

Personal Information

Name **Juan Haladjian**
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Professional Experience

Oct 2016 - present Post-doctoral researcher at the Chair for Applied Software Engineering at Technische Universität München
Oct 2011 - Oct 2016 Research Associate at the Chair for Applied Software Engineering at Technische Universität München
Apr 2009 - Oct 2010 Working student at Philotech GmbH, Munich
Nov 2007 - Apr 2008 Student Research Assistant at the CISTIB group at the Universitat Pompeu Fabra, Barcelona

Education

Oct 2016 - present Habilitation in Computer Science at Technische Universität München
Oct 2011 - Oct 2016 Dr.rer.nat. in Computer Science at Technische Universität München. Passed with **suma cum laude**
Oct 2009 - Oct 2011 Master of Science in Computational Science and Engineering at Technische Universität München. Passed **with distinction** (final grade: 1,5)
Sept 2004 - Oct 2009 Bachelor in Computer Science at Universitat Pompeu Fabra. Passed **with honors**

Research Interests

Ubiquitous Computing Activity recognition, wearable computers, smart textiles
Human Computer Interaction Rapid prototyping, development toolkits, end-user development
Data Science Pattern recognition, signal processing, machine learning
Applications Medicine, sports, animal welfare

Awards and Achievements

- 2016 Participation in Software Campus Entrepreneurship Program
- 2016 WWDC Scholarship Award from Apple
- 2016 ACM ISWC / Ubicomp Best paper nomination award
- 2015 WWDC Scholarship Award from Apple
- 2015 Performance Bonus Award from TUM (4041 Euro)
- 2014 Performance Bonus Award from TUM (4041 Euro)
- 2013 WWDC Scholarship Award from Apple
- 2010 - 2012 Scholarship from Caja Madrid for a two-year master study
- 2009 Extraordinary Graduation Award to best grades at UPF
- 2009 - 2010 Scholarship from FARO Global for internship abroad
- 2007 Participation in ACM ICPC Programming Contest, Lisbon
- 2006 Participation in ACM ICPC Programming Contest, Lisbon

Selected Publications

- Nov 2019 **Haladjian, J. (2019). The Wearables Development Toolkit: An Integrated Development Environment for Activity Recognition Applications.** In Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies, 3(4).
- Aug 2019 **Haladjian, J., Schlabbers, D., Taheri, S., Tharr, M., & Brügge, B. (2019). Sensor-based Detection and Classification of Soccer Goalkeeper Training Exercises.** In Proceedings of the ACM Transactions on Internet of Things.
- Dec 2018 Echterhoff, J., **Haladjian, J., & Brügge, B. (2018). Gait Analysis in Horse Sports.** In Proceedings of the Fifth International Conference on Animal-Computer Interaction (p. 3). ACM.
- Oct 2018 Echterhoff, J., **Haladjian, J., & Brügge, B. (2018). Gait and Jump Classification in Modern Equestrian Sports.** In Proceedings of the 2018 ACM International Symposium on Wearable Computers (pp. 88–91). ACM.
- May 2018 **Haladjian, J., Haug, J., Nüske, S., & Brügge, B. (2018). A Wearable Sensor System for Lameness Detection in Dairy Cattle.** Multimodal Technologies and Interaction, 2(2), 27.
- Mar 2018 **Haladjian, J., Bredies, K., & Brügge, B. (2018). KneeHapp Textile: A Smart Textile System for Rehabilitation of Knee Injuries.** In Proceedings of the 15th International Conference on Wearable and Implantable Body Sensor Networks

(BSN) (pp. 9–12). IEEE.

- Nov 2017 **Haladjian, J.**, Ermis, A., Hodaie, Z., & Brügge, B. (2017). **iPig: Towards Tracking the Behavior of Free-roaming Pigs**. In Proceedings of the Fourth International Conference on Animal-Computer Interaction (pp. 10:1--10:5). ACM.
- Nov 2017 **Haladjian, J.**, Hodaie, Z., Nüske, S., & Brügge, B. (2017). **Gait Anomaly Detection in Dairy Cattle**. In Proceedings of the Fourth International Conference on Animal-Computer Interaction (pp. 8:1--8:8). ACM.
- Sept 2017 **Haladjian, J.**, Scheuermann, C., Bredies, K., & Brügge, B. (2017). **A Smart Textile Sleeve for Rehabilitation of Knee Injuries**. In Proceedings of the 2017 ACM International Symposium on Wearable Computers (pp. 49–52). ACM.
- Sept 2016 **Haladjian, J.**, Bredies, K., & Brügge, B. (2016). **Interactex: An integrated development environment for smart textiles**. In Proceedings of the 2016 ACM International Symposium on Wearable Computers (pp. 8-15). ACM.

Selected Talks

- Feb 2019 **Teaching Wearable Device Development with the Wearables Development Toolkit**. 2nd Workshop on Innovative Software Engineering in Education at Multikonferenz Softwareengineering & Management (paper presentation)
- Jan 2019 **Development Tools for Wearable Applications**. Ubiquitous Media Technology Lab at Deutsche Forschungsinstitut für Künstliche Intelligenz (invited talk)
- Oct 2018 **Rapid Prototyping of Smart Textiles**. ACM Intelligent User Interfaces Summer School at Haifa, Israel. (invited talk)
- Oct 2018 **Wearable Sensors for Patients**. Machine Learning for NeuroRehabilitation workshop at International Conference on NeuroRehabilitation (paper presentation)
- Oct 2018 **IPRA: Real-Time Face Recognition on Smart Glasses with Fog Computing**. Second Workshop on Eye Wear Computing at International Symposium on Wearable Computers (paper presentation)
- Aug 2018 **Wearable Sensor Applications for Humans and Animals**. BioMediTech Department at Tampere University of Technology (invited talk)
- Jul 2018 **Tragbare Sensortechnologien fuer Menschen und Tiere**. RFID Netzwerkabend - Fachkonferenz (invited talk)
- Jul 2018 **Wearable Technologies for Patients**. Neuro-Kopf-Zentrum at Klinikum Rechts der Isar (invited talk)
- May 2018 **Neue Sensorentechnologien fuer Patienten**. Fachkonferenz at Münchner Kreis (invited talk)
- Mar 2018 **Wearable technology to support and assess rehabilitation after knee and hip surgeries**. Body Sensor Networks (invited talk)

- Mar 2018 **Wearable Device Applications for Humans and Animals.** Human Computer Interaction Institute at Carnegie Mellon University (invited talk)
- Nov 2017 **Gait Anomaly Detection in Dairy Cattle.** Animal Computer Interaction conference (paper presentation)
- Nov 2017 **iPig: Towards Tracking the Behavior of Free-roaming Pigs.** Animal Computer Interaction conference (paper presentation)
- Sept 2016 **Interactex: An Integrated Development Environment for Smart Textiles.** International Symposium on Wearable Computers (paper presentation)
- Sept 2015 **TangoHapps: An Integrated Development Environment for Smart Garments.** International Symposium on Wearable Computers (doctoral symposium paper presentation)
- Jun 2015 **KneeHapp: A Bandage for Rehabilitation of Knee Injuries.** Intel Santa Clara (invited talk)
- Mar 2015 **Schnelle Prototypen fuer intelligente Kleidung.** Multikonferenz Softwareengineering & Management (keynote)
- Nov 2014 **End-user development of eTextiles.** Smart Space Orchestration Workshop with Intel Edison (invited talk)
- Mar 2012 **A quick prototyping tool for serious games with real time physics.** IADIS Mobile Learning (paper presentation)

Teaching Experience

- 2019 Tracking goalkeeper training - a computer vision approach (lab course, project leader)
Wearables for patients (seminar, instructor)
- 2018 Einführung in die Softwaretechnik (lecture course, exercise instructor)
Benutzbarkeit, Benutzermodellierung und Softwareergonomie (lecture course, lecturer)
- 2017 Goalkeeper training tracking with a wearable sensor (lab course, project leader)
Wearables for animals (seminar, instructor)
Benutzbarkeit, Benutzermodellierung und Softwareergonomie (lecture course, exercise instructor and lecturer)
A motion tracking system for pigs (lab course, project leader)
Wearable sensors for rehabilitation after hip surgery (lab course, project leader)
- 2016 Lameness detection with wearable sensors (lab course, project leader)
JASS: “Software Development for Mobile Platforms and the Internet of Things” (winter school, instructor)
- 2015 Ferienakademie: “Quality of Life: Mobile Apps for Rehabilitation and Wellness” (summer school, instructor)

	Ubiquitous computing (seminar, instructor)
	Smart textiles for knee rehabilitation I (lab course, project leader)
2014	Smart textiles for rehabilitation II (lab course, project leader)
	An in-flight entertainment system on the iPhone (lab course, project leader)
2013	Ferienakademie: “Smart Clothing: Amplified Intelligence” (summer school, instructor)
	A smart jacket for activity monitoring in supercomputer centers (lab course, project leader)
2012	A robot for remote meeting management (lab course, project leader)
	Steering model airplanes with an iPhone (lab course, project leader)
	Games development with iOS (seminar, instructor)
	Einführung in Informatik I (lecture course, tutor)

Projects and Funding

2017 - 2019	Torwart Sensorhandschuh project with Oliver Kahn – ZIM (coordinator and project leader, 180k Euro)
2018	iCow - Leonhard Lorenz-Stiftung (coordinator and project leader, 3K Euro)
2014 - 2016	eTextlIDE - BMBF (coordinator and project leader, 91K Euro)
2013 - 2014	Custodian - Siemens CIT (project leader, 120 Euro)
2013 - 2014	Connected Textiles - EIT-ICT (project leader, 60K Euro)
2012 - 2013	Wearables M2M - T-Systems (project leader, 60K Euro)

Professional Activity

Organising Committees	ACM Animal-Computer Interaction 2019 - Program Chair
	ACM Animal-Computer Interaction 2018 - Videoposters & Demos Chair
PC Memberships	ACM Animal-Computer Interaction 2019
	ACM Animal-Computer Interaction 2018
Reviewer	Multimodal Technologies and Interaction Sensors
	ACM Interactive, Mobile, Wearable and Ubiquitous Technologies
	ACM International Symposium on Wearable Computers

Thesis Supervision

- 2019 Teodora Lata - Automatic Classification of Rehabilitation Exercises after Hip Replacement - Master thesis
- Milena Zurmühl - WearKit - A Simulation Environment for Wearable Device Applications - Guided research
- Smith Agarwal - Automatic Synchronization of Sensor Data - Guided research
- Philip Kluz - A Rapid Prototyping Toolkit for Wearable Device Applications - Master thesis
- Maximilian Sölch - Semi-Automatic Annotation of Wearable Sensor Data - Bachelor thesis
- Dimitri Tyan - Rapid Prototyping of Wearable Device Applications - Bachelor thesis
- Jorge Jimenez - A Framework for Assessing and Deploying Machine Learning Algorithms - Master thesis
- Bettina Weinholtz - Sensor-Based Classification of Lacrosse Goalkeeper Movements - Master thesis
- Daniel Schlabbers - Framework for Classification of Goalkeeper Exercises - Master thesis
- Jessica Echterhoff - Gait and Jump Classification in Modern Equestrian Sports - Bachelor thesis
- 2018 Florian Angrmeier - A Wearable for Tracking the Rehabilitation after Hip Replacement Surgery - Bachelor thesis
- Maximilian Tharr - Segmentation and Classification of Goalkeeper Training Exercises - Master thesis
- Johannes Haug - Gait Anomaly Detection in Dairy Cattle - Master thesis
- Marcel Wagenländer - Classification of Goalkeeper Movements - Bachelor thesis
- Cassia Wang - Detection of Early Parkinson's Disease Using Gait Analysis I - guided research
- Justin Zhu - Detection of Early Parkinson's Disease Using Gait Analysis II - guided research
- 2017 Christoph Vogeler - HipHapp: A Smart Textile for Rehabilitation after Hip Replacement Surgery - Master thesis
- Ayca Ermis - Gait Monitoring - guided research
- 2016 Fabian Warthenpfohl - KneeHapp: A Smart Bandage for Rehabilitation after Knee Injuries - Master thesis
- Maximilian Reif - Multi Sensor/Actuator Guidance System for Blind Skiers - Bachelor thesis
- Agon Lohaj - An IDE for the Rapid Development of Algorithms for Smart Textiles - Master thesis

- 2015 Mertcan Yigin - A Framework for the Rapid Development of E-Textiles - Master thesis
- Tim Haug - A Smart Bandage for the Rehabilitation of Knee Injuries - Bachelor thesis
- Güven Candogan - A Visual Programming Environment for Medical eTextile Applications - Master thesis
- Magued Farah - Integrating Usage Feedback into an IDE for E-Textiles - Master thesis
- Lukas Welte - A Testbed for the Comparison of Algorithms for Rehabilitation Exercises - Bachelor thesis
- Aaron Pérez Martín - A Visual Programming Paradigm for eTextiles - Master thesis
- Natalia Zarawska - A Framework for Dynamic Gesture Management Using Smart Rings - Master thesis
- 2014 Timm Beckmann - A Visual Programming Approach for Reusing Solutions to Commonly Occurring Problems in the Context of Smart Clothing - Bachelor thesis
- Blagina Simeonova - Patterns for the Development of Rehabilitation Exercises with eTextiles - Master thesis
- Tobias Kammerer - Interactive Control of Computer Applications with User-Defined Gestures - Bachelor thesis
- Robert Weindl - A Framework for Real-Time Information Sharing on the Internet of Things - Master thesis
- Michael Conrads - Classification of Gestures in a Visual Programming Environment - Bachelor thesis
- 2013 Tevfik Aoglu - A Gesture Based Framework for Symbol Recognition - Bachelor thesis
- 2011 Magued Farah - Bug Game: Learning Math in a Serious Game for iPad - Bachelor thesis
- 2010 Nazmus Shaon - Improvement of the Functionality and Usability of TangoHapps - Master thesis