

Radu-Daniel VATAVU

curriculum vitae



Professor of Computer Science



Machine Intelligence and Information Visualization Lab
(MintViz) | MANSiD Research Center

University "Ștefan cel Mare" of Suceava

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Married (2007), two children (2010 and 2014)



[ACM Author Profile](#)



[DBLP Author Profile](#)



[ORCID Profile](#)
(0000-0002-7631-6445)



[Google Scholar Profile](#)



[Research Gate Profile](#)



[Springer Link Author Profile](#)

EDUCATION

HDR (Habilitation to Direct Research) in Computer Science, from 2015

Thesis title: *Designing Gesture Interaction by Understanding Users*

Defended (December 2014) at the Technical University of Cluj-Napoca, Romania

Scientific committee: Prof. Sergiu Nedeveschi, Prof. Lucian Vințan, and Prof. Valentin Cristea

Ph.D. in Computer Science & Docteur en Informatique, from 2008

Co-directed thesis between University Lille 1, France and University of Suceava, Romania

Thesis title: *Real-time Human Gesture Acquisition for Interacting with Virtual Environments*

Advisors: Prof. Christophe Chaillou and Prof. Ștefan-Gheorghe Pentiu



AWARDED "CUM LAUDE" DISTINCTION

Diploma in Computer Science, 1999 – 2004

Faculty of Electrical Engineering and Computer Science

University Ștefan cel Mare of Suceava, Romania

GPA 9.82 / 10 over 5 years



RANKED 1ST IN GRADUATING CLASS

Diploma in Economics, 1999 – 2003

Faculty of Economic Sciences and Administration

University Ștefan cel Mare of Suceava, Romania

Final exam grade: 9.48 / 10

ACADEMIC PROFESSIONAL EXPERIENCE

Professor of Computer Science, since February 2016

Faculty of Electrical Engineering and Computer Science, University Ștefan cel Mare of Suceava, Romania

Teaching: Algorithms Design, Advanced Programming Concepts, Advanced Artificial Intelligence, Natural Human-Computer Interaction

Research in Human-Computer Interaction, Ambient Intelligence, Accessible Computing, Entertainment Computing

Director of the [Machine Intelligence and Information Visualization Research Lab](#), since 2015

A laboratory part of the MANSiD Research Center, University Ștefan cel Mare of Suceava, Romania

The research goals of the laboratory are design and development of useful and usable interactions between humans and computers by means of advanced AI & InfoVis informed by understanding users

Associate Professor (Computer Science), October 2014 – January 2016

Faculty of Electrical Engineering and Computer Science, University Ștefan cel Mare of Suceava, Romania

Teaching: Algorithms Design, Advanced Programming Concepts, Pattern Recognition, Advanced Artificial Intelligence, Image Processing Systems

Research in Human-Computer Interaction and Ambient Intelligence

Lecturer in Computer Science, 2009 - 2014

Faculty of Electrical Engineering and Computer Science, University Ștefan cel Mare of Suceava, Romania

Teaching: Algorithms Design, Advanced Programming Concepts, Pattern Recognition, Computer Network Programming, Introduction to Computer Programming

Research in Human-Computer Interaction

Assistant Professor, 2008 – 2009

Faculty of Electrical Engineering and Computer Science, University Ștefan cel Mare of Suceava, Romania

Teaching: Algorithms Design, Pattern Recognition, Introduction to Computer Programming

Ph.D. student in Computer Science, October 2004 – March 2008

University Lille 1, France & University Ștefan cel Mare of Suceava, Romania

Research in gesture user interfaces for interacting in virtual environments

Thesis title: *Real-time Human Gesture Acquisition for Interacting with Virtual Environments*

Advisors: Prof. Christophe Chaillou and Prof. Ștefan-Gheorghe Pentiu


Scholarship awarded by Agence Universitaire de la Francophonie (AUF) between 2015 – 2017


Invited/visiting positions: Université catholique de Louvain, Belgium (one week in November 2019, September 2018, and June 2017); Beihang University, Beijing, China (one week in October 2019 and August 2017); Technical University of Vienna, Austria (one week in September 2015 and April 2014); University of Mons, Belgium (one week in October 2013, July 2013, April 2013, and October 2012); INRIA Lille Nord Europe, France (two months, June – July 2011), University Lille 1, France (one month, May 2011).

PUBLICATIONS

ARTICLES IN JOURNALS

Note: Journal key metrics, such as impact factors (IF) and 5-year impact factors (5-Year IF) are provided below, according to the most recent Web of Science™ (WoS) InCites™ Journal Citation Reports® (JCR) available in the publication year of each article. My total impact factor for WoS journal articles is **40.968** (representing the absolute sum of all the 5-Year IFs) and, respectively, **22.831** (the average value of the 5-Year IFs considering the number of co-authors). Sixteen (16) articles were published by journals ranked in the Q1 or Q2 quartiles according to JCR; Q1/Q2 journals are highlighted in the list below.

- J01. Irina Popovici, Ovidiu-Andrei Schipor, Radu-Daniel Vatavu. (2019). Hover: Exploring Cognitive Maps and Mid-Air Pointing for Television Control. *International Journal of Human-Computer Studies* 129 (September 2019). Elsevier, 95-107. doi:10.1016/j.ijhcs.2019.03.012
Q2 quartile, IF: 2.300, 5-Year IF: 2.224 (Web of Science™ InCites™ JCR® 2017)
- J02. Víctor Manuel López Jaquero, Radu-Daniel Vatavu, Jose Ignacio Panach, Oscar Pastor, Jean Vanderdonckt. (2019). A Newcomer's Guide to EICS, the Engineering Interactive Computing Systems Community. *Proceedings of the ACM on Human-Computer Interaction* 3, EICS, Article 1 (June 2019), 9 pages. doi:10.1145/3300960
- J03. Ovidiu-Andrei Schipor, Radu-Daniel Vatavu, Wenjun Wu. (2019). SAPIENS: Towards Software Architecture to Support Peripheral Interaction in Smart Environments. *Proceedings of the ACM on Human-Computer Interaction* 3, EICS, Article 11 (June 2019), 24 pages. doi:10.1145/3331153
- J04. Adrian Aiordăchioae, Radu-Daniel Vatavu. (2019). Life-Tags: A Smartglasses-based System for Recording and Abstracting Life with Tag Clouds. *Proceedings of the ACM on Human-Computer Interaction* 3, EICS, Article 15 (June 2019), 22 pages. doi:10.1145/3331157
- J05.  Jean Vanderdonckt, Mathieu Zen, Radu-Daniel Vatavu. (2019). AB4Web: An On-Line A/B Tester for Comparing User Interface Design Alternatives. *Proceedings of the ACM on Human-Computer Interaction* 3, EICS, Article 18 (June 2019), 28 pages. doi:10.1145.3331160
HONORABLE MENTION AWARD DELIVERED AT THE ACM EICS '19 CONFERENCE
- J06. Ovidiu-Andrei Schipor, Radu-Daniel Vatavu, Jean Vanderdonckt. (2019). Euphoria: A Scalable, Event-driven Architecture for Designing Interactions across Heterogeneous Devices in Smart Environments. *Information and Software Technology* 109 (May 2019). Elsevier, 43-59. doi:10.1016/j.infsof.2019.01.006
Q1 quartile, IF: 2.627, 5-Year IF: 2.768 (Web of Science™ InCites™ JCR® 2017)
- J07. Ovidiu-Andrei Schipor, Radu-Daniel Vatavu. (2018). Invisible, Inaudible, and Impalpable: Users' Preferences and Memory Performance for Digital Content in Thin Air. *IEEE Pervasive Computing* 17(4). IEEE, 76-85. doi:10.1109/MPRV.2018.2873856
Q1 quartile, IF: 3.022, 5-Year IF: 2.916 (Web of Science™ InCites™ JCR® 2017)
- J08. Radu-Daniel Vatavu, Bogdan-Florin Gheran, Maria-Doina Schipor. (2018). The Impact of Low Vision on Touch Gesture Articulation on Mobile Devices. *IEEE Pervasive Computing* 17(1). IEEE, 27-37. doi:10.1109/MPRV.2018.011591059
Q1 quartile, IF: 3.022, 5-Year IF: 2.916 (Web of Science™ InCites™ JCR® 2017)

- J09. Radu-Daniel Vatavu. (2017). Characterizing Gesture Knowledge Transfer across Multiple Contexts of Use. *Journal on Multimodal User Interfaces 11*(4). Springer International Publishing, 301-314. doi:10.1007/s12193-017-0247-x
IF: 1.031, 5-Year IF: 1.039 (Web of Science™ InCites™ JCR® 2016)
- J10.  Radu-Daniel Vatavu. (2017). Smart-Pockets: Body-Deictic Gestures for Fast Access to Personal Data during Ambient Interactions. *International Journal of Human-Computer Studies 103*. Elsevier, 1-21. doi:10.1016/j.ijhcs.2017.01.005
Q1 quartile, IF: 2.863, 5-Year IF: 2.657, (Web of Science™ InCites™ JCR® 2016)
Journal was ranked 1st position in Ergonomics in 2017
"RESEARCH OF EXCELLENCE" AWARD FROM UEFISCDI, ROMANIA, 2017
"MIHAI DRĂGANESCU" AWARD OF THE ROMANIAN ACADEMY, 2019
- J11. Radu-Daniel Vatavu. (2017). Beyond Features for Recognition: Human-Readable Measures to Understand Users' Whole-Body Gesture Performance. *International Journal of Human-Computer Interaction 33*(9), 713-730. Taylor & Francis. doi: 10.1080/10447318.2017.1278897
IF: 1.118, 5-Year IF: 1.396 (Web of Science™ InCites™ JCR® 2016)
- J12. Radu-Daniel Vatavu. (2017). Visual Impairments and Mobile Touchscreen Interaction: State-of-the-Art, Causes of Visual Impairment, and Design Guidelines. *International Journal of Human-Computer Interaction 33* (6). Taylor & Francis, 486-509. doi:10.1080/10447318.2017.1279827
IF: 1.118, 5-Year IF: 1.396 (Web of Science™ InCites™ JCR® 2016)
- J13. Yihua Lou, Wenjun Wu, Radu-Daniel Vatavu, Wei-Tek Tsai. (2017). Personalized Gesture Interactions for Cyber-Physical Smart-Home Environments. *Science China Information Sciences 60* (7). Science China Press & Springer, 072104:1-15. doi: 10.1007/s11432-015-1014-7
Q2 quartile, IF: 1.628, 5-Year IF: 1.151 (Web of Science™ InCites™ JCR® 2016)
- J14. Ovidiu-Andrei Schipor, Wenjun Wu, Wei-Tek Tsai, Radu-Daniel Vatavu. (2017). Software Architecture Design for Spatially-Indexed Media in Smart Environments. *Advances in Electrical and Computer Engineering 17*(2), 17-22. doi: 10.4316/AECE.2017.02003
IF: 0.595, 5-Year IF: 0.661 (Web of Science™ InCites™ JCR® 2016)
- J15. Radu-Daniel Vatavu, Matei Mancaş. (2015). Evaluating Visual Attention for Multi-Screen Television: Measures, Toolkit, and Experimental Findings. *Personal and Ubiquitous Computing 19*(5-6). Springer London, 781-801. doi:10.1007/s00779-015-0862-z
Q2 quartile, IF: 1.498, 5-Year IF: 1.708 (Web of Science™ InCites™ JCR® 2015)
- J16. Ionuț-Alexandru Zaiți, Ștefan-Gheorghe Pentiuc, Radu-Daniel Vatavu. (2015). On Free-Hand TV Control: Experimental Results on User-Elicited Gestures with Leap Motion. *Personal and Ubiquitous Computing 19*(5-6). Springer London, 821-838. doi:10.1007/s00779-015-0863-y
Q2 quartile, IF: 1.498, 5-Year IF: 1.708 (Web of Science™ InCites™ JCR® 2015)
- J17. Radu-Daniel Vatavu, Gabriel Cramariuc, Doina Maria Schipor. (2015). Touch Interaction for Children Aged 3 to 6 Years: Experimental Findings and Relationship to Motor Skills. *International Journal of Human-Computer Studies 74*. Elsevier, 54-76. doi:10.1016/j.ijhcs.2014.10.007
Q1 quartile, IF: 1.476, 5-Year IF: 2.097 (Web of Science™ InCites™ JCR® 2015)
- J18. Radu-Daniel Vatavu, Ionut-Alexandru Zaiți. (2013). Automatic Recognition of Object Size and Shape via User-Dependent Measurements of the Grasping Hand. *International Journal of Human-Computer Studies 71*(5). Elsevier, 590-607. doi:10.1016/j.ijhcs.2013.01.002

- Q1 quartile**, IF: 1.165, 5-Year IF: 1.942 (Web of Science™ InCites™ JCR® 2013)
- J19. Radu-Daniel Vatavu. (2013). The Impact of Motion Dimensionality and Bit Cardinality on the Design of 3D Gesture Recognizers. *International Journal of Human-Computer Studies* 71(4). Elsevier, 387-409. doi:10.1016/j.ijhcs.2012.11.005
- Q1 quartile**, IF: 1.165, 5-Year IF: 1.942 (Web of Science™ InCites™ JCR® 2013)
- J20. Radu-Daniel Vatavu. (2013). A Comparative Study of User-Defined Handheld vs. Freehand Gestures for Home Entertainment Environments. *Journal of Ambient Intelligence and Smart Environments* 5(2). IOS Press, 187-211. doi:10.3233/AIS-130200
- IF: 1.082, 5-Year IF: 1.252 (Web of Science™ InCites™ JCR® 2013)
- J21. Bogdan Pogorelc, Artur Lugmayr, Bjorn Stockleben, Radu-Daniel Vatavu, Nina Tahmasebi, Estefania Serral, Emilija Stojmenova, Bojan Imperl, Thomas Risse, Gideon Zenz, Matjaz Gams. (2013). Ambient Bloom: New Business, Content, Design and Models to Increase the Semantic Ambient Media Experience. *Multimedia Tools and Applications*, 66(1). Springer, 7-32. doi:10.1007/s11042-012-1228-4
- Q2 quartile**, IF: 1.058, 5-Year IF: 1.039 (Web of Science™ InCites™ JCR® 2013)
- J22. Radu-Daniel Vatavu. (2013). On Designing Interactivity Awareness for Ambient Displays. *Multimedia Tools and Applications*, 66(1). Springer, 59-80. doi:10.1007/s11042-012-1140-y
- Q2 quartile**, IF: 1.058, 5-Year IF: 1.039 (Web of Science™ InCites™ JCR® 2013)
- J23. Radu-Daniel Vatavu. (2012). Nomadic Gestures: A Technique for Reusing Gesture Commands for Frequent Ambient Interactions. *Journal of Ambient Intelligence and Smart Environments*, 4(2). IOS Press, 79-93. doi:10.3233/AIS-2012-0137
- IF: 0.707, 5-Year IF: 1.020 (Web of Science™ InCites™ JCR® 2012)
- J24. Radu-Daniel Vatavu. (2012). Point & Click Mediated Interactions for Large Home Entertainment Displays. *Multimedia Tools and Applications*, 59(1). Springer, 113-128. doi:10.1007/s11042-010-0698-5
- Q2 quartile**, IF: 1.014, 5-Year IF: 0.932 (Web of Science™ InCites™ JCR® 2012)
- J25. Bogdan Pogorelc, Radu-Daniel Vatavu, Artur Lugmayr, Bjorn Stockleben, Thomas Risse, Juha Kaario, Estefania Constanza Lomonaco, Matjaz Gams. (2012). Semantic Ambient Media: From Ambient Advertising to Ambient-Assisted Living. *Multimedia Tools and Applications*, 58(2). Springer, 399-425. doi:10.1007/s11042-011-0917-8
- Q2 quartile**, IF: 1.014, 5-Year IF: 0.932 (Web of Science™ InCites™ JCR® 2012)
- J26. Radu-Daniel Vatavu. (2012). Presence Bubbles: Supporting and Enhancing Human-Human Interaction with Ambient Media. *Multimedia Tools and Applications*, 58(2). Springer, 371-383. doi:10.1007/s11042-010-0674-0
- Q2 quartile**, IF: 1.014, 5-Year IF: 0.932 (Web of Science™ InCites™ JCR® 2012)
- J27. Remus-Cătălin Prodan, Ștefan-Gheorghe Pentiu, Radu-Daniel Vatavu. (2012). An Efficient Solution for Hand Gesture Recognition from Video Sequence. *Advances in Electrical and Computer Engineering*, 12(3). Suceava, 85-88. doi:10.4316/AECE.2012.03013
- J28. Cristian Andy Tănase, Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu, Adrian Graur. (2008). Detecting and Tracking Multiple Users in the Proximity of Interactive Tabletops. *Advances in Electrical and Computer Engineering*, 8(2). Suceava, 61-64. doi:10.4316/AECE.2008.02011

- J29. Radu-Daniel Vatavu, Stefan-Gheorghe Pentiu, Laurent Grisoni, Christophe Chaillou. (2008). Modeling Shapes for Pattern Recognition: A Simple Low-Cost Spline-based Approach. *Advances in Electrical and Computer Engineering*, 8(1). Suceava, 67-71. doi:10.4316/AECE.2008.01012
- J30. Radu-Daniel Vatavu, Stefan-Gheorghe Pentiu. (2008). Multi-Level Representation of Gesture as Command for Human-Computer Interaction. *Computing and Informatics*, 27(6). Slovak Academy of Sciences, 837-851. doi:www.cai.sk/ojs/index.php/cai/article/viewArticle/16
IF: 0.524, 5-Year IF: 0.543 (Web of Science™ InCites™ JCR® 2007)
- J31. Adriana Băcilă, Xavier Decoopman, Radu-Daniel Vatavu, G. Mesmacque, M. Vodă, V.A. Șerban. (2007). Computer Simulation of Fatigue Crack Propagation under Random Loading Conditions. *International Journal of Fatigue*, 29(9-11). Elsevier, 1772-1780. doi:10.1016/j.ijfatigue.2007.02.026
Q1 quartile, IF: 2.162, 5-Year IF: 2.252 (Web of Science™ InCites™ JCR® 2007)
- J32. Radu-Daniel Vatavu, Stefan-Gheorghe Pentiu, Christophe Chaillou. (2005). On Natural Gestures for Interacting in Virtual Environments. *Advances in Electrical and Computer Engineering*, 5(12), 72-79.


PAPERS IN INTERNATIONAL CONFERENCES


Note: Conferences listed in this section are peer-reviewed venues with full archived publications at prestigious publishing houses, such as the Association for Computing Machinery (ACM). Top-tier conferences, such as CHI, INTERACT, MobileHCI, TVX, etc. represent extremely selective venues with acceptance rates between 20 and 30%. Where available, acceptance rates are provided for each venue. CHI is the premier international conference of Human-Computer Interaction, the flagship conference of ACM SIGCHI¹, ranked first in the "Top publications – Human-Computer Interaction" according to the h5-index.² ARC CORE A*, A, and B conferences are highlighted in the list below.



- C01. Irina Popovici, Radu-Daniel Vatavu. (2019). Understanding Users' Preferences for Augmented Reality Television. *Proceedings of ISMAR '19, the 18th International Symposium on Mixed and Augmented Reality*. IEEE Press, 397-406. doi:10.1109/ISMAR.2019.00053
CORE A*, ACC. RATE: 50/163 = 30.7%
- C02. Adrian Aiordăchioae, Radu-Daniel Vatavu, Dorin Mircea Popovici. (2019). A Design Space for Vehicular LifeLogging to Support Creation of Digital Content in Connected Cars. *Proceedings of EICS '19, the 11th the ACM SIGCHI Symposium on Engineering Interactive Computing Systems*. New York, NY, USA: ACM Press, Article No. 9, 6 Pages. doi:10.1145/3319499.3328234
- C03. Nathan Magrofuoco, Jean Vanderdonckt, Paolo Roselli, Jorge-Luis Perez-Medina, Radu-Daniel Vatavu.  (2019). GestMan: A Cloud System for Managing Stroke Gesture Sets. *Proceedings of EICS '19, the 11th the ACM SIGCHI Symposium on Engineering Interactive Computing Systems*. New York, NY, USA: ACM Press, Article No. 7, 6 Pages. doi:10.1145/3319499.3328227
BEST TECH NOTE AWARD
- C04. Radu-Daniel Vatavu. (2019). The Dissimilarity-Consensus Approach to Agreement Analysis in Gesture Elicitation Studies. *Proceedings of CHI '19, the 37th ACM Conference on Human Factors in Computing Systems*. New York, NY, USA: ACM Press, Paper 224. doi:10.1145/3290605.3300454
CORE A*, ACC. RATE: 703/2958 = 23.8%


¹ <http://www.sigchi.org/conferences>

² https://scholar.google.com/citations?view_op=top_venues&vq=eng_humancomputerinteraction

- C05. Radu-Daniel Vatavu, Ovidiu-Ciprian Ungurean. (2019). Stroke-Gesture Input for People with Motor Impairments: Empirical Results & Research Roadmap. *Proceedings of CHI '19, the 37th ACM Conference on Human Factors in Computing Systems*. New York, NY, USA: ACM Press, Paper 215. doi:10.1145/3290605.3300445
CORE A*, ACC. RATE: 703/2958 = 23.8%
- C06.  Radu-Daniel Vatavu, Lisa Anthony, Jacob O. Wobbrock. (2018). \$Q: a super-quick, articulation-invariant stroke-gesture recognizer for low-resource devices. *Proceedings of MobileHCI '18, the 20th International Conference on Human-Computer Interaction with Mobile Devices and Services*. ACM, New York, NY, USA, Article 23. doi:10.1145/3229434.3229465
CORE B, ACC. RATE: 50/216 = 23.1% | **HONORABLE MENTION AWARD**
- C07. Luis A. Leiva, Daniel Martín-Albo, Radu-Daniel Vatavu. (2018). GATO: predicting human performance with multistroke and multitouch gesture input. *Proceedings of MobileHCI '18, the 20th International Conference on Human-Computer Interaction with Mobile Devices and Services*. New York: ACM Press, Article 32. doi:10.1145/3229434.3229478
CORE B, ACC. RATE: 50/216 = 23.1%
- C08. Ovidiu-Ciprian Ungurean, Radu-Daniel Vatavu, Luis A. Leiva, Daniel Martín-Albo. 2018. Predicting stroke gesture input performance for users with motor impairments. *Proceedings of MobileHCI '18 Adjunct, the 20th International Conference on Human-Computer Interaction with Mobile Devices and Services Adjunct*. ACM, New York, NY, USA, 23-30. doi:10.1145/3236112.3236116
CORE B
- C09. Irina Popovici, Radu-Daniel Vatavu. (2018). Perceived Usability, Desirability, and Workload of Mid-Air Gesture Control for Smart TVs. *Proceedings of RoCHI '18, the 15th Romanian International Conference on Human-Computer Interaction*. Bucharest: Matrix Rom, 91-98. doi:dblp.org/rec/conf/rochi/PopoviciV18
ACC. RATE: 28/42 = 66.7%
- C10. Bogdan-Florin Gheran, Ovidiu-Ciprian Ungurean, Radu-Daniel Vatavu. (2018). Toward Smart Rings as Assistive Devices for People with Motor Impairments: A Position Paper. *Proceedings of RoCHI '18, the 15th Romanian International Conference on Human-Computer Interaction*. Bucharest: Matrix Rom, 99-106. doi:dblp.org/rec/conf/rochi/GheranUV18
ACC. RATE: 28/42 = 66.7%
- C11. Bogdan-Florin Gheran, Jean Vanderdonckt, Radu-Daniel Vatavu. (2018). Gestures for Smart Rings: Empirical Results, Insights, and Design Implications. *Proceedings of DIS '18, the 2018 Designing Interactive Systems Conference*. New York: ACM Press, 623-635. doi:10.1145/3196709.3196741
CORE B, ACC. RATE: 107/487 = 22.0%
- C12. Bogdan-Florin Gheran, Radu-Daniel Vatavu, Jean Vanderdonckt. (2018). Ring x2: Designing Gestures for Smart Rings using Temporal Calculus. *Proceedings of DIS '18 Companion, the 2018 ACM Conference Companion Publication on Designing Interactive Systems*. ACM, New York, NY, USA, 117-122. doi:10.1145/3197391.3205422
CORE B, ACC. RATE: 50/107 = 46.7%
- C13. Jean-Yves Lionel Lawson, Jean Vanderdonckt, Radu-Daniel Vatavu. (2018). Mass-Computer Interaction for Thousands of Users and Beyond. *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems*. New York: ACM Press, Paper LBW032. doi:10.1145/3170427.3188465
CORE A*, ACC. RATE: 255/641 = 39.8%

- C14. Ovidiu-Ciprian Ungurean, Radu-Daniel Vatavu, Luis A. Leiva, Réjean Plamondon. (2018). Gesture Input for Users with Motor Impairments on Touchscreens: Empirical Results based on the Kinematic Theory. *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems*. New York: ACM Press, Paper LBW537. doi:10.1145/3170427.3188619
CORE A*, ACC. RATE: 255/641 = 39.8%
- C15. Luis A. Leiva, Daniel Martín-Albo, Réjean Plamondon, Radu-Daniel Vatavu. (2018). KeyTime: Super-Accurate Prediction of Stroke Gesture Production Times. *Proceedings of CHI '18, the 36th ACM Conference on Human Factors in Computing Systems*. New York: ACM Press, Paper No. 239. doi:10.1145/3173574.3173813
CORE A*, ACC. RATE: 666/2592 = 25.7%
- C16. Luis A. Leiva, Daniel Martín-Albo, Radu-Daniel Vatavu. (2017). Synthesizing Stroke Gestures Across User Populations: A Case for Users with Visual Impairments. *Proceedings of CHI '17, the 35th ACM Conference on Human Factors in Computing Systems*. New York: ACM Press, 4182-4193. doi:10.1145/3025453.3025906
CORE A*, ACC. RATE: 606/2424 = 25%
- C17. Radu-Daniel Vatavu. (2017). Improving Gesture Recognition Accuracy on Touch Screens for Users with Low Vision. *Proceedings of CHI '17, the 35th ACM Conference on Human Factors in Computing Systems*. New York: ACM Press, 4182-4193. doi:10.1145/3025453.3025941
CORE A*, ACC. RATE: 606/2424 = 25%
- C18. Maria Doina Schipor, Radu-Daniel Vatavu. (2017). Neurobiological and Neurocognitive Models of Vision for Touch Input on Mobile Devices. *Proceedings of EHB '17, the 6th IEEE International Conference on e-Health and Bioengineering*. IEEE Press, 353-356. doi:10.1109/EHB.2017.7995434
- C19. Maria Doina Schipor, Radu-Daniel Vatavu. (2017). Coping Strategies of People with Low Vision for Touch Input: A Lead-in Study. *Proceedings of EHB '17, the 6th IEEE International Conference on e-Health and Bioengineering*. IEEE Press, 357-360. doi:10.1109/EHB.2017.7995435
- C20. Radu-Daniel Vatavu, Annette Mossel, Christian Schönauer. (2016). Digital Vibrons: Understanding Users' Perceptions of Interacting with Invisible, Zero-Weight Matter. *Proceedings of MobileHCI '16, the 18th International Conference on Human-Computer Interaction with Mobile Devices and Services*. New York: ACM Press, 217-226. doi:10.1145/2935334.2935364
CORE B, ACC. RATE: 57/238 = 23.9%
- C21. Radu-Daniel Vatavu, Jacob O. Wobbrock. (2016). Between-subjects elicitation studies: Formalization and tool support. *Proceedings of CHI '16, the 34th ACM Conference on Human Factors in Computing Systems*. New York: ACM Press, 3390-3402. doi:10.1145/2858036.2858228
CORE A*, ACC. RATE: 565/2435=23%
- C22. Martez E. Mott, Radu-Daniel Vatavu, Shaun K. Kane, Jacob O. Wobbrock. (2016). Smart Touch:  Improving Touch Accuracy for People with Motor Impairments with Template Matching. *Proceedings of CHI '16, the 34th ACM Conference on Human Factors in Computing Systems*. New York: ACM Press, 1934-1946. doi:10.1145/2858036.2858390
CORE A*, ACC. RATE: 565/2435=23%, **BEST PAPER AWARD**
- C23. Radu-Daniel Vatavu, Lisa Anthony, Quincy Brown. (2015). Child or Adult? Inferring Smartphone Users' Age Group from Touch Measurements Alone. *Proceedings of INTERACT'15, the 15th IFIP TC.13 Int. Conference on Human-Computer Interaction*. Springer, 1-9. doi:10.1007/978-3-319-22723-8_1
CORE A, ACC. RATE: 85/286=30%

- C24. Christian Schönauer, Annette Mossel, Ionut-Alexandru Zaiti, Radu-Daniel Vatavu. (2015). Touch, Movement & Vibration: User Perception of Vibrotactile Feedback for Touch and Mid-Air Gestures. *Proceedings of INTERACT'15, the 15th IFIP TC.13 International Conference on Human-Computer Interaction*. Springer, 165-172. doi:10.1007/978-3-319-22723-8_14
CORE A, ACC. RATE: 85/286=30%
- C25. Radu-Daniel Vatavu. (2015). Audience Silhouettes: Peripheral Awareness of Synchronous Audience Kinesics for Social Television. *Proceedings of TVX'15, the 2nd ACM International Conference on Interactive Experiences for TV and Online Video*. New York: ACM Press, 13-22.  doi:10.1145/2745197.2745207
ACC. RATE: 12/50=24%, **BEST PAPER AWARD**
- C26. Radu-Daniel Vatavu, Jacob O. Wobbrock. (2015). Formalizing Agreement Analysis for Elicitation Studies: New Measures, Significance Test, and Toolkit. *Proceedings of CHI'15, the 33rd ACM SIGCHI Conference on Human Factors in Computing Systems*. New York: ACM Press, 1325-1334.  doi:10.1145/2702123.2702223
CORE A*, ACC. RATE: 495/2150=23%, **"BEST OF CHI" HONORABLE MENTION AWARD**
- C27. Radu-Daniel Vatavu, Lisa Anthony, Jacob O. Wobbrock. (2014). Gesture Heatmaps: Understanding Gesture Performance with Colorful Visualizations. *Proceedings of ICMI'14, the 16th ACM International Conference on Multimodal Interaction*. New York: ACM Press, 172-179. doi:10.1145/2663204.2663256
CORE B, ACC. RATE: 49/127=39%
- C28. Yosra Rekik, Radu-Daniel Vatavu, Laurent Grisoni. (2014). Understanding Users' Perceived Difficulty of Multi-Touch Gesture Articulation. *Proceedings of ICMI'14, the 16th ACM International Conference on Multimodal Interaction*. New York: ACM Press, 232-239. doi:10.1145/2663204.2663273
CORE B, ACC. RATE: 49/127=39%
- C29. Radu-Daniel Vatavu, Matei Mancaş. (2014). Visual Attention Measures for Multi-Screen TV. *Proceedings of TVX'14, the ACM International Conference on Interactive Experiences for TV and Online Video*. New York: ACM Press, 111-118. doi:10.1145/2602299.2602305
ACC. RATE: 20/80=25%
- C30. Radu-Daniel Vatavu, Ionut-Alexandru Zaiti. (2014). Leap Gestures for TV: Insights from an Elicitation Study. *Proceedings of TVX'14, the ACM International Conference on Interactive Experiences for TV and Online Video*. New York: ACM Press, 131-138 doi:10.1145/2602299.2602316
ACC. RATE: 20/80=25%
- C31. Yosra Rekik, Radu-Daniel Vatavu, Laurent Grisoni. (2014). Match-Up & Conquer: A Two-Step Technique for Recognizing Unconstrained Bimanual and Multi-Finger Touch Input. *Proceedings of AVI'14, the 12th International Working Conference on Advanced Visual Interfaces*. New York: ACM Press, 201-208
CORE B, ACC. RATE: 47/164=28%
- C32. Radu-Daniel Vatavu, Lisa Anthony, Jacob O. Wobbrock. (2013). Relative Accuracy Measures for Stroke Gestures. *Proceedings of ICMI'13, the 15th ACM International Conference on Multimodal Interaction*. New York: ACM Press, 279-286. doi:10.1145/2522848.2522875
CORE B, ACC. RATE: 50/133=38%
- C33. Radu-Daniel Vatavu, Matei Mancaş. (2013). Interactive TV Potpourris: An Overview of Designing Multi-screen TV Installations for Home Entertainment. *Proceedings of INTETAIN'13, 5th International ICST Conference on Intelligent Technologies for Interactive Entertainment*. Lecture Notes of the Institute for Computer Sciences vol. 124. Springer Int. Publishing, 49-54. doi:10.1007/978-3-319-03892-6_6

- C34. Radu-Daniel Vatavu. (2013). There's a World outside Your TV: Exploring Interactions beyond the Physical TV Screen. *Proceedings of EuroITV'13, the 11th European Conference on Interactive TV and Video*. New York: ACM Press, 143-152. doi:10.1145/2465958.2465972
ACC. RATE: 21/58=36%
- C35. Ionuț-Alexandru Zaiți, Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu. (2013). Exploring Hand Posture for Smart Mobile Devices. *Proceedings of SouthCHI'13, the 1st International Conference on Human Factors in Computing and Informatics*. Lecture Notes in Computer Science vol. 7946. Berlin: Springer, 721-731. doi:10.1007/978-3-642-39062-3_52
ACC. RATE: 57/169=34%
- C36. Lisa Anthony, Radu-Daniel Vatavu, Jacob O. Wobbrock. (2013). Understanding the Consistency of Users' Pen and Finger Stroke Gesture Articulation. *Proceedings of GI'13, the 39th Graphics Interface Conference*. Toronto, Ontario: Canadian Information Processing Society, 87-94. doi:2532129.2532145
CORE B, ACC. RATE: 16/42=38% (HCI TRACK)
- C37. Radu-Daniel Vatavu, Géry Casiez, Laurent Grisoni. (2013). Small, Medium, or Large?: Estimating the User-Perceived Scale of Stroke Gestures. *Proceedings of CHI'13, the 31st ACM SIGCHI Conference on Human Factors in Computing Systems*. New York: ACM Press, 277-280. doi:10.1145/2470654.2470692
CORE A*, ACC. RATE: 392/1963=20%
- C38. Radu-Daniel Vatavu, Cătălin Marian Chera, Wei-Tek Tsai. (2012). Gesture Profile for Web Services: An Event-driven Architecture to Support Gestural Interfaces for Smart Environments. *Proceedings of AmI'12, the International Joint Conference on Ambient Intelligence*. Lecture Notes in Computer Science vol. 7683. Berlin: Springer, 161-176. doi:10.1007/978-3-642-34898-3_11
ACC. RATE: 18/47=38% (LONG PAPERS)
- C39. Radu-Daniel Vatavu, Lisa Anthony, Jacob O. Wobbrock. (2012). Gestures as Point Clouds: A \$P  Recognizer for User Interface Prototypes. *Proceedings of ICMI'12, the 14th ACM International Conference on Multimodal Interaction*. New York: ACM Press, 273-280. doi:10.1145/2388676.2388732
CORE B, ACC. RATE: 15/74=20% (LONG PAPERS), **OUTSTANDING PAPER AWARD**
- C40. Cătălin Marian Chera, Wei-Tek Tsai, Radu-Daniel Vatavu. (2012). Gesture Ontology for Informing Service-Oriented Architectures. *Proceedings of ISIC'12, the IEEE International Symposium on Intelligent Control*. Washington, D.C.: IEEE Computer Society, 1184-1189. doi:10.1109/ISIC.2012.6398257
CORE B
- C41. Radu-Daniel Vatavu. (2012). User-Defined Gestures for Free-Hand TV Control. *Proceedings of EuroITV'2012, the 10th European Conference on Interactive TV and Video*. New York: ACM Press, 45-48. doi:10.1145/2325616.2325626
ACC. RATE: 31/91=34%
- C42. Radu-Daniel Vatavu. (2012). Small Gestures Go a Long Way: How Many Bits per Gesture Do Recognizers Actually Need? *Proceedings of DIS'12, the 9th ACM International Conference on Designing Interactive Systems*. New York: ACM Press, 328-337. doi:10.1145/2317956.2318006
CORE B, ACC. RATE: 90/449=20%
- C43. Radu-Daniel Vatavu. (2012). 1F: One Accessory Feature Design for Gesture Recognizers. *Proceedings of IUI'12, the 17th International Conference on Intelligent User Interfaces*. New York: ACM Press, 297-300. doi:10.1145/2166966.2167022
CORE A, ACC. RATE: 49/212=23%

- C44. Radu-Daniel Vatavu. (2011). The Effect of Sampling Rate on the Performance of Template-based Gesture Recognizers. *Proceedings of ICMI'11, the 13th International Conference on Multimodal Interaction*. New York: ACM Press, 271-278. doi:10.1145/2070481.2070531
CORE B, ACC. RATE: 47/120=39%
- C45. Radu-Daniel Vatavu, Daniel Vogel, Géry Casiez, Laurent Grisoni. (2011). Estimating the Perceived Difficulty of Pen Gestures. *Proceedings of INTERACT'11, the 13th IFIP TC13 Conference on Human-Computer Interaction*. Lecture Notes in Computer Science vol. 6947. Berlin: Springer, 89-106. doi:10.1007/978-3-642-23771-3_9
CORE A, ACC. RATE: 111/402=27%
- C46. Radu-Daniel Vatavu. (2011). Reusable Gestures for Interacting with Ambient Displays in Unfamiliar Environments. *Proceedings of ISAmI'11, the 2nd International Symposium on Ambient Intelligence*. Advances in Intelligent and Soft Computing vol. 92. Berlin: Springer, 157-164. doi:10.1007/978-3-642-19937-0_20
- C47. Radu-Daniel Vatavu, Laurent Grisoni, Ștefan-Gheorghe Pentiu. (2010). Multiscale Detection of Gesture Patterns in Continuous Motion Trajectories. *Proceedings of GW'09, the 8th International Gesture Workshop*. Lecture Notes in Computer Science vol. 5934. Berlin: Springer, 85-97. doi:10.1007/978-3-642-12553-9_8
- C48. Radu-Daniel Vatavu, Laurent Grisoni, Ștefan-Gheorghe Pentiu. (2009). Gesture Recognition Based on Elastic Deformation Energies. *Proceedings of GW'07, the 7th International Gesture Workshop*. Lecture Notes in Computer Science vol. 5085. Berlin: Springer, 1-12. doi:10.1007/978-3-540-92865-2_1
ACC. RATE: 31/53=58%
- C49. Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu. (2008). Interactive Coffee Tables: Interfacing TV within an Intuitive, Fun and Shared Experience. *Proceedings of EuroITV'08, the 6th European Interactive TV Conference*. Lecture Notes in Computer Science vol. 5066. Berlin: Springer, 183-187. doi:10.1007/978-3-540-69478-6_24
ACC. RATE: 42/156=27%
- C50. Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu, Christophe Chaillou, Laurent Grisoni, Samuel Degrande. (2006). Visual Recognition of Hand Postures for Interacting with Virtual Environments. *Proceedings of DAS'06, the 8th International Conference on Development and Application Systems*. Suceava, 477-482.

CHAPTERS IN BOOKS

- B01. Yosra Rekik, Radu-Daniel Vatavu, Laurent Grisoni. (2016). Spontaneous Gesture Production Patterns on Multi-touch Interactive Surfaces. In: C. Anslow, P. Campos, J. Jorge (Eds.) *Collaboration Meets Interactive Spaces* (pp. 33-46). Springer International Publishing. doi: 10.1007/978-3-319-45853-3_3
- B02. Radu-Daniel Vatavu, Ovidiu-Ciprian Ungurean, Ștefan-Gheorghe Pentiu. (2011). Body Gestures for Office Desk Scenarios. In D. England (Ed.), *Whole Body Interaction* (pp. 163-172). Springer Human-Computer Interaction Series. London: Springer-Verlag. doi:10.1007/978-0-85729-433-3_13
- B03. Radu-Daniel Vatavu. (2011). The Understanding of Meaningful Events in Gesture-Based Interaction. In J. Zhang, L. Shao, L. Zhang, G.A. Jones (Eds.), *Intelligent Video Event Analysis and Understanding* (pp. 1-19). Springer Studies in Computational Intelligence, volume 332. Springer. doi:10.1007/978-3-642-17554-1_1

- B04. Radu-Daniel Vatavu. (2010). Creativity in Interactive TV: Personalize, Share, and Invent Interfaces. In A. Marcus, A. Cereijo Roibas, R. Sala (Eds.), *Mobile TV: Customizing Content and Experience* (pp. 121-139), Springer Human-Computer Interaction Series. London: Springer. doi:10.1007/978-1-84882-701-1_12
- B05. Radu-Daniel Vatavu. (2009). Interfaces that Should Feel Right: Natural Interaction with Multimedia Information. In M. Grgic, K. Delac, M. Ghanbari (Eds.), *Recent Advances in Multimedia Signal Processing and Communications* (pp. 145-170). Springer Studies in Computational Intelligence vol. 231. Berlin: Springer. doi:10.1007/978-3-642-02900-4_7

WORKSHOP PAPERS, COURSES, POSTERS, and OTHER PUBLICATIONS

01. Ovidiu-Andrei Schipor, Radu-Daniel Vatavu, Wenjun Wu. (2019). Integrating Peripheral Interaction into Augmented Reality Applications. *Proceedings of ISMAR '19-Adjunct, the 18th International Symposium on Mixed and Augmented Reality*. IEEE Press, 341-342.
02. Irina Popovici, Radu-Daniel Vatavu. (2019). Consolidating the Research Agenda of Augmented Reality Television with Insights from Potential End-Users. *Proceedings of ISMAR '19-Adjunct, the 18th International Symposium on Mixed and Augmented Reality*. IEEE Press, 73-74.
03. Irina Popovici, Radu-Daniel Vatavu. (2019). Towards Visual Augmentation of the Television Watching Experience: Manifesto and Agenda. In *Proceedings of TVX '19, the 2019 ACM International Conference on Interactive Experiences for TV and Online Video*. ACM, New York, NY, USA, 199-204. doi:10.1145/3317697.3325121
04. Ovidiu-Andrei Schipor, Radu-Daniel Vatavu. (2019). Towards Interactions with Augmented Reality Systems in Hyper-Connected Cars. *Proceedings of HCI Engineering 2019, the 2nd Workshop on Charting the Way Towards Methods and Tools for Advanced Interactive Systems* (in conj. with EICS '19)
05. Irina Popovici, Radu-Daniel Vatavu, Wenjun Wu. (2019). TV Channels in Your Pocket! Linking Smart Pockets to Smart TVs. In *Proceedings of TVX '19, the 2019 ACM International Conference on Interactive Experiences for TV and Online Video*. ACM, New York, NY, USA, 193-198. doi:10.1145/3317697.3325119
06. Jean Vanderdonckt, Radu-Daniel Vatavu. (2018). Designing, Engineering, and Evaluating Gesture User Interfaces. *Proceedings of the 2018 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '18)*. ACM, New York, NY, USA. doi:10.1145/3170427.3170648
07. Petru-Vasile Cioată, Radu-Daniel Vatavu. (2018). In Tandem: Exploring Interactive Opportunities for Dual Input and Output on Two Smartwatches. *Proceedings of the 23rd International Conference on Intelligent User Interfaces Companion (IUI '18 Companion)*. ACM, New York, NY, USA, Article 60. doi:10.1145/3180308.3180369
08. Radu-Daniel Vatavu. (2017). Fundamentals of Gesture Production, Recognition, and Analysis. *Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '17)*. ACM, New York, NY, USA, 1174-1177. doi:10.1145/3027063.3027106
09. Radu-Daniel Vatavu. (2016). Tools for Designing for Home Entertainment: Gesture Interfaces, Augmented Reality, and Smart Spaces. *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '16)*. ACM, New York, NY, USA, 1003-1006. doi:10.1145/2851581.2856676
10. Dorin-Mircea Popovici, Radu-Daniel Vatavu, and Mihai Polceanu. (2015). GRASphere: a prototype to augment indirect touch with grasping gestures. *Proceedings of the 14th International Conference on Mobile and Ubiquitous Multimedia (MUM '15)*. ACM, New York, NY, USA, 350-354. doi:10.1145/2836041.2841206

11. Radu-Daniel Vatavu. (2015). Gesture Interfaces, Ambient Intelligence, and Augmented Reality for the Interactive TV. In *In Proceedings of the ACM International Conference on Interactive Experiences for TV and Online Video (TVX '15)*. ACM, New York, NY, USA, 197-198. doi:10.1145/2745197.2745698
12. Radu-Daniel Vatavu. (2014). Designing New Interactive TV Applications with Gestures, Ambient Intelligence, and Augmented Reality. In *Adjunct Proceedings of TVX'14, the ACM International Conference on Interactive Experiences for TV and Online Video*.
13. Radu-Daniel Vatavu. (2013). Designing Gestural Interfaces for the Interactive TV. In *Proceedings of EuroITV'2013, the 11th European Conference on Interactive TV and Video*. New York: ACM Press, 167-168. doi:10.1145/2465958.2465981
14. Radu-Daniel Vatavu. (2012). Designing Gestural Interfaces for Future Home Entertainment Environments. In *Adjunct Proceedings of EuroITV'2012, the 10th European Conference on Interactive TV and Video*. Berlin, Fraunhofer Institute for Open Communication Systems, 136-137
15. Radu-Daniel Vatavu, Ionuț-Alexandru Zaiți. (2011). An Investigation of Extrinsic-Oriented Ambient Exploration for Gaming Applications. In R. Wichert, K. Van Laerhoven, J. Gelissen (Eds.), *Constructing Ambient Intelligence* (pp. 245-248). Springer Communications in Computer and Information Science vol. 277. Berlin: Springer-Verlag. doi:10.1007/978-3-642-31479-7_42
16. Radu-Daniel Vatavu. (2010). Understanding Challenges in Designing Interactions for the Age of Ambient Media. *Proceedings of SAME'10, the 3rd Workshop on Semantic Ambient Media Experience, in conjunction with AmI'2010*. International SERIES on Information Systems and Management in Creative eMedia (CreMedia), Tampere: Tampere University of Technology, 8-13. <http://www.ambientmediaassociation.org/Journal/index.php/series/article/view/174>
17. Radu-Daniel Vatavu. (2009). Enhancing Human-Human Interactions through Emotional Responsive Ambient Media. *Proceedings of SAME'2009, the 2nd Workshop on Semantic Ambient Media Experience, in conjunction with AmI'2009*.
18. Radu-Daniel Vatavu, Ovidiu Ciprian Ungurean, Ștefan-Gheorghe Pentiu. (2009). Gestures for your Workplace: Investigating Body Interaction for Everyday Desk Scenarios. In *Proceedings of WBI'2009, the 3rd Workshop on Whole Body Interaction, in conjunction with CHI '09*
19. Ovidiu Ciprian Ungurean, Ștefan-Gheorghe Pentiu, Radu-Daniel Vatavu. (2009). Use Your Head: An Interface for Computer Games using Head Gestures. In *Proceedings of GW' 09, the 8th International Gesture Workshop*.
20. Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu, Tudor Ioan Cerlincă. (2007). Bringing Context into Play: Supporting Game Interaction through Real-Time Context Acquisition. In *Proceedings of WMISI'07, the Workshop on Multimodal Interfaces in Semantic Interaction at ICMI'2007*, 3-8. New York: ACM Press. doi:10.1145/1330572.1330573
21. Radu-Daniel Vatavu, Ștefan-Gheorghe Pentiu. (2005). A Graphical User Interface with Real-Time Information Feedback for a Video Camera Controlled Arm Robot. In *Proceedings of IWCIT'2005, the International Workshop of Control and Information Technologies*, 49-54. Technical University of Ostrava.

THESES

01. Radu-Daniel Vatavu. (2014). *Designing Gesture Interaction by Understanding Users*. Habilitation Thesis, defended (December 13, 2014) at the Technical University of Cluj-Napoca, Romania

02. Radu-Daniel Vatavu. (2008). *Real-time Human Gesture Acquisition for Interacting with Virtual Environments*. PhD Thesis, co-directed between University Lille 1, France and University of Suceava, Romania, defended (March 18, 2008) at University of Suceava. [link: theses.fr](https://theses.fr)

AWARDED RESEARCH PROJECTS

Note: My research has received support from CNCS-UEFISCDI, Romania (the Romanian Executive Agency for Funding Higher Education, Research, Development, and Innovation); Agence Universitaire de la Francophonie (AUF); Wallonie-Bruxelles International (WBI), Belgium; OeAD Austria; the Ministry of Science and Technology, China; and the European Commission through the European Social Fund, FP7, and COST action programmes, the Increase of Economic Competitiveness Fund, and the EUCogIII research network. Note that some calls, such as UEFISCDI's "Young Independent Researcher Groups" are very competitive, with funding rates of approximately 10-12%. Where available, funding rates are also provided below, as well as the ranking of each project at the final, post-implementation evaluation.

P₁₂. **Sensory Augmentation for Low-Vision Conditions using Smart Wearables**

- Principal Investigator
- The project runs between October 2018 and October 2020 (24 months) with a team of 3 faculty members and 2 PhD students. The goal is to design new interactive technology based on smart wearables, such as smart rings and smartglasses, to enhance visual perception for people with and without low vision.
- Funded by UEFISCDI, Romania (PNIII-P1, "Young Independent Researcher Groups" grant scheme, contract no. TE141/2018) with an award of approx. 100,000€
- Web page: <http://www.eed.usv.ro/mintviz/projects/Senses++>
- Funding rate: **12.5%** (only 142 projects were funded from 1,131 applications); the project was **ranked 7th position** in the area of Mathematics and Informatics

P₁₁. **Efficient Communications based on Smart Devices for In-Car Augmented Reality Interactive Applications**

- Principal Investigator together with [Mircea-Dorin Popovici](#) (Ovidius University of Constanța, Romania)
- The project runs between May 2018 and November 2020 (30 months) with a team of 9 researchers and is part of the complex multi-project "Hybrid Light Visible Communication Platform and Augmented Reality for the Development of Intelligent Systems for Active Assistance and Safety of Vehicles" (PN-III-P1-1.2-PCCDI-2017-0917) with PI [Mihai Dimian](#) (University Stefan cel Mare of Suceava). The goal of the project is to design interactive technology for in-vehicle augmented reality applications.
- Funded by UEFISCDI, Romania (PNIII-P1, "Complex Consortium Projects" grant scheme, contract no. 21PCCDI/2018) with an award of approx. 225,000€
- Web page: [under construction](#)
- Funding rate: **22.9%** (87 projects were funded from 380 applications)

P₁₀. **New Interaction Techniques for Smart Environments at the Periphery of User Attention**

- Principal Investigator together with [Wenjun Wu](#) (Beihang University, China)
- The project runs between July 2018 and December 2019 (18 months) in cooperation with Beihang University, China with a mixed team of faculty members and PhD students. The goal is to strengthen

the collaboration between the two institutions and to design peripheral interaction techniques for smart environments.

- Funded by UEFISCDI, Romania (PNIII-P3, "European and International Cooperation" grant scheme, contract no. 3BM/2018) & Ministry of Science and Technology, China with a combined award amount of approx. 8,200€ to cover staff/student mobility between the partners
- Web page: <http://www.eed.usv.ro/mintviz/projects/PeriphInt>
- Funding rate: 33.7% (29 projects were funded from 86 applications); the project was **ranked 3rd position** out of 86 applications

P₉. MotorSkill: Effective Gesture Interactions with Touch Surfaces for Motor Impairment Conditions

- Principal Investigator
- The project ran between August 2017 and December 2018 (17 months) with a team of 6 faculty members and one PhD student. The goal was to design effective touch gesture input for users with motor impairments assisted by voice input, eye gaze tracking, and EEG analysis.
- Funded by UEFISCDI, Romania (PNIII-P2, "Demonstrative Experimental Project" grant scheme, contract no. 209PED/2017) with an award of approx. 103,000€
- Web page: <http://www.eed.usv.ro/mintviz/projects/MotorSkill>
- Funding rate: **12.1%** (252 projects funded from 2,074 applications); the project was ranked 36th position in the area of ICT, Space, and Security
- **The implementation received an "A" evaluation score** awarded by UEFISCDI

P₈. Computational Psychology of Human Movement to Understand Gestures & Body Kinesics

- Principal Investigator together with [Jean Vanderdonckt](#) (Université catholique de Louvain, Belgium)
- The project ran between January 2017 and December 2018 (24 months) in cooperation with Université catholique de Louvain, Belgium with a mixed team of faculty members and PhD students. The goal was to strengthen the collaboration between the two institutions and to develop new methodology and a software tool for whole-body gesture analysis.
- Funded by UEFISCDI, Romania (PNIII-P3, "European and International Cooperation" grant scheme, contract no. 101BM/2017) & Wallonie Bruxelles International, Belgium with a combined award amount of approx. 9,500€ to cover staff/student mobility between the partners
- Web page: <http://www.eed.usv.ro/mintviz/projects/PSYKINESICS>
- Funding rate: 55.1% (16 projects were funded from 29 applications); the project was ranked 7th position out of 29 applications

P₇. Interaction Techniques with Massive Data Clouds in Smart Environments

- Principal Investigator together with [Wenjun Wu](#) (Beihang University, China)
- The project ran between October 2016 and December 2017 (15 months) in cooperation with Beihang University, China with a mixed team of faculty members and PhD students. The goal was to develop interaction techniques and data visualizations for smart environments.
- Funded by UEFISCDI, Romania (PNIII-P3, "European and International Cooperation" grant scheme, contract no. 47BM/2016) & Ministry of Science and Technology, China with a combined award amount of approx. 8,200€ to cover staff/student mobility between the partners
- Web page: <http://www.eed.usv.ro/mintviz/projects/InteractCloud>

- Funding rate: 30.4% (28 projects funded from 92 applications); the project was **ranked 5th position** out of 29 applications

P₆. **Gesture Interfaces for Visually-Impairing Interaction Contexts**

- Principal Investigator
- The project ran between October 2015 and September 2017 (24 months) with a team of 3 faculty members and 2 PhD students. The goal was to design efficient gesture recognition on touchscreen devices for contexts of use involving physiological and situational visual impairments.
- Funded by UEFISCDI, Romania (PNII "Young Independent Researcher Groups" grant scheme, contract no. 47/2015) with an award of approx. 120,000€
- Web page: <http://www.eed.usv.ro/mintviz/projects/GIVISIMP>
- Funding rate: **13.1%** (386 projects funded from 2,961 applications); the project was **ranked 10th position** in the area of Mathematics and Informatics
- **The implementation received an "A+" evaluation score** awarded by UEFISCDI

P₅. **Multimodal Feedback for Supporting Gesture Interaction in Smart Environments**

- Principal Investigator together with [Hannes Kaufmann](#) (Technical University of Vienna)
- The project ran between January 2014 and December 2015 (24 months) in cooperation with Technical University of Vienna, Austria with a mixed team of faculty members and students. The goal of the project was to implement efficient feedback for gesture input.
- Funded by UEFISCDI, Romania & OeAD, Austria (PNII "European and International Cooperation" grant scheme, contract 740/2014) with an award of approx. 7,000€
- Web page: <http://www.eed.usv.ro/mintviz/projects/LifeStage>
- Funding rate: 51.2% (21 projects funded from 41 applications); the project was **ranked 4th position** out of 21 applications

P₄. **Gesture-based Interactive System for the Development and Educational Support of Children: Applications in Education, Tourism, and Discovery of Patrimony**

- Principal Investigator together with [Matei Mancas](#) (University of Mons, Belgium)
- The project ran between September 2012 and September 2014 (24 months) in cooperation with University of Mons, Belgium with a mixed team that included faculty members and PhD students. The goal was to collect and analyze children's gestures and design an educational application.
- Funded by UEFISCDI, Romania & WBI, Belgium (PNII "European and International Cooperation" grant scheme, contract 588/2012) with an award of approx. 5,000€
- Web page: <http://www.eed.usv.ro/mintviz/projects/InteractEDU>

P₃. **Context-dependent gesture interaction**

- I was awarded a post-doctoral scholarship between July 2010 and February 2013 (30 months) within the frame of the project "Progress and development through post-doctoral research and innovation in engineering and applied sciences - PRIDE" (POSDRU/89/1.5/S/57083) with a total award of approximately 30,000€. The goal was to develop high-performing algorithms for gesture recognition in various contexts of use and application scenarios for gesture-based interaction.

P₂. **Wallonie-Bruxelles International post-doctoral scholarship**

- I was awarded a one-month WBI post-doctoral scholarship (ref. no. 2009/05914) that I declined for personal reasons

P₁. **AUF International PhD scholarships**

- I was awarded three doctoral scholarships from Agence Universitaire de la Francophonie (AUF) between September 2005 – August 2006 (12 months), September 2006 – August 2007 (12 months), and September – December 2007 (4 months) to fund research in gesture user interfaces for interacting in virtual environments.

INVOLVMENT IN OTHER ACADEMIC PROJECTS

I was a member of the Management Committee for ICT COST IC1307, the “European Network on Integrating Vision and Language (iV&L Net): Combining Computer Vision and Language Processing For Advanced Search, Retrieval, Annotation and Description of Visual Data”

- Funded by the European Commission (COST actions) between March 2014 – March 2018 (48 months)
- The goal of the network was to create an European community around integrated modeling of vision and language, applications of integrated models, automatic generation of image and video descriptions, and image and video search.
- Web page: <https://www.cost.eu/actions/IC1307>

AWARDS & DISTINCTIONS

A₁₃. **“Mihai Drăganescu” Award of the Romanian Academy, 2019**

For my work on Smart Pockets published in 2017 in the Int. Journal of Human-Computer Sciences: Radu-Daniel Vatavu. (2017). Smart-Pockets: Body-Deictic Gestures for Fast Access to Personal Data during Ambient Interactions. *International Journal of Human-Computer Studies* 103. Elsevier, 1-21. [doi:10.1016/j.ijhcs.2017.01.005](https://doi.org/10.1016/j.ijhcs.2017.01.005)

The Romanian Academy represents Romania’s highest cultural and scientific forum.

A₁₂. **Honorable Mention Award, EICS 2019**

At the 11th ACM SIGCHI Symposium on Engineering Interactive Computing Systems – EICS ‘19 (Valencia, Spain, June 2019) for the paper “*AB4Web: An On-Line A/B Tester for Comparing User Interface Design Alternatives*” co-authored with Jean Vanderdonckt and Mathieu Zen, <https://doi.org/10.1145/3331160>

A₁₁. **Best Tech Note Award, EICS 2019**

At the 11th ACM SIGCHI Symposium on Engineering Interactive Computing Systems – EICS ‘19 (Valencia, Spain, June 2019) for the paper “*GestMan: A Cloud System for Managing Stroke Gesture Sets*” co-authored with Nathan Magrofuoco, Jean Vanderdonckt, Paolo Roselli, and Jorge-Luis Perez-Medina, <https://doi.org/10.1145/3319499.3328227>

A₁₀. **Honorable Mention Award, MobileHCI 2018**

At the 20th ACM International Conference on Human-Computer Interaction with Mobile Devices and Services - MobileHCI’18 (Barcelona, Spain, September 2018) for the paper “*\$Q: A Super-Quick, Articulation-Invariant Stroke-Gesture Recognizer for Low-Resource Devices*” co-authored with Lisa Anthony and Jacob O. Wobbrock, <https://doi.org/10.1145/3229434.3229465>

A₉. **Best Paper Award, CHI 2016**

At the 34th ACM SIGCHI Conference on Human Factors in Computing Systems – CHI'16 (San Jose, CA, USA, May 2016) for the paper *“Smart Touch: Improving Touch Accuracy for People with Motor Impairments with Template Matching”* co-authored with Martez E. Mott, Shaun K. Kane, and Jacob O. Wobbrock, <https://doi.org/10.1145/2858036.2858390>

A₈. Best Paper Award, TVX 2015

At the ACM International Conference on Interactive Experiences for TV and Online Video – TVX '15 (Brussels, Belgium, June 2015) for the paper *“Audience Silhouettes: Peripheral Awareness of Synchronous Audience Kinesics for Social Television”*, <https://doi.org/10.1145/2745197.2745207>

A₇. “Best of CHI” Honorable Mention Award, CHI 2015

At the 33rd ACM SIGCHI Conference on Human Factors in Computing Systems – CHI'15 (Seoul, South Korea, April 2015) for the paper *“Formalizing Agreement Analysis for Elicitation Studies: New Measures, Significance Test, and Toolkit”* co-authored with Jacob O. Wobbrock, <https://doi.org/10.1145/2702123.2702223>

A₆. “Young Researcher of the Year” Award, 2013

Awarded by the University Ștefan cel Mare of Suceava

A₅. Outstanding Paper Award, ICMI 2012

At the ACM International Conference on Multimodal Interaction - ICMI'12 (Santa Monica, California, USA, Oct. 2012) for the paper *“Gestures as Point Clouds: A \$P Recognizer for User Interface Prototypes”* co-authored with Lisa Anthony and Jacob O. Wobbrock, <https://doi.org/10.1145/2388676.2388732>

A₄. “Professor Bologna” Award, 2010

Awarded by the National Association of Students, Romania

A₃. Recipient of 11 prizes for scientific research results from UEFISCDI, 2008 – 2019, including a “Research of Excellence” Award in 2017

Awarded by CNCSIS–UEFISCDI, the Romanian National Council for Research, Ministry of Education and Research (ro: PNII Premiarea Rezultatelor cercetării, secțiunea Articole)

A₂. “Cum Laude” distinction for the Ph.D. defense, 2008

A₁. Miscellaneous awards: between 1995 and 2004, I was the recipient of several awards and prizes at National and International competitions in Mathematics and Computer Science, including the Romanian National Olympiad in Informatics.

TEACHING

Currently teaching

Randomized Algorithms and Metaheuristics (1st year Master in Computer Science)

28h course + 14h practical applications

Topics covered: efficient information retrieval, randomized algorithms, heuristic search, ant colony optimization, general purpose GPU computing

Augmented Reality and Ambient Intelligence (2nd year Master in Computer Science)

21h course + 14h practical applications

Topics covered: ambient intelligence, ambient media, ubiquitous computing, augmented reality

Natural Human-Computer Interaction (1st year Master in Computer Science)

14h course + 14h practical applications

Topics covered: gesture recognition, multimodal interaction

Algorithms Design (3rd Year Bachelor Studies in Computer Science)

42h course + 21h practical applications

Topics covered: algorithmic complexity analysis, programming concepts and techniques, Divide and Conquer algorithms, dynamic programming, graph theory

Former courses

Computer Network Programming (Master in Computer Science, 1st year)

28h course + 14h practical applications

Topics covered: sockets TCP/IP programming, interfacing external services and devices, connecting to database, web, file, and email web servers, designing network applications.

Pattern Recognition (License in Computer Science, 4th year)

21h practical applications

Topics covered: pattern recognition techniques for supervised and unsupervised learning, data structures, classification algorithms and application development

Virtual Environments for Communication and Socialization (Master in Educational Sciences)

14h course.

Topics covered: virtual and augmented reality, ambient intelligence, communication in social networks, network analysis with graph theory

RESEARCH SUPERVISION

Alexandru-Ionuț Șiean, PhD student, started October 2019

Topic: *Designing, Engineering, and Evaluating Human-Drone Interaction*

Adrian Aiordăchioae, PhD student, started October 2018

Topic: *Sensory and Cognitive Augmentation using Augmented Reality and Smart Glasses*

Marian-Nicolae Pînzariu, PhD student, started October 2017

Topic: *Time Simulations for Mixed Reality Applications*

Irina Popovici, PhD student, started October 2016

Topic: *Digital Objects Anchored in a Physical Space with Non-Visual Feedback*

Petru-Vasile Cioată, PhD student, started October 2016

Topic: *Multimodal Interaction Techniques for Efficient Text Entry on Smart Devices*

Bogdan-Florin Gheran, PhD student, started October 2015

Topic: *Gesture Interfaces for Mobile and Wearable Devices*

INVOLVEMENT IN THE COMMUNITY

MAJOR ROLES

Full Papers Co-Chair for [EICS 2019](#), the 11th ACM SIGCHI Symposium on Engineering Interactive Computing Systems (Valencia, Spain) together with Víctor Manuel López Jaquero

Full Papers Co-Chair for [TVX 2019](#), the ACM International Conference on Interactive Experiences for TV and Online Video (Manchester, UK) together with Guy Schofield

Area Chair for Human-Centered Approaches for [RCIS 2019](#), the 13th IEEE International Conference on Research Challenges in Information Science (Brussels, Belgium)

Area Chair for Human-Computer Interaction for [IFIP ICEC 2018](#), the 17th International Conference on Entertainment Computing (Poznan, Poland)

Associate Chair for [CHI 2020](#), the 38th ACM Conference on Human Factors in Computing Systems (Honolulu, Hawaii, USA) (the Engineering Interactive Systems Subcommittee)

Associate Chair for [CHI 2019](#), the 37th ACM Conference on Human Factors in Computing Systems (Glasgow, UK) (the Interaction Techniques, Devices, and Modalities Subcommittee)

Associate Chair for [CHI 2018](#), the 36th ACM Conference on Human Factors in Computing Systems (Montreal, Canada) (the Interaction Techniques, Devices, and Modalities Subcommittee)

Associate Chair for [MobileHCI 2019](#), the 20th ACM International Conference on Human-Computer Interaction with Mobile Devices and Services (Barcelona, Spain)

Associate Chair for [MobileHCI 2018](#), the 20th ACM International Conference on Human-Computer Interaction with Mobile Devices and Services (Barcelona, Spain)

Associate Chair for [TVX 2018](#), the ACM International Conference on Interactive Experiences for TV and Online Video (Seoul, South Korea)

Associate Chair for [TVX 2016](#), the 3rd ACM International Conference on Interactive Experiences for TV and Online Video (Chicago, IL, USA)

Associate Chair for [TVX 2014](#), the 1st ACM International Conference on Interactive Experiences for TV and Online Video (New Castle, UK)

PC Member for [UIST 2016](#), the 29th ACM User Interface Software and Technology Symposium

EDITORIAL BOARD POSITIONS

Since 2017, I serve on the Editorial Board of [Springer's Human-Computer Interaction](#) series.

Since 2014, I serve on the Editorial Board of [EAI Endorsed Transactions on Creative Technologies](#)

MEMBER OF THE PROGRAM COMMITTEE (reviewing only, shown in alphabetical order)

[AltMM 2018](#), the 3rd ACM International Workshop on Multimedia Alternate Realities, in conjunction with ACM Multimedia 2018

[AltMM 2017](#), the 2nd ACM International Workshop on Multimedia Alternate Realities, in conjunction with ACM Multimedia 2017

[AltMM 2016](#), the 1st ACM International Workshop on Multimedia Alternate Realities, in conjunction with ACM Multimedia 2016

[EICS 2017](#), the 9th ACM SIGCHI Symposium on Engineering Interactive Computing Systems

[IEEE AIVR 2018](#), the 1st IEEE International Conference on Artificial Intelligence and Virtual Reality

[INTETAIN 2016](#), the 8th International Conference on Intelligent Technologies for Interactive Entertainment

INTETAIN 2015, the 7th International Conference on Intelligent Technologies for Interactive Entertainment
INTETAIN 2014, the 6th International Conference on Intelligent Technologies for Interactive Entertainment
INTETAIN 2013, the 5th International Conference on Intelligent Technologies for Interactive Entertainment
ISAmI 2019, the 10th International Symposium on Ambient Intelligence
ISAmI 2017, the 8th International Symposium on Ambient Intelligence
ISAmI 2016, the 7th International Symposium on Ambient Intelligence
ISAmI 2015, the 6th International Symposium on Ambient Intelligence
ISAmI 2014, the 5th International Symposium on Ambient Intelligence
ISAmI 2013, the 4th International Symposium on Ambient Intelligence
ISAmI 2012, the 3rd International Symposium on Ambient Intelligence
ISEA 2015, the 21st International Symposium on Electronic Art
IUI 2018, the 23rd ACM International Conference on Intelligent User Interfaces
IUI 2019, the 24th ACM International Conference on Intelligent User Interfaces
SAME 2012, the 5th Workshop on Semantic Ambient Media Experience
VSMM 2009, the 15th International Conference on Virtual Systems and Multimedia
WBI 2011, Whole Body Interaction in Games and Entertainment, in conjunction with ACE 2011

PEER REVIEWING - JOURNALS (alphabetical order)

ACM Transactions on Interactive Intelligent Systems (ACM): 2013, 2015, 2017
Behavior & Information Technology (Taylor & Francis): 2013, 2017, 2018
Creative Technologies (EAI, Member of the Editorial Board)
Engineering Applications of Artificial Intelligence (Elsevier): 2015
Future Generation Computer Systems (Elsevier): 2017
IEEE Access (IEEE Computer Society): 2017
IEEE Computer Graphics and Applications (IEEE Computer Society): 2019
IEEE Consumer Electronics Magazine (IEEE Computer Society): 2017
IEEE Pervasive Computing (IEEE Computer Society): 2016
IEEE Transactions on Human-Machine Systems (IEEE Computer Society): 2015, 2016, 2017
Interacting with Computers (Oxford Journals): 2016
International Journal of Human-Computer Studies (Elsevier): 2014, 2015, 2016, 2017, 2018, 2019
International Journal of Human-Computer Interaction (Taylor & Francis): 2017, 2018, 2019
International Journal of Child-Computer Interaction (Elsevier): 2019
International Journal of Vehicular Technology (Hindawi): 2016
Journal of Motor Behavior (Taylor & Francis): 2018
Multimedia Tools and Applications (Springer)
Pervasive and Mobile Computing (Springer): 2014

PEER REVIEWING - CONFERENCES (alphabetical order)

3DUI, the IEEE Symposium on 3D User Interfaces: 2009, 2010
AMCIS, the Americas Conference on Information Systems: 2019
CHI, the Annual SIGCHI Conference on Human Factors in Computing Systems: 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018 (AC), 2019 (AC), 2020 (AC)
CSCW, the ACM Conference on Computer Supported Cooperative Work and Social Computing: 2014
DIS, the ACM Designing Interactive Systems Conference: 2010, 2012, 2014, 2019

EICS, the ACM SIGCHI Symposium on Engineering Interactive Computing Systems: 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019 (Full Papers Co-Chair), 2020

GI, the Graphics Interface Conference: 2007, 2013, 2014

HRI, the ACM/IEEE International Conference on Human-Robot Interaction: 2012, 2013, 2017

ICMI, the ACM International Conference on Multimodal Interfaces: 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2016, 2017

INTERACT, the IFIP TC13 Conference on Human-Computer Interaction: 2009, 2011, 2013, 2015, 2017

INTETAIN, the International Conference on Intelligent Technologies for Interactive Entertainment: 2013, 2014, 2015, 2016

ISAmI, the International Symposium on Ambient Intelligence: 2012, 2013, 2014, 2015, 2016, 2017, 2019

ISEA, the 21st International Symposium on Electronic Art: 2015

ISWC, the Annual IEEE International Symposium on Wearable Computers: 2009

ITS, the ACM Interactive Tabletops and Surfaces Conference: 2013, 2014

IUI, the ACM International Conference on Intelligent User Interfaces: 2010, 2012, 2013, 2015, 2017, 2018, 2019

MobileHCI, the ACM International Conference on Human-Computer Interaction with Mobile Devices and Services: 2008, 2009, 2010, 2012, 2013, 2014, 2015, 2016, 2018 (AC), 2019 (AC)

MOCO, the International Workshop on Movement and Computing: 2014, 2015

MUM, the International Conference on Mobile and Ubiquitous Multimedia: 2013

RCIS, the 13th IEEE International Conference on Research Challenges in Information Science: 2019

RoCHI, the Romanian Conference on Computer-Human Interaction: 2016

SUI, the ACM Symposium on Spatial User Interaction: 2013, 2017

TEI, the International Conference on Tangible, Embedded and Embodied Interaction: 2012, 2013, 2017

TVX 2014, the ACM International Conference on Interactive Experiences for TV and Online Video: 2014 (AC), 2015, 2016 (AC), 2018 (AC), 2019 (Full Papers Co-Chair)

UbiComp / IWMUT, the ACM International Joint Conference on Pervasive and Ubiquitous Computing / Proc. of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies: 2018

UIST, the ACM Symposium on User Interface Software and Technology: 2012, 2013, 2014, 2016 (AC), 2017

VR, the IEEE Virtual Reality Conference: 2010

VRST, the ACM Symposium on Virtual Reality Software and Technology: 2019

VSMM, the Int. Conference on Virtual Systems and Multimedia: 2009

OTHER PEER REVIEWING

Agence Nationale de la Recherche (ANR), France - Appel à projets générique: 2018

Fonds de la Recherche Scientifique (FRS – FNRS), Belgium – FRIA Bourse: 2018

Committee of the National Olympiad in Informatics, Romania: 2019

UEFISCDI, Romania: 2019