

SEPPO HEIKKILA

"IT and automation professional looking for challenges requiring software or hardware expertise."



PERSONAL INFORMATION

Surname, Forenames
Address
E-mail, Telephone
Date of birth, Nationality

HEIKKILÄ, SEPPO SAKARI
Rue des Délices 5, 1203 Genève, Switzerland
Seppo.Heikkila@cern.ch, +41 78 6673977
08.10.1979, Finnish

WORK EXPERIENCE

Position:
Responsibilities:

02.2012 – 06.2012, 10.2012 – 02.2013, 01.2016 onwards
HIPTEK at CERN, Thalent SA, Geneva, Switzerland
Research fellow (HIPTEK), Consultant (Thalent SA, 10.2012-02.2013)
2016: Scalable and Secure Infrastructures for Cloud Operations (SSICLOPS.eu) project.
2012-2013: Developing secure cloud-based file storage software that is ownCloud compatible.

Position:
Responsibilities:

03.2013 – 12.2015
CERN Openlab and Data and Storage Service group in the CERN IT department, The European Organization for Nuclear Research (CERN), Geneva, Switzerland
Senior Research Fellow
Evaluating cloud storage systems and integrating them with existing CERN services.

Positions:
Responsibilities:

01.2003 – 08.2005, 09.2006 – 01.2012
Department of Automation and Systems Technology, Aalto University, Espoo, Finland
Researcher (04.2005 onwards), Research assistant
Researcher: Doctoral thesis (robotic astronaut assistant), course assistant (Erasmus Mundus SpaceMaster programme), instructor of five M.Sc. theses and two B.Sc. theses.
Research assistant: Control systems, M.Sc. thesis, course assistant (automation fundamentals).

Position:
Responsibilities:

01.2008 – 09.2008
Automation & Robotics group, European Space Research & Technology Centre (ESTEC), The European Space Agency (ESA), Noordwijk, The Netherlands
Researcher (within ESA NPI programme)
Requirements definition and research on robotic astronaut assistants.

Position:
Responsibilities:

05.2002 – 08.2002, 06.2006-08.2006
3G Software Team, Nokia Networks, Oulu, Finland, **SES Global**, Betzdorf, Luxembourg
Trainee (Nokia: 2002, SES: 2006)
Nokia: 3G software development (C, UML). SES: Satellite receiver localisation system upgrade.

EDUCATION AND TRAINING

Organisation:
Subject:

09.1999 – 03.2005, 10.2006 – 12.2011
Aalto University (previously Helsinki University of Technology), Espoo, Finland
Ph.D. programme in Automation and Systems Technology. Thesis: "Affordance-Based Task Communication Methods for Astronaut-Robot Cooperation".
M.Sc. programme in Electrical Engineering (average 4.1/5). Major subject: Space Technology, 1st minor subject: Software Systems, and 2nd minor: Automation and Control Technology.

Degree:

Doctor of Science in Technology (2011), Master of Science in Technology (2005)

Organisation:
Subject:

09.2005 – 09.2006
International Space University, Illkirch-Graffenstaden, France.
Degree programme in space studies including technical, financial and legal aspects (average 80/100). Internship at SES Astra SA (Betzdorf, Luxembourg) with satellite receiver localisation.

Degree:

Master of Science in Space Studies

PERSONAL SKILLS AND COMPETENCES	
LANGUAGES	
Finnish	Mother tongue
English	Excellent (reading/writing/verbal)
Swedish	Good (reading/writing) + Satisfactory (verbal)
French, Spanish	Satisfactory (reading/writing) + Basics (verbal), three courses of French and four of Spanish
German, Portuguese	Basics (reading/writing/verbal), one half a year course of both
COMPUTER LANGUAGES	
C/C++	Excellent; database, data storage, control system and graphics software projects (11 years)
Java	Excellent; cloud-based file storage, mail-client, database and webpage projects (7 years)
SQL	Excellent; web page and control software projects with my/PostgreSQL (9 years)
Matlab/Octave, R	Excellent; data processing, Simulink modeling and neural computing projects (7 years)
HTML, PHP	Excellent; web development both at work and at home (10 years)
Latex	Excellent; several publications, Ph.D., master's thesis, etc. (10 years)
Python, Perl, Bash	Very Good; numerous programs and server maintenance scripts (8 years)
Assembler	Good; operating system development and microcontroller programming (2 years)
Visual Basic	Good; several small scripts and data acquisition project (2 years)
Ruby, Ada	Satisfactory; free time practice with sample programs (6 months)
OPERATING SYSTEMS	
Linux	Excellent; especially with Debian, Ubuntu, and Red Hat / Scientific Linux distributions (10 years)
Windows	Excellent; used since Windows 3.1 (16 years)
Unix	Very good; experienced user (8 years)
SOFTWARE	
Computing	Matlab, Simulink, GNU Octave, ROOT, Mathematica, Maple, R, SPSS, Blender, Solidworks
Programming	Eclipse, Ant, Maven, Vaadin, Emacs, Autotools, CMake, VCS (git, svn), CMS (Joomla, Drupal)
Automation and space	LabVIEW, Eagle layout editor, AVR Studio, dSPACE TargetLink/ControlDesk, xPC Target, STK
Office	MS/OpenOffice, MS Project, LyX, Gimp, Inkspace, Dia, Photoshop, Adobe Premiere
HARDWARE	
Architectures and platforms	PC-104, x86/x86-64, ARM, Atmel AVR, Elmo motor controllers, dSPACE MicroAutoBox
Sensors and actuators	Range finders (e.g. SICK), stereo cameras, accelerometers, encoders, DC and servo motors
Instruments and tools	Oscilloscopes, multimeters, power supplies, signal generators, pulse generators, CAN bus monitors, soldering tools, PCB milling and etching
Network buses and standards	CAN, CANopen, I2C, SPI, FlexRay, RS-232, RS-422, IEEE 1284, USB, IEEE 1394 (FireWire)
ORGANISATIONAL SKILLS AND COMPETENCES	
	<ul style="list-style-type: none"> - Instructor of five M.Sc. theses, two B.Sc. theses, and several student projects - Finnish technology industry sponsored participant to "Tulenkantajat" - future leaders' seminar - President (2004) and secretary (2003) of Student Unions sport sub-organization PoliTaido - One-year military service in Kainuu Brigade (1998), group leader (military communications)
ARTISTIC SKILLS AND COMPETENCES	
	<ul style="list-style-type: none"> - Web page development (e.g. http://mielipiteet.fi, http://picsurl.com), OpenGL programming - PADI certified "open water diver" (ISO 24801-2), snowboarding, hiking, windsurfing
HONORS AND AWARDS	
	<ul style="list-style-type: none"> - Acceptance to study an extended curriculum in science at Aalto University (top 10% of the first year students are invited each year), M.Sc. degree completed with distinction - Acceptance to ESA's Student Parabolic Flight Campaign (2003) - Five incentive scholarships (2008-2011): Jenny and Antti Wihuri Foundation, KAUTE Foundation (x2), and Walter Ahlström Foundation (x2) - 22 publications: 13 peer reviewed articles, 9 abstracts, best paper award from the 20th IEEE Ro-Man 2011 conference. See additional information for the full list of publications
ADDITIONAL INFORMATION	
	http://iki.fi/seppo.heikkila