Curriculum Vitae

Jacob Bergstedt

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Email
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Phone Number
+46762693514
Born
September 1, 1986, Linköping, Sweden
Citizenship
Swedish
Languages
Swedish, English
Programming Languages
More than 5 years of semi-daily experience: R, MATLAB,
Developed larger than 3 month project in: C++, Python,
Toying with: STAN, Julia
Github
https://github.com/JacobBergstedt

Academic Degrees

- Master of Science in Engineering, Engineering Biology, Linköping Institute of Technology, 2013, 300 ECTS.

- Master of Science in Biomedical Engineering, Linköping Institute of Technology, Faculty for Health Science, Linköping, 2013, 120 ECTS.

- In total between 2008 and 2013: 327 ECTS with a grade average of 4.65 out of 5.

Employment

- PhD Student at the Automatic Control Department at Lund Institute of Technology, Lund, Sweden. Since 1 August 2013. Scheduled to be finished 1 August 2018. Supervisors:

  - Bo Bernhardsson (bob@control.lth.se)
  - Magnus Fontes (magnus.fontes@pasteur.fr)
  - Etienne Patin (epatin@pasteur.fr)
  - Pontus Giselsson (pontus.giselsson@control.lth.se)

- Project work for Inera AB: development of a signal processing algorithms for breath signals recorded by phone. Supervised by Fredrik Gustafsson (fredrik.gustafsson@liu.se). Summer 2012.

- Teaching assistent at the Department for Automatic control Linköping university 2011-2012

- Teaching assistent at the Department for Mathematics, Linköping university 2009-2011

Publications

- P. Scepanovic, C. Alanio, C. Hammer, F. Hodel, J. Bergstedt, et. al. "Genetic factors and age are the strongest predictors of humoral immune responses to common pathogens and vaccines", bioRxiv, 2018.

- E. Clavé*, I. L. Araujo*, C. Alanio*, E. Patin*, J. Bergstedt*, et. al. "Human thymopoiesis is controlled by a genetic variant within the TCRA-TRCD locus". Submitted to Science Translational Medicine. *Joint first author.

- E. Patin*, M. Hasan*, J. Bergstedt*, et. al. "Natural variation in innate immune cell parameters is driven by genetic factors". Accepted to Nature Immunology in December 2017. *Joint first author.

- B. Piasecka, D. Duffy, A. Urrutia, H. Quach, E. Patin, C. Posseme, J. Bergstedt, et. al. "Dissecting the Roles of Age, Sex and Genetics in Shaping Variation in the Human Immune Landscape". Accepted to PNAS in December 2017.

- B. Olofsson*, J. Antonsson (currently Bergstedt)*, H.G. Kortier, R. Johansson, B. Bernhardsson and A. Robertsson. "Sensor Fusion for Robotic Workspace Estimation". IEEE Transactions on Mechatronics, Vol 21, Issue 5, p. 2236-2248, 2016. *Joint first authors

- H.G. Kortier, J. Antonsson (currently Bergstedt), H.M. Schepers, F.Gustafsson and P.H. Veltink. "Hand Pose Estimation by Fusion of Inertial and Magnetic Sensing Aided by a Permanent Magnet", IEEE Transactions on Neural Systems and Rehabilitation Engineering, Vol 23, Issue 5, p. 796-806, 2015.

- J. Antonsson (currently Bergstedt), "Motion Tracking Using a Permanent Magnet", Master's Thesis, ISRN LiTH-ISY-EX-13/4697-SE, Department of Electrical Engineering, Linköping Institute of Technology, Sweden, June 2013, http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A633536&dswid=-8721.

Conferences and Workshops

- Participated in the Modeling Immune System and Pathogen (MISP) Interactions Research Camp, Copenhagen, Denmark 2017.

- Participated in the Modeling and Data Analysis for the Healthy Human Global Project Research Camp, Punta del Este, Uruguay 2015.

- J. Antonsson (currently Bergstedt), "Model Selection for Genome Wide Association Studies". Poster at the conference "Statistical Analysis of Massive Genomic Data", University of Evry-Val-d'Essonne, France, 2015.

- J. Antonsson (currently Bergstedt), "Pose Tracking of a Permanent Magnet". Talk at the "Workshop on Advances in Positioning Technologies and Applications", Chalmers Institute of Technology, 2013.

Invited Talks

- "Empirical analyses of immune parameters, Talk at Malmö hospital.

- "Modern Data Analysis for Observational Studies". Talk for PERSIMUNE: Centre of Excellence for Personalized Medicine of Infectious Complications in Immune Deficiency, Rigshospitalet, Copenhagen, 2016.

- "Variable Selection Techniques in Genomics". Talk at the Automatic Control group at Linköping Institute of Technology, 2015.

Software

The mmi package

R package for convenient modeling and inference with multiple models. Source code and vignettes can be found at https://github.com/JacobBergstedt/mmi.

Teaching

At the Pasteur institute

GWAS and molecular epidemiology, R for bioinformatics.

At Lund Institute of Technology

System Identification, Network Dynamics, Machine Learning, Automatic Control.

At Linköping Institute of Technology

Automatic control, Linear algebra, Calculus.

Grants

- Fysiografiska sällskapet i Lund travel grant, 20 000 SEK

Academic Visits

- Visiting PhD student at the Human Evolutionary Genetics lab, headed by Lluis Quintana-Murci (lluis.quintana-murci@pasteur.fr), Fall 2017.

- Gaston Berger University in Saint-Louis, Senegal, September 2015.

- Visiting PhD student at the International Group for Data Analysis, Pasteur Institute in Paris, October 2014 - August 2015.

- Master Thesis Student at Twente University, Enschede, The Netherlands, spring 2013.