

Curriculum Vitae



Personal details

Name: Dr. András Hajdu
Born: February 6, 1973, Karcag, Hungary
Citizenship: Hungarian
Interests: Digital Image Processing, Machine Learning, Big Data, Bioinformatics

Affiliation

Full Professor, Head of Department

Department of Computer Graphics and Image Processing
Faculty of Informatics, University of Debrecen
4002, Debrecen, POB 40, Hungary
email: hajdu.andras@inf.unideb.hu
www: <https://arato.inf.unideb.hu/hajdu.andras/>
tel.:+36 52 512900/75124, mobile:+36 30 9039010
Google Scholar: <https://scholar.google.hu/citations?user=pY3CfdIAAAJ&hl=en>

Scientific and educational degrees

2017 Doctor of the Hungarian Academy of Sciences
2008 Habilitation, Faculty of Informatics, University of Debrecen, Debrecen, Hungary
2003 PhD. with „summa cum laude” in Mathematics and Computer Sciences, University of Debrecen, Debrecen, Hungary
1996 Master of Science in Mathematics, Teacher of Mathematics, English-Hungarian Special Translator, Lajos Kossuth University, Debrecen, Hungary

Languages

English (fluent), Russian (basic level)

Scientific appointments

2017- Full Professor at the Dept. of Computer Graphics and Image Processing, Faculty of Informatics, University of Debrecen, Debrecen, Hungary
2011- Head of Dept. of Computer Graphics and Image Processing, Faculty of Informatics, University of Debrecen, Debrecen, Hungary

2010-	Leader of the Bioinformatics Research Group, University of Debrecen, Debrecen, Hungary
2010-2011	Vice Dean of Faculty of Informatics, University of Debrecen, Debrecen, Hungary
2008-2017	Associate Professor at the Dept. of Computer Graphics and Image Processing, Faculty of Informatics, University of Debrecen, Debrecen, Hungary
2005-2006	Postdoctoral Researcher, Aristotle University of Thessaloniki, Thessaloniki, Greece
2004-	Assistant Professor at the Dept. of Information Technology, Faculty of Informatics, University of Debrecen, Debrecen, Hungary
2001-2004	Assistant Lecturer at the Dept. of Information Technology, Institute of Informatics, University of Debrecen, Debrecen, Hungary
2000-2001	Predoctoral fellowship at the Dept. of Information Technology, Institute of Informatics, University of Debrecen, Debrecen, Hungary
1997-1999	Full time PhD student at the Institute of Mathematics and Informatics, University of Debrecen, Hungary
1992-1996	Full time student at the Lajos Kossuth University, Debrecen, Hungary

Scholarships and prizes

2016	„Tamás Rapcsák” Prize for Operation Research, Dr. Tamás Rapcsák Fund
2014	Best Publication of the Year (University of Debrecen), Hungary
2012-2014	„János Szentágothai” grant for distinguished researchers of the Republic of Hungary
2012	IT Lecturer of the Year (national prize), Hungary
2009	Prize of the Faculty of Informatics, University of Debrecen, Hungary
2008-2011	„János Bolyai” research scholarship of the Hungarian Academy of Sciences
2004	„Gyula Farkas” prize of the János Bolyai Mathematical Society, Hungary
2002-2003	„Pro Regione” scholarship, University of Debrecen, Debrecen, Hungary
1997	„Universitas” scholarship, Lajos Kossuth University, Debrecen, Hungary

Research projects

2019-2021	GINOP-2.2.1-18-2018-00012: Automated detection of cancer cells in cytological smears, scientific leader
2017-2020	EFOP-3.6.2-16-2017-00015: HU-MATHS-IN; Intensification of the activity of the Hungarian Industrial Innovation Service Network, scientific leader
2015-2018	VKSZ_14-1-2015-0072, SCOPIA: Development of diagnostic tools based on endoscope technology, project leader
2012-2015	OTKA, NK101680, Mathematical modelling of clinical observations for improved melanoma detection, senior researcher
2012-2013	HURO/1001/283/2.3.1, MobileAssistant: Cross border academic development of an image-based recommendation system for regional educational purposes, project leader
2009-2011	TECH08-2 grant of the Hungarian National Office for Research and Technology (NKTH), DRSCREEN - Developing a computer-based image processing system for diabetic retinopathy screening, project leader
2004-2006	FP6-004218, SHARE: Mobile Support for Rescue Forces, Integrating Multiple Modes of Interaction, EU FP6 Information Society Technologies, role: scientific manager, AUTH leader: Ioannis Pitas

Memberships

2017- Hungarian Academy of Sciences, academic doctor
2015- International Association of Pattern Recognition (IAPR), board member
2015- Hungarian Association for Image Analysis and Pattern Recognition, president
2014- Institute of Electrical and Electronics Engineers (IEEE), senior member
2008- Institute of Electrical and Electronics Engineers (IEEE), member
2003- Hungarian Academy of Sciences, public member
2002- International Association for Pattern Recognition (IAPR), member

Refereeing

Computers in Biology and Medicine (Elsevier), Discrete Applied Mathematics (Elsevier), Discrete Mathematics (Elsevier), Transactions on Image Processing (IEEE), Transactions on Pattern Analysis and Machine Intelligence (IEEE), Transactions on Signal Processing (IEEE), Transactions on Medical Imaging (IEEE), Transactions on Biomedical Engineering (IEEE), Machine Vision and Applications (Springer) Pattern Recognition Letters (Elsevier), Signal Processing (Elsevier), Teaching Mathematics and Computer Science (University of Debrecen, Hungary), Image Processing (IET)

Conferences:

ISSPA 2005, ISSPA 2007, ICSPC 2007, SITIS'10, MCS2011, SITIS 2011, HAIS 2012, CBMI 2013, ISPA 2013, VISAPP 2013, ISBI 2014, ISBI2015, ICPR2016, ISBI2016, ISBI2017, ISBI2018, ICPR2018, ISBI2019, ICPR2019

Evaluation:

H2020 WP2014-15, H2020-MSCA-IF-2017, H2020-MSCA-IF-2018, OTKA 2015-2017.

Teaching

Lectures and seminars on Machine Learning, Deep Learning, Big Data, Programming (Python, C, C++, Matlab, Java, Visual Basic, R), Bioinformatics, Collaborative Project Work, Theoretical Informatics, Statistics, Optimization, Digital Image Processing, Parallel Computing; Supervising Thesis Writing, Supervising TDK-Thesis Writing, Supervising Summer School Students, Supervising PhD students

Conference organizations

2019 6th International Conference on Parallel, Distributed, GPU and Cloud Computing for Engineering, Pecs, Hungary, session organizer (Artificial Intelligence, High Performance Computing and Visualization for Big Data)
2019 12th Conference of the Hungarian Association for Image Analysis and Pattern Recognition, Debrecen, Hungary, conference organizer
2018 IEEE International Conference on Future IoT Technologies, Eger, Hungary, invited lecturer
2015 ISPA 2015 - IEEE-EURASIP 9th Int'l Symposium on Image and Signal Processing and Analysis, Edinburgh, Scotland, UK, session organizer
2014 CogInfoCom 2014, 5th IEEE International Conference on Cognitive Infocommunications, Vietri sul Mare, Italy, track organizer
2013 ISPA 2013 - IEEE-EURASIP 8th Int'l Symposium on Image and Signal Processing and Analysis, Trieste, Italy, session organizer
2013 CogInfoCom 2013, 4th IEEE International Conference on Cognitive Infocommunications, Budapest, Hungary, session organizer

- 2012 CogInfoCom 2012, 3rd IEEE International Conference on Cognitive Infocommunications, Kosice, Slovakia, session organizer
- 2011 Summer School on Image Processing 2011, Veszprem, Hungary, invited lecturer
- 2011 12th Symposium on Programming Languages and Software Tools - SPLST'11, Tallin, Estonia, invited lecturer

Selected publications

(complete list at <https://arato.inf.unideb.hu/hajdu.andras/>)

- A. Hajdu, L. Hajdu, R. Tijdeman: Finding well approximating lattices for a finite set of points, Math. Comp. 88 (2019), 369-387, IF=1.579.
- Gy. Kovacs, A. Hajdu: A Self-Calibrating Approach for the Segmentation of Retinal Vessels by Template Matching and Contour Reconstruction, Medical Image Analysis 29 (2016), 24-46, IF=3.654.
- B. Antal, A. Hajdu: An ensemble-based system for automatic screening of diabetic retinopathy, Knowledge-Based Systems (Elsevier) 60 (April 2014), 20-27, IF=4.104.
- A. Hajdu, L. Hajdu, A. Jonas, L. Kovacs, H. Toman: Generalizing the majority voting scheme to spatially constrained voting, IEEE Trans. on Image Processing 22(11) (November 2013), 4182-4194, IF=3.042.
- I. Lazar and A. Hajdu: Retinal microaneurysm detection through local rotating cross-section profile analysis, IEEE Trans. on Medical Imaging 32(2) (February 2013), 400-407, IF=3.643.
- B. Antal, A. Hajdu: An Ensemble-based System for Microaneurysm Detection and Diabetic Retinopathy Grading, IEEE Trans. on Biomedical Engineering 59(6) (2012), 1720-1726. IF=2.278.