# CV

# Johan Larsson July 5, 2018



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## 1 Education

## 1.1 Degrees

Bachelor's degree in statistics, Lund University

I developed an algorithm for creating area-proportional Euler diagrams using ellipses. This work also resulted in a conference paper and oral presentation at the SetWR conference in Edinburgh.

2015 - 2017 Master's degree in medical science with a major in physical therapy, Lund University

In my masters thesis I design and piloted a randomized controlled trial.

2011 - 2014 Bachelor's degree in Physical Therapy, Lund University

For my bachelor thesis, me and my co-author traveled to Tokyo to interview physical therapists about their professional role and use of technology.

#### 1.2 Courses

**Linux som utvecklingsmiljö**, 7.5 ECTS, Umeå University **Statistical methods with R**, 7.5 ECTS, Karolinska Institute

**Statistics: Bayesian methods**, 7.5 ECTS, Lund University

Statistics: Probability and inference theory, 7.5 ECTS, Lund University

Statistics: Special assignment, 15 ECTS, Lund University

Statistics: Econometrics, 7.5 ECTS, Lund University

**Statistics: Time Series Analysis**, 7.5 ECTS, Lund University **Statistics: Statistical theory**, 7.5 ECTS, Lund University

Statistics: Sampling Techniques, 7.5 ECTS, Lund University

**Statistics: Basic Course**, 30 ECTS, Lund University

**2014 – 2015 Summer research course**, 18 ECTS, Faculty of Medicine, Lund University

I worked as a research assistant at a specialized clinic for pain rehabilitation and presented a poster at EFIC in 2015 and IASP in 2016.

**2013 – 2014 Summer research scholarship**, 15 ECTS, Faculty of Medicine, Lund University

As a part of a stipend, I undertook a course in basic academic knowledge.

# 2 Work experience

Google Summer of Code, *The R Project for Statistical Computing*A project supervised by Toby Dylan Hocking and Michael Weylandt wherein which I am translating the incremental stochastic gradient algorithm SAGA to R and implementing it work for generalized linear models, such as gaussian (univariate and multi-task), logistic (binomial and multinomial), poisson, and Cox regression.

2017 – now Physical therapist, The Department of Orofacial Pain and Jaw Function, Malmö University

Clinical work and quantitative assessment of sensory function.

**Teacher Assistant**, *The Department of Health Sciences, Lund University*I teach anatomy, palpation, and examination skills to students at the medical school of Lund University.

**Physical Therapist**, *Vårdcentralen Södra Sandby, Region Skåne* Clinical work at a primary care center in southern Skåne.

#### 2.1 Research

#### 2015 - 2018 Research assistant, SMIL

SensoriMotor Integration Lund (SMIL) is a collaborative effort between Lund University, Skåne University Hospital, Malmö University, and Umeå University, in which we are assessing the utility of a gym-based treatment for patients with persistent neck pain.

**Research assistant**, The Department of Pain Rehabilitation, Skåne University Hospital

Together with supervisors Eva-Maj Malmström and Hans Westergren I studied patients with longstanding whiplash-associated disorders, which has so far resulted in one publication and two posters.

- Research assistant, Department of Clinical Sciences, Lund University
  As part of a research stipend from the Faculty of Medicine at Lund
  University, I under supervision of Eva-Ekvall Hansson and Michael
  Miller studied the gait of dizzy, elderly patients. This work resulted in
  two publications.
- Transcriber, Department of Health Sciences, Lund University
  For a brief period, I worked as a transcriber for a research project within gerontology.

#### 2.2 Teaching

**Teaching assistant**, *Department of Physiotherapy*, *Lund University*I serve as a teaching assistant for students at the program of medicine.

#### 2.3 Supervisor

- Assistant Supervisor, bachelor's thesis, The Department of Orofacial Pain and Jaw Function, Malmö University

  Supervision of two students at undergraduate level for a project regarding exercise for neck and jaw pain.
- 2017 2018 Assistant Supervisor, master's thesis, The Department of Orofacial Pain and Jaw Function, Malmö University

  Supervision of two students at master's level for a project about biofeedback and posture.

### 2.4 Reviewer

- Gait & Posture (ISSN: 0966-6362)
- Journal of Clinical Interventions in Aging (ISSN: 1178-1998)
- Spine (ISSN: 0362-2436)
- Archives of Physical Medicine and Rehabilitation (ISSN: 0003-9993)

See publons.com/a/1299032 for additional information.

#### 2.5 Miscellaneous

- Network analyses, SBU, Stockholm, Sweden
- 2016 Conducting systematic reviews, HTA-o, Malmö, Sweden

# 3 Publications

- 1. Larsson J. Mapping physical therapy research: The geographical affiliations and methodological quality of 2,959 randomized controlled trials. *Physiotherapy Theory and Practice*. 2018;Accepted for publication. doi: 10.1080/09593985.2018.1423657
- 2. Westergren H, Larsson J, Freeman M, Carlsson A, Jöud A, Malmström E-M. Sexbased differences in pain distribution in a cohort of patients with persistent post-traumatic neck pain. *Disability and Rehabilitation*. 2017 Jan; doi: 10.1080/09638288.2017.1280543
- 3. Larsson J, Miller M, Ekvall Hansson E. Vestibular asymmetry increases double support time variability in a counter-balanced study on elderly fallers. *Gait & Posture*. 2016 Mar;45:31–4. doi: 10/f8fq3f
- 4. Larsson J, Ekvall Hansson E, Miller M. Increased double support variability in elderly female fallers with vestibular asymmetry. *Gait Posture*. 2015 Mar;41(3):820–4. doi: 10.1016/j.gaitpost.2015.02.019

#### 3.1 Theses

1. Larsson J. Mapping physical therapy research: The geographical affiliations and methodological quality of 2,959 randomized controlled trials. *Physiotherapy Theory and Practice*. 2018;Accepted for publication. doi: 10.1080/09593985.2018.1423657

- 5. Larsson J. Gym-based exercise therapy for patients with persistent neck pain: A research protocol for a randomized controlled trial [Master's Thesis]. [Lund, Sweden]: Lund university; 2017.
- 6. Najafi D, Larsson J. The Professional Role and Technology Use Among Physical Therapists in Tokyo: A Qualitative Interview Study [Bachelor Thesis]. [Lund, Sweden]: Lund University; 2014.

#### 3.2 Conference papers

7. Larsson J, Gustafsson P. A Case Study in Fitting Area-Proportional Euler Diagrams with Ellipses using eulerr. In: *Proceedings of International Workshop on Set Visualization and Reasoning*. Edinburgh, United Kingdom: CEUR Workshop Proceedings; 2018. p. 91.

## 3.3 Conference abstracts

- 8. Larsson J, Westergren H, Häggman-Henrikson B, Malmström E-M. Gym-based Exercise Therapy for Patients With Persistent Neck Pain. In: *Pain in Europe X: Bringing Pain Relief to All Patients*. Copenhagen, Denmark: EFIC; 2017.
- 9. Larsson J, Westergren H, Malmström E-M. Pain distribution after neck traumas: An analysis of 745 consecutive patients with persistent neck pain. In: *IASP 2016: The World Congress on Pain.* Yokohama, Japan; 2016.
- 10. Westergren H, Larsson J, Malmström E-M. Pain distribution in 745 consecutive patients with persistent pain after whiplash trauma. In: *EFIC 2015: Translating evidence into practice.* Vienna, Austria; 2015.
- 11. Larsson J, Westergren H, Häggman-Henrikson B, Malmström E-M. SensoriMotor Integration Lund the SMIL gym: A supervised exercise program for patients with persistent neck pain. In: *Svenskt Smärtforum 2016*. Jönköping, Sweden; 2016.

## 3.4 Scientific communication

12. Larsson J. A letter to the editor regarding "Serratus anterior or pectoralis minor: Which muscle has the upperhand during protraction exercises?". *Manual Therapy*. 2016 Aug;24:e1. doi: 10/gcsk6d

# 4 Software packages

eulerr Area-Proportional Euler Diagrams with Ellipses

https://CRAN.R-project.org/package=eulerr

**qualpalr** Automatic Generation of Qualitative Color Palettes

https://CRAN.R-project.org/package=qualpalr

komadown R Markdown templates based on the 'KOMA-Script' classes for LaTeX,

additionally offering cross-referencing via the 'bookdown' package.

https://CRAN.R-project.org/package=komadown

tactile Extensions to 'lattice', providing new high-level functions, methods for

existing functions, panel functions, and a theme. https://CRAN.R-project.org/package=tactile

# 5 Software and programming knowledge

Advanced	Intermediate	Novice
R	SPSS	Fortran
C++	Stan	Python
<b>L</b> TEX	Excel	