Resume of Robert Katzschmann, robert@katzschmann.de, (650) 739-3837 August 4, 2017

Education

09/2013 – today	**Massachusetts Institute of Technology (MIT), USA** PhD Candidate, Dept. of Mechanical Engineering, GPA: 5.0
10/2007 – 01/2013	**Karlsruhe Institute of Technology (KIT), Germany** Diplom-Ingenieur (Bachelor and Master of Science) in Mechanical Engineering, Mechatronics, robotics and microsystems technology, GPA: 5.0

Work/Research Experience

09/2013 – today	**Distributed Robotics Laboratory, CSAIL, MIT, USA** PhD Research Assistant in Soft Robotics, Advisor: Prof. Daniela Rus
12/2012 – 08/2013	**Auris Surgical Robotics, Redwood City, California, USA** Systems engineer, research and development of a robotic system for microsurgery
04/2012 – 10/2012	**Artificial Intelligence Lab, Computer Science Dept, Stanford University, USA** Research Assistant (Master Thesis), Advisors: Dr. Torsten Kröger and Prof. Oussama Khatib
07/2011 – 01/2012	**ABB Corporate Research Robotics, Shanghai, China** Research Internship: Thermal study and optimization of robotic drive trains
11/2010 – 05/2011	**Institute for Process Control and Robotics, Karlsruhe Institute of Technology, Germany** Bachelor Thesis Research on robotic hand with force-moment-sensors
10/2008 – 03/2011	**Karlsruhe Institute of Technology (KIT), Germany** Teaching Assistant for controls, machine design, mathematics, technical mechanics
09/2005 – 03/2012	**IGB consulting engineers for building services, Mannheim, Germany** Technical design assistant and quality management representative
08/2005 – 05/2011	**PCK system house GbR, Mannheim, Germany** Director, IT consulting and trade, network administration, web design

Skills

Languages	German (native), English (fluent), Chinese (intermediate)
Software	C/C++, Java, Python, Mathematica, Matlab, Maple, Adams, Abaqus
Mechanical	Solidworks, ProEngineer, AutoCAD; Mill, Lathe, Waterjet, Lasercut, 3D-Printing

Awards & Fellowships

10/2014	"Tony Stark Award for a Bad-Ass Live Demonstration" during MIT Research Exhibition
09/2013 – 01/2014	Graduate Exploration Fellowship for full tuition and stipend, MIT
12/2012 – 01/2013	IGEL Fellowship by the Faculty of Computer Science, KIT
04/2012 – 09/2012	Fellowship by the Kurt Fordan Foundation for outstanding talents, funding master's thesis
04/2012 – 09/2012	Fellowship by the Dr.-Ing. Willy-Höfler Foundation, funding for master's thesis
02/2011 – 01/2012	Fellowship "Heinz Nixdorf Program for the Promotion of Asian-Pacific Experience for Young German Professionals" by the German Association for International Cooperation
02/2010	Awardee of the Grashof award for outstanding accomplishments and the best final result in the basic study of mechanical engineering at KIT, Germany
02/2010 – 09/2012	Fellowship "Schaeffler Top Student" by the Schaeffler Group, Germany
04/2009 – 09/2012	Fellowship by the Friedrich Naumann Foundation for Freedom

Voluntary Work

02/2015 – 02/2016	Research Exhibition Chair within MIT Graduate Association of Mechanical Engineers
12/2009 – 01/2011	Chairman of "studentec e.V." association for engineering consulting
09/2008 – 05/2011	Member of the faculty council for Mechanical Engineering at KIT

Publications

H.-C. Wang, R. K. Katzschmann, B. Araki, S. Teng, L. Giarre, and D. Rus, "Enabling Independent Navigation for Visually Impaired People through a Wearable Vision-Based Feedback System." ICRA, Singapore, 2017.
R. Katzschmann, A. de Maille, D. Dorhout, D. Rus, "Cyclic Hydraulic Actuation of Soft Robotic Devices," IROS, Daejeon, Oct. 2016.
R. MacCurdy, R. Katzschmann, Y. Kim, and D. Rus, "Printable hydraulics: A method for fabricating robots by 3D co-printing solids and liquids." ICRA, Stockholm, 2016.
R. Katzschmann, A. Marchese, D. Rus. "Autonomous Object Manipulation using a Soft Planar Grasping Manipulator." Soft Robotics Journal, 2015.
J. Delpreto, R. Katzschmann, R. Maccurdy, and D. Rus, "A Compact Acoustic Communication Module for Remote Control Underwater." Invited: ACM WUWNET, Washington D.C., USA, Oct. 2015.
B. S. Homberg, R. Katzschmann, M. R. Dogar, and D. Rus, "Haptic Identification of Objects using a Modular Soft Robotic Gripper," IROS, Hamburg, Sept. 2015
S. Li, R. Katzschmann, D. Rus, "A soft cube capable of controllable continuous jumping," IROS, Hamburg, Sept. 2015.
A. Marchese, R. Katzschmann, D. Rus. "A Recipe for Soft Fluidic Elastomer Robots." Soft Robotics, March 2015.
A. Marchese, R. Katzschmann, D. Rus. "Whole Arm Planning for a Soft and Highly Compliant 2D Robotic Manipulator." IROS, Chicago, IL, USA, September 2014.
R. Katzschmann, A. Marchese, D. Rus. "Hydraulic Autonomous Soft Robotic Fish for 3D Swimming." ISER, Marrakech, Morocco, June 2014.
R. Katzschmann, T. Kröger, T. Asfour and O. Khatib."Towards Online Trajectory Generation Considering Robot Dynamics and Torque Limits." IROS, Tokyo, Japan, Nov. 2013.