2011, pp. 161-168. ISSN 2537-2726, getCITED
13. Farkas,E., **Szekely,I.**, „Development in Wide-Area Digital Data Acquisition Network Technology”. Proceedings of the 9th International Conf. OPTIM 2004, Edited by the Transilvania University of Brașov, 2004, vol. IV, pp 97-102, ISBN 973-635-289-7
14. Turos,L., Csernath,G., **Szekely,I.**, EMI reduction techniques in digitally controllable power supplies. In: 8th International Conference Interdisciplinarity in Engineering, INTER-ENG 2014, 9-10 October 2014, Tirgu Mures, Romania. pp. 554-561,ISSN 2212-0173
15. Pușcaș, A.M., Coquery, G., Borza, P.N., **Székely, I.**, Carp, M.C., “State of the Art in Mobile Systems’ Energy Management and Embedded Solutions for Improving the Energy Efficiency”. Bulletin of the Transilvania University of Brasov, vol.15 (50)-New Series, Series A, 2008, pp 383 -390, ISSN 2065-2119. http://webbut.unitbv.ro/BU2008/BULETIN%20I%20PDF/content_I_EEEA.htm
16. Losoncz, L., **Szekely, I.**, “Driver and Interface for Kyocera 320x240 QVGA LCD”. International Symposium for Design and Technology of Electronic Packages, SIITME 2009, September 18-20, 2009, Gyula, pag. 156-160. ISBN: 9781424451333. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-77949307300&doi=10.1109%2fSIITME.2009.5407388&partnerID=40&md5=35a4dbc53fe2803dd23a66fc5964427d>

PhD theses under supervisory of prof.dr.ing. Iuliu SZEKELY

No	PhD student/PhD	Thesis title	Year of receiving the PhD degree
1.	Alexandru Marian	Metode și procedee de analiză a semnalelor radio pentru localizarea obiectelor în spații închise	2005
2.	Popescu Vlad	Procesarea și transmisia radio a datelor în mediu subteran	2006
3.	Croitoru Otilia	Sisteme GPS/INS pentru determinarea ținutei de navigare a autovehiculelor	2007
4.	Kelemen András	Reglarea puterii convertoarelor electronice din instalațiile de încălzire prin inducție.	2007
5.	Farkas Emil	Contribuții la dezvoltarea rețelelor globale de achiziție a datelor în timp real	2008
6.	Cocoradă Sorin Alexandru	Cercetări teoretice și experimentale privind protocoalele cu trimitere multiplă în rețele mobile cu comutare de pachete	2008
7.	Kertész Csaba	Contribuții la dezvoltarea de sisteme cu microcontrolere pentru monitorizarea unor parametri de siguranță în clădiri	2008
8.	Bakó László	Sisteme adaptive cu rețele neuronale artificiale neuromorfe. Realizări cu dispozitive hardware reconfigurabile	2009
9.	Csemát Géza	Sisteme de control prin mijloace de comunicații mobile	2009
10.	Curpen Dan Mihail	Creșterea performanțelor calității serviciilor de voce în rețelele cu comutație de pachete	2009
11.	Stanca Aurel Cornel	Contribuții la sistemele de control ale autovehiculelor ce utilizează supercondensatoare	2010
12.	Robu Dan-Nicolae	Contribuții la calitatea serviciilor în comunicațiile mobile	2010
13.	Machedon- Pisu Mihai	Optimizări energetice și funcționale ale sistemelor de achiziție pentru comunicații wireless în banda ISM	2010
14.	Cazacu Virgil	Servicii bazate pe IP în rețele inteligente de telecomunicații	2011
15.	Nedelcu Adrian-Valentin	Adaptarea și optimizarea tehnologiilor wireless de proximitate în vederea integrării în sisteme pervazive de comunicații	2011
16.	Puscas Ana-Maria	Structuri hibride celulare integrate pentru creșterea eficienței energetice a sistemelor mobile	2011
17.	Stoianovici Vlad-Cristian	Metode și tehnici pentru managementul și accesul dinamic la spectrul de radiofrecvență	2011
18.	Lozneanu Dan	Contribuții la creșterea eficienței energetice a echipamentelor terminale din sistemele de achiziții de date wireless	2011
19.	Losonczy Lajos	Optimizarea sistemelor electronice distribuite, încorporate în aplicații	2012
20.	Müller Christoph	Applicability of Wired and Wireless Ethernet Networking Systems as Unified Safety Relevant Communication System in Underground Mines	2013
21.	Molnár László	Dezvoltarea serviciilor de telecomunicații în concordanță cu efectul lor psiho-social	2013
22.	Danciu Gabriel Mihail	Contribuții la dezvoltarea metodelor de procesare a imaginilor de la camere digitale cu informație de distanță	2014
23.	Turos Laszlo Zsolt	Convertoare de energie configurabile digital de eficiență ridicată implementate pe circuite computaționale avansate	2015
24.	Coliban Radu-Mihai	Achiziția și prelucrarea neliniară a informațiilor cu aplicații în imagistică și experimente fizice complexe	2017