

Curriculum vitae

DSc (Tech.) LEENA KORKIALA-TANTTU

A. Personal data

- Korkiala-Tanttu Leena Katarina, nee Korkiala
- Date of birth 23rd May 1959, Pusula Finland
- Associate Professor in Geoengineering, from 1.2.2018.
- Vice head of the Department of Civil Engineering, from 1.1.2016
- Vice director of Bachelor Programme of Energy and Environmental Engineering, from March 2017

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B. Education and degrees awarded

- DSc (Tech.) 2.3.2009, Helsinki University of Technology, Civil Engineering Department, Major subjects: Soil Mechanics and Foundation Engineering and Engineering geology; Thesis: Permanent Deformation in Pavement
- MSc (Tech.) 4.4.1984, Helsinki University of Technology, Major subjects: Soil Mechanics and Foundation Engineering, Road structures and Construction design; Thesis: The Rate of the Settlement of the Consolidating and creeping Soil Layer
- PED001, Pedagogical studies at Aalto University, February 2017 (25 cr.)
- Furthermore, have successfully completed the basic studies in Educational Sciences in 18.2.2011 in Open University of University of Helsinki, as well as some pedagogical courses in Aalto University between 2012 and 2016. All together, 55 cr. of Pedagogical studies.
- Languages:
Finnish (native speaker), Master and doctoral studies in Finnish
English (fluent), several publications and research visits
Swedish (good), language diploma
German (basics)

C. Previous positions and mobility

- Professor of Practice in Geotechnical Engineering, Aalto University, from 1.12.2012 to 31.1.2018
- Director of Educational Programme of Civil and Environmental Engineering, from May 2014 to October 2017
- Professor fixed time, Aalto University, from August 2010
- Team Leader, Pöyry Finland Oy, Geotechnical design team, September 2009 – July 2010
- Senior Consultant, Pöyry Infra Oy, Geotechnical Design October 2008 – August 2009
- Senior Research Scientist and Team Leader, VTT Technical Research Centre of Finland, Road Structures and Geotechnics, January 2006 -September 2008

- Research Scientist and Project Manager, VTT Technical Research Centre of Finland, Road Structures and Geotechnics, April 1999 –December 2005
- Geotechnical Designer and Project Manager, YS-Yhdyskunta Oy, February 1993 – March 1999
- Geotechnical Designer, Y-Suunnittelu Oy, May 1984 – January 1993
- Mobility:
 - Research Visit University Nottingham, Nottingham Transport Research Centre, September - December 2003, Supervisor Andrew Dawson
 - Research Visit University of Lausanne, June 2003, Supervisor Michael Wistuba
 - Research Visit University of Strathclyde, November 2007, Supervisor Minna Karstunen
 - A couple of shorter research visits to VTI (Road Research Centre of Sweden) in Linköping in total of two weeks during 2000 – 2005.

D. Professional activities and achievements

Editorial work

- In years 2000 – 2009 acted as editor-in-chief for the member journal of Finnish Geotechnical Society.

Expert and reviewer tasks

- Peer-reviewing for five scientific journals (Geotechnique, Proceedings of the ICE Transport, Proceedings of the ICE Geotechnical Engineering, Geotechnical & Geological Engineering, Liikunta & Tiede, Rakenteiden Mekaniikka) from year 2007, in total more than 40 manuscripts.
- Peer-reviewing for twelve international conferences for more than 30 manuscripts.

Assessments for academic posts

- Four assessments of academic/scientific competence for professor positions

Public examiner/opponent tasks

- Pre-examiner, public examiner or and as an opponent of a doctoral dissertation, as well as a member in dissertation committees for ten (11) thesis, mainly in KTH Stockholm.

Thesis supervision

- Two of doctoral students have graduated (2014 Mirva Koskinen and 2016 Igor Mataic). Currently, supervising six active doctoral students in different phases.
- Between 2011 and 2018, supervised 56 master and 23 bachelor theses

Positions of trust and memberships in councils, boards, committees, networks, scientific associations, etc.

- Taken actively part into the geotechnical professional society both in Finland and abroad. Been a member of Finnish Geotechnical Society since 1986, as a board member twice in 1995-1998 and since 2014. Member in four technical committees.
- Since 1.1.2014 been the international secretary of Finnish Geotechnical Society.
- Been a Finnish nominated member of ISSMFE in TC17 and TC34 (in 2006-2009) and in TC304 (Engineering Practice of Risk Assessment and Management) and TC211 (Ground Improvement) from 2010.

- Invited to the panel of Transport network for ROTI 2017 Environment (ROTI = Rakennetun omaisuuden tila = State of the Nation on Built Environment) Transportation Infrastructure.
- Invited for technical evidence to the district court twice and once for the court of appeal. In addition, written six expert statements concerning different civil cases.
- During 2006 and 2008 invited to work as a Technical Expert in STUK's Nuclear Waste Section of the Advisory Committee on Nuclear Safety.
- Nominated to represent Finnish Geotechnical Society in the Evaluation Committee of Ground Construction Competences organized by FISE Qualification of Professionals in Building, HVAC and Real Estate Sector in Finland
- Elected as Oltermanni (representative of the professors) for the guild of Civil Engineering for years 2016-2018
- Also, a board member of R&D in the Advisory Council for Infra Construction from 2014.

Experience of leadership (department, research group, etc.)

- Vice head of the Department of Civil Engineering since 1.1.2016
- Several team leader and group manager roles during over 10 years at VTT, Pöyry and Aalto University.
- Director of Educational Programme of Civil and Environmental Engineering from May 2014 to October 2017.
- Vice director of Bachelor Programme of Energy and Environmental Engineering, since March 2017
- Project manager for more than 20 research or design projects.
- Part of VTT's strategic research coordination group TIC (Technology in Community) in years 2006-2007.

Joint efforts and cooperation, e.g., with industry, trade and business life

- Due to long industrial background, experience on the design of geotechnical structures for about 17 years (1984-1999 and 2008-2010) from the site planning to the detailed design of infrastructures
- Project manager in about 25 research projects. Most of which has been joint efforts and cooperation with industry and business life. See more details in External Funding.
- Member of Building SMART Finland Infraconstruction steering group as a representative of research and education.
- Nominated (by Finnish Transport Agency) member in the mirror group of Eurocode 7 updating process.
- Involved in curriculum planning of new bachelor programme (ENY programme) starting from 2013 and Geoengineering Master programme starting Fall 2016.
- Participated the creation of the research programme of SHOK (the Strategic Centres for Science, Technology and Innovation) of the Built Environment (RYM).
- Co-inventor of a couple of disclosures at VTT
- Involved in three disclosures made in 2016. The disclosures are actively developed and the ideas are pitched to Tekes to receive funding and create start-ups.
- Taken part to the cooperation with school of arts (architecture), chemistry and electronics and inside school of engineering concerning research applications, networks and teaching. For instance, the students of mechatronics have made their project work from the mass stabilization for two times. Also given lectures in for example Environmental Risk Analysis course.

- Joint created apprenticeship education program for InfraBIM (Building Information Model) (course structure and teaching materials) with Tampere Technical University and many Universities of Applied Sciences. Supervised also three project works in that program.
- Joint-organized the course of Environmental Impacts with Tampere Technical University in year 2015.
- Jointly organised course of use of recycled materials in infra construction with Tampere Technical University and industry in semester 2017-2018.

Participation in/organization of conferences, workshops, etc.

- Participated in organisation committee of two International Geotechnical Conferences (Nordic Geotechnical meeting and 4th GIGS, the International Conference on Ground Improvement Geosystems) in June 2000.
- Responsible organisator for NGM 2020 18th Nordic Geotechnical Meeting and BSGC 2020 14th Baltic Sea Geotechnical Conference in Helsinki.
- Worked in the organising committee of Roads and Transportation conference for four times, most recent in year 2016.
- Organised more than 20 workshops in both international and national level.
- Besides participated to at last 30 international conferences.

Administrative assignments (teaching, research, general, etc.)

- Elected as a professor representative of Aalto Academic Affair Committee from 1.1.2018.
- Elected as a professor representative of the Academic Affair Committee for Engineering from 1.1.2014 to 31.12.2017.
- Otherwise, look at Experience in Leadership.

Public appearances, tutorials, talks

- Published more 16 scientific journal articles, 49 conference papers, one monograph and 42 other scientific publications. A list of publications is in separate file.
- Written 4 textbooks and 16 articles to popularising science.
- Given Keynote lecture in ICNACE (3rd Internattional Conference on New Advances ini Civil Engineering, 28.4.-29.4.2017 Helsinki
- Given several (more than 20) public presentations in conferences, workshops and Finnish Geotechnical Days, and been a panellist in a couple of workshops.
- Since September 2012 tutoring of the freshmen has been one task. The number of students has varied annually from four to ten students.

External research funding

- Worked as a project manager in about 25 research projects. Most of which has been joint efforts and cooperation with industry and business life. The most important projects are:
 - *The behaviour of pavement structures, Finnish Transport Agency, eight different projects in years 2013 – 2017 including both master (5) and doctoral student (3) projects, totally more than 470 000 €*
 - *The behaviour of soft clays in cuttings and reliability based definition of soil parameters, Finnish Transport Agency, four projects from 2015 up to 2020, totally around 493 000 €.*
 - *The behaviour of bentonite and backfill materials, KYT2014, Finnish Research Programme on Nuclear Waste Management years 2012-2014; 150 000€*

- *Development of open sector bored pile (C-pile), Tekes-project (Tekes = Finnish Funding Agency for Technology and Innovation) funded by Tekes, Emeca and Suomen Teräspaalaus Oy; years 2012-2014; 125 000€*
- *Geotechnical studies of preconstruction works, City of Helsinki, in years 2014 – 2015; Sum 25 000€*
- *During years 2000-2008 while I worked at VTT I have received several (>10) grants together with the research groups from VTT. I have also been a project manager in most of these projects.*
- Been a consortium partner in a couple of FP6 and FP7 projects. The projects include for example ECRPD (VTT's share 104 000 k€, years 2007-2008) and taken part to two COST actions.

Prizes and awards

- I was elected as the Civil Engineer of the Year by Finnish Association of Civil Engineers in 2018.
- The students have got many awards of their works like attending the conference of young geotechnical engineers (four times) both in European and international level.
- The thesis of Juha Häkkänen, Jaana Vinter and Monica Löfman have been awarded as the master thesis of the school of Engineering in years 2014 to 2016.
- Jaana Vinter won the annual prize of Finnish Geotechnical society of the best thesis in year 2015 and a Master thesis prize of Oskari Vilamo foundation in year 2016
- The thesis of Mikko Riikonen got a scholarship from MANK (Earth Construction Board) in September 2014 and in year 2015 by Destia.
- The project work of Ilkka Tieaho was awarded as the best work in the apprenticeship education program.
- The joint educational course with Tampere Technical University about the use of recycled materials (UKI-course) in infraconstruction was nominated the Geoteko-prize in November 2017. Geoteko-prize is awarded every second year by Finnish Geotechnical Society.

Citations

- The number of citations according to Google Scholar is 260, Research Gate 130 and Scopus 45. The h-index in Google Scholar is 10, in Scopus 4 (excluding self-citations). According to Google Scholar the number of citations has been increasing during last four years since 2013 from 140 to 260.