Dr.-Ing. Andreas Braun

04.10.1982, Aschaffenburg, Germany, married

Contact

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Education

2014	Doktor-Ingenieur (Doctorate of Engineering) - Computer Science Technische Universität Darmstadt Thesis title: Application and validation of capacitive proximity sensing systems in smart environments (summa cum laude)
2010	Master of Science - Computational Engineering Technische Universität Darmstadt Thesis title: Modeling of Input Devices for Natural Interaction from Low-Level Capacitive Proximity Sensor Data
2008	Bachelor of Science - Computational Engineering Technische Universität Darmstadt Thesis title: Development and Evaluation of an object recognition for box tree cuttings

Work experience	
2015 - present	Head of the Competence Center for "Smart Living & Biometric Technologies" at the Fraunhofer Institute for Computer Graphics Research IGD • Team management of three senior, six junior and twenty student researchers • Acquisition of industry & research projects
2016 - present	 Independent Technical Consultant for Steinbeis TIB GmbH Providing independent technology evaluation, particularly for mergers & acquisitions projects
2010 - 2014	Research associate in the Competence Center for "Interactive Multimedia Appliances" at the Fraunhofer Institute for Computer Graphics Research • Coordination and task lead in international joint projects • Research in the field of interaction in smart environments, smart furniture, indoor localization, virtual coaching.
2008 - 2009	Research assistant in the Competence Center for "Interactive Multimedia Appliances" at the Fraunhofer Institute for Computer Graphics Research Research in sensor data analysis and design of interaction systems

Professional positions & Memberships

2016 - present Participation in biometrics standardization bodies ISO/IEC JTC1 SC37 Biometrics DIN NIA 37 Biometrie Principal Investigator at Center for Research in Security and Privacy CRISP, 2016 - present Darmstadt Representative of Fraunhofer IGD in teaching & professional education, industry transfer, and international collaboration 2016 - present Vice-Spokesperson Fraunhofer AAL Alliance Strategic Collaboration of 11 Fraunhofer Institutes in the domains of Personal Health and Ambient Assisted Living 2014 - present Lecturer (Lehrbeauftragter) at Technische Universität Darmstadt Integrated course - Ambient Intelligence Until 2016: Seminar - Multimodal Interaction 2016 - present **Membership European Association of Biometrics EAB** Membership TeleTrusT - Bundesverband IT-Sicherheit e.V. (German association of institutions working in IT security) **Projects** 2017 - present Runder Tisch Cybersicherheit (Round Table Cybersecurity) - Hessisches Ministerium des Inneren und für Sport (funding €215.000) Collaboration of four research entities in cybersecurity for the state of Hessen Tasks: partner project lead CRISP Initiativprojekt 3 (third main project of the research center CRISP) -2017 - present Bundesministerium für Bildung und Forschung (federal ministry of education and research (funding €253.000) Developing safe and reliable processing for cloud-based infrastructure Tasks: developing prototypes for secure and privacy-preserving infrastructure in smart buildings BioStandard - Bundesamt für Sicherheit in der Informationtechnik (Federal 2017 - present office for information security) (funding €473.000) Supporting standardisation in biometrics in national, European and international entities Tasks: contributions to DIN, CEN, and ISO/IEC standards **ACTIVAGE** - Horizon 2020 (funding €750.000) 2017 - present Large-scale piloting of IoT systems in smart living Tasks: partner project management 2014 - 2017 Miraculous Life - EC Seventh Framework Programme (funding €258.000) Affective Avatars for improving the well-being of seniors Tasks: Work Package Lead Dissemination and Exploitation **POSEIDON** - EC Seventh Framework Programme (funding €626.000) 2013 - 2017 Personalized Smart Environment for People with Down's Syndrome Tasks: technical coordination, work package lead **EIT Digital** - Knowledge & Innovation Community of the EIT (funding €435.000) 2013 - present Tasks: leading subtasks in several projects of the action lines Health &

Wellbeing, Smart Spaces and Smart Energy Systems

Skills

Languages German - native

English - C2 - proficient user French - B1 - independent user

Further Education Project Management Professional

Certified Requirements Engineer (Foundation Level)

Computers & OS: Windows, Linux

Programming Languages: C#, Python, Java, C++

Machine Learning Frameworks: WEKA, Keras, OpenCV

Organization & Review

Conference & Workshop Organization

Aml - European Conference on Ambient Intelligence (Program Chair) - 2017

- AFFIN Workshop on Affective Interaction with Avatars (Workshop Chair) 2015
- EISVC Workshop on Empowering and Integrating Senior Citizens with Virtual Coaching (Workshop Chair) - 2012

Technical Program Committee Member

- DAPI Distributed, Ambient, and Pervasive Interactions since 2016
- ANT Ambient Systems, Networks and Technologies since 2016
- BIOSIG since 2016
- iWOAR International Workshop on Sensor-based Activity Recognition and Interaction since 2017
- EvAAL Evaluating AAL Systems 2012

Review (excerpt)

- CHI 2016
- IEEE Transactions on Human-Machine Systems since 2015
- AutoUI since 2014
- IEEE Transaction on Neural Systems & Rehabilitation Engineering since 2016
- Journal of Ambient Intelligence and Smart Environments since 2014
- MDPI Sensors since 2016
- Journal of Ambient Intelligence and Humanized Computing since 2017
- Engineering Applications of Artificial Intelligence since 2018

Publications (excerpt)

the most current overall list can be found on my Google Scholar site: https://scholar.google.de/citations?user=CralCooAAAAJ

2015 - A. Braun, R. Wichert, A. Kuijper, D. Fellner - Capacitive Proximity Sensing in Smart Environments - Journal of Ambient Intelligence and Smart Environments

2017 - O. Henniger, N. Damer, A. Braun - Opportunities for Biometric Technologies in Smart Environments - Ambient Intelligence 2017

2014 - A. Braun, S. Neumann, S. Schmidt, R. Wichert, A. Kuijper - Towards Interactive Car Interiors - the Active Armrest - NordiCHI 2014

2015 - A. Braun, S. Frank, M. Majewski, X. Wang - CapSeat - Capacitive Proximity Sensing for Automotive Activity Recognition - AutomotiveUI 2015

2015 - A. Braun, I. Schembri, S. Frank - ExerSeat - Sensor-Supported Exercise System for Ergonomic Microbreaks - Ambient Intelligence 2015

Invited Talks

Applications of machine learning in physiological monitoring (keynote) - International Conference in Technology and Innovation in Sports - Thessaloniki, June 2018

Opportunitites and limitations of biometrics in access control - Symposium Anlagensicherung TÜV Nord - Hamburg, February 2018

Biometric Technologies - ZVEI Kolloquium - Frankfurt, November 2017

Home Care Technologies - Round Table Internet Health - Berlin, September 2017

Authentifizierung und Biometrie im Alltag - Gaming Summit - Berlin, June 2017

Secure Health Assistance Using Mobile Sensors - CeBIT Future Talk - Hannover, March 2017

Biometrie und Zugangskontrolle - Fachverband Spielhallen Jahreshauptversammlung - Berlin, November 2016

Invisible Sensing Technologies in Automotive Seating - Global Automotive Seating Innovators - Barcelona, October 2016

Invisible Sensing for Car Interiors - Interior Design - Stuttgart, March 2016

Opportunities of invisible, integrated sensing systems in car seats - Innovative Seating - Düsseldorf, February 2016

Invisible sensing technologies for car seats - Automotive Seating Summit - Berlin, September 2015

CapSeat - Integrated Sensing for Driver Assistance and Physiological Monitoring - CTI Forum Automotive Seating - June 2015

V2me -Virtual Coach Reaches Out to me - Tagung AAL Fachverbände für Menschen mit Behinderung - Berlin, October 2014

Patents

DE 10 2011 083 438.9 - Sensoranordnung zur Bestimmung des Zustands einer Person auf einem Untergrund (pending) -

translation: Sensor distribution for the detection of the state of a user on a surface

DE 10 2014 214 978.9 - Verfahren zur Feststellung der Identität einer Person auf einem Sitz eines Fahrzeugs (granted)

translation: Method to determine the identity of a person on the seat of a vehicle