

CURRICULUM VITAE

1 Full name and date

Name: **Praks, Jaan**

Gender: Male

Date of CV: 25. April 2016

2 Personal information

Birth: 16 November, 1971, Tartu, Estonia

Citizenship: Estonia

Residence: Makslahdentie 22 E 24, 02140, Espoo, Finland



3 Education and degrees awarded

2012 Doctor of Science (Technology), "Radar polarimetry and interferometry for remote sensing of boreal forest", accepted with distinction, Aalto University

1996 B.Sc. in Environmental Physics and Remote Sensing (accepted as M.Sc. in Finland), University of Tartu, Estonia, Faculty of Physics

1991 Kehra Secondary School, Estonia, graduated with Silver Medal

4 Other education and training, qualifications and skills

Pedagogical training (25 ecr), Aalto University

5 Linguistic skills

- Estonian (native speaker)
- Finnish (native or bilingual proficiency), English (full professional proficiency), Russian (limited working proficiency), Swedish (elementary proficiency)

6 Current positions

2014 - present Assistant Professor, on tenure track (level 1), Department of Radio Science and Engineering, Aalto University, School of Electrical Engineering, Finland

7 Previous work experience

2011 - 2014 University Teacher, Department of Radio Science and Engineering, Aalto University, School of Electrical Engineering, Finland

2007 - 2010 Teaching Assistant on Space Technology, Department of Radio Science and Engineering, School of Science and Technology, Aalto University, Finland

1997 - 2007 Researcher, Laboratory of Space Technology, Helsinki University of Technology, Finland

1995 - 1996 Research Assistant, Tartu Observatory, Estonia

8 Research funding, leadership and supervision

8.1 Major research funding

- 2010 - 2016** Aalto-1 nanosatellite (MIDE) (450 000 euro) (applied with M. Hallikainen)
- 2012 - 2015** Aalto-2 nanosatellite (TEKES) (600 000 euro) (applied with M. Hallikainen)
- 2015 - 2016** Reaktor nanosatellite development industry contract (50 000 euro)
- 2016** Aalto-1 nanosatellite launch sponsor agreements (35 000 euro)
- 2015 - 2016** PIRA-2 (ESA) (23 000 euro)
- 2015** AISA airborne campaign airborne operations (10 000 euro)
- 2015** ICEYE airborne measurement campaign airborne operations (100 000 euro)
- 2014** Aalto-1 launch (Aalto University) (240 000 euro)
- 2013 - 2015** Software Platform for Nanosatellites (MIDE) (50 000 euro) (applied with M. Hallikainen)
- 2012** Nanosatelliittien kehitys maanpuolustuksen näkökulmasta (MATINE) (38 000 euro) (applied with M. Hallikainen)
- 2010** Metsässä olevien kohteiden kolmi-ulotteinen havainnointi polarimetrisellä SAR-tomografialla (MATINE) (60 000 euro) (applied with M. Hallikainen)

8.2 Participation in funding applications

- 2014 - 2016** Participated in preparation of 18 funding applications, including 4 H2020 and 3 ESA ITT applications with various collaboration partners (PI in one)

8.3 Leadership in research work

- 2014 - 2016** Responsible leader of Aalto-1 nanosatellite project
- 2010 - 2014** Founder and coordinator of Aalto-1 nanosatellite project
- 2014 - 2016** Responsible leader of Aalto-2 nanosatellite project
- 2012 - 2014** Coordinator of Aalto-2 nanosatellite project
- 2015 - 2016** Responsible leader of PIRA-2 (ESA) project
- 2014 - 2015** Member of steering group of ICEYE satellite project (TEKES)
- 2014** Leader of subcontract in Pulsar Plane project (FP7)
- 2014 - 2016** Responsible leader of many smaller projects
- 2003 - 2014** Responsible researcher and coordinator of many projects and campaigns

8.4 Supervision of students and post-doctoral researchers

- 2014 - present** Main supervisor of post-docs Kaupo Voormansik and Oleg Antropov
- 2014 - present** Supervisor of 7 and instructor of 3 doctoral students
- 2005 - present** Supervisor or instructor of 23 MSc students
- 2010 - present** Supervisor of 26 BSc students

9 Merits in teaching

9.1 Pedagogical competence

Pedagogical training (25 ecr), Aalto University

9.2 Involvement in teaching and curriculum planning

- 2015/2016 Responsible teacher of 6 different courses on space technology and remote sensing topic
- Main lecturer of Satellite Systems (5ecr) and Microwave Remote Sensing Instrumentation (5ecr)
- Organizer and creator of the first CubeSat project courses at Aalto (in Finland)
- Organizer of numerous student workshops and summer schools, including tutoring in Alpbach summer school 2013 and 2014
- Developer of project based teaching of space technology at Aalto
- Deputy member of NanoRad Degree Programme Committee
- Co-designer of international Nordic Master in Cold Climate Engineering Programme Space Track (Aalto, DTU, NTNU)

10 Awards and honors

2012 Doctoral degree with distinction

1991 Silver Medal for graduation from Gymnasium

11 Other academic merits

11.1 Evaluation of PhD theses

2015 Opponent of doctoral defense of Xiaochen Zou (University of Helsinki)

11.2 Editorial activities and refereeing

- Editor of 2 international conference proceedings
- Editor of 3 national conference proceedings
- Reviewer in many remote sensing journals and conferences

11.3 Memberships in expert groups and positions of trust

2015 - Finnish National Delegate at ESA Advisory Committee on Education

2015 - Aalto University Delegate at National URSI

2014 - Finnish National Delegate at EARSeL Committee

2011 - Member of Finnish Space Committee Scientific Advisory Group

2011, 2015 Chairman of Finnish Remote Sensing Club

1998 - Member Finnish Remote Sensing Club steering group

2009 - 2014 Member of ESTCUBE student satellite Advisory Group

11.4 Administrative responsibilities in academic organizations

- Deputy member in Campus development steering group
- Member of Aalto Strategy implementation group at School of Electrical Engineering

11.5 Scientific Conferences

- Co-chair, The 14th Specialist Meeting on Microwave Radiometry and Remote Sensing of the Environment Microrad 2016, Espoo, Finland
- Chair, Finnish Remote Sensing Day 2015, Espoo Finland

- TCP member, European Navigation Conference 2016, Helsinki, Finland
- TCP member, EO2.0 2015, ESA, ESRIN, Italy
- Keynote speaker at Tartu Conference on Space Science and Technology, 2014, Estonia
- Co-chair, URSI Commission F, Microwave Signatures 2013, Espoo (Helsinki), Finland
- Member of TCP of Nordic Remote Sensing Days 2009 and 2011
- Member of TCP of Finnish Remote Sensing Days 2003, 2010, 2011 (chair), 2013, 2015 (chair)
- Member of TCP of URSI Convention on Radio Science in 2002, 2003, 2004, 2008

12 Scientific and societal impact of research

12.1 Scientific publications

- Over 80 publications on remote sensing and small satellite technology, 20 articles in international refereed journals, several submitted articles, over 50 articles in international conference proceedings.
- Total number of citations 489 (Google Scholar 20.4.2016)
- h-index = 11 (Google Scholar 20.4.2016).

12.2 Key collaboration partners

DLR, Germany; ONERA, France; Tartu Observatory, Estonia; Estonian Marine Institute; VTT, Technical Research Centre of Finland; Finnish Meteorological Institute; Finland's environmental administration (SYKE); University of Helsinki; University of Turku; ICEYE Oy, HARP Technologies Oy

12.3 Merits in producing and facilitating the use of scientific data

- 2005** Responsible organizer of many airborne measurement campaigns
- 2003 - 2007** Operator of airborne spectrometer AISA
- 2014 - present** Responsible for Skyvan aircraft scientific operations

12.4 Commercialization of research results

- 2016** Co-founder of Reaktor Space Lab spin-off company
- 2014** Involvement ICEYE spin-off company creation
- 2013** Inventor of Space Factory concept which led to spin-off

12.5 Science communication and public outreach

- Numerous public appearances in television, radio and newspapers on space technology topics, including (YLE Prisma, MTV Aamu TV, YLE Puhe, Helsingin Sanomat, Tekniikan Maaailma and others)
- Numerous invited lectures and talks in societies, schools and popular science happenings in Finland and abroad
- 2016 Advisor in Garage48 SpaceTech Hackathon, Tartu, Estonia; ActInSpace contest in Tallinn; SpaceUp Finland, Espoo, Finland, invited speaker
- 2013, 2014, 2015 LUMA *Avaruus ja satelliitit* yearly course for high-schools, organizer and main lecturer