

Curriculum Vitae

1 Full name:

- Family name: Vermeer
- Given name: Martinus (“Martin”)
- Male
- CV date of currency: April 22, 2019

2 Birth, nationality:

- Born January 27, 1953 in Hardinxveld, The Netherlands
- Finnish citizen living in Helsinki, Finland

3 Studies, degrees:

- Ph. D. U. of Helsinki, Geophysics, January 31, 1985, U. of Helsinki, Faculty of Science
- M. Sc. in Eng., Delft U. of Technology (DUT), Geodesy, June 3, 1981, DUT Department of Geodesy
- Title of Docent: Geodesy. U. of Helsinki, February 2, 1994

4 Other education and skills:

- YOOP (“Program on Higher Education Pedagogy”), 15 study weeks, completed at Helsinki U. of Technology (HUT) Jan. 5, 2004.

5 Natural-language skills:

- Mother tongue: Dutch
- English, Finnish (near-native), German, Swedish (good), Danish (fair), French (basic).

6 Current position:

- From 2000 Professor of Geodesy, Helsinki U. of Tech. / Aalto University

7 Positions held:

- 1992-2000 Head of Finnish Geodetic Institute Department of Geodesy (Professor)
- 1993 (seven weeks) visiting professor of Space Geodesy, Delft U. of Technology, The Netherlands
- 1988-1992 Researcher, Danish National Survey and Cadastre (KMS) in an arrangement with Finnish Geodetic Institute
- 1981-1992 Researcher, Finnish Geodetic Institute (FGI)

8 Funding received, research supervision and management:

- During 1998-1999 responsible manager for a TEKES- and Vaisala-sponsored project on GPS and atmospheric water vapour.
- During 2003 PaKoMu, Local Co-ordinates and Transformations, financed by Ministry of Agriculture and Forestry.
- During 2006 Heights, Height Systems, Height Models And Their Error Propagation, financed by Ministry of Agriculture and Forestry.
- 2005-2008 (three years) The use of ICT measurement techniques on high-quality construction. Academy of Finland, KITARA programme.
- Academy of Finland no. 123113, *Regional Crustal Deformation and Lithosphere Thickness Observed with Geodetic Techniques*, 01.01.2008 - 31.12.2010, 83 190€. Consortium leader. Supervised / advised on graduate student.

9 Educational merits and experience

- YOOP (“Program on Higher Education Pedagogy”), 15 study weeks, completed at Helsinki U. of Technology (HUT) Jan. 5, 2004.
- Academic teaching
 - M. Sc theses supervisor, sometimes advisor, some 25 theses
 - Supervisor, one licentiate thesis
 - Supervised doctoral dissertations:
 - * Markku Poutanen: *Sea surface topography and vertical datums using space geodetic techniques*. U. of Helsinki (UH) 2001.
 - * Jorma Jokela: *Length in Geodesy - On Metrological Traceability of a Geospatial Measurand*, Aalto U. 2014.
 - * Karin Kollo: *Aspects of Modelling Geographic Information in Geodesy and Geodynamics*, Aalto U. 2015.

10 Awards and recognitions

- From 1994 foreign member, Finnish Academy of Sciences and Letters.
- 2008: Golden Badge of Merit from the Finnish National Land Survey, for valuable activities to the benefit of the profession.
- 2011: winning entry in logo competition for the Finnish Society of Photogrammetry and Remote Sensing. Modified 2015 to serve as the logo of the Finnish Society of Geodesy and Photogrammetry: <https://www.fksry.fi/>.
- 2018: Winning name proposal for a cocktail drink mixed by Marlo Garnsworthy, inspired by melting ice: *Moulin Bleu*.
<https://twitter.com/SvantesKatt/status/1076890074544046087>.
- Martin Vermeer is *not*, and has never been, an Expert Reviewer for the Intergovernmental Panel on Climate Change.

11 Other scientific or academic merits:

11.1 Doctoral opponentships:

- Peter Nsombo: *Geoid Determination Over Zambia*. Swedish Royal Institute of Technology. KTH June 1996.
- Kjell Almgren: *A new method for GPS ambiguity resolution on-the-fly at short baselines*. KTH Feb. 1998.
- Abd. Majid A. Kadir: *Gravity field mapping over the Southeast Asian region using spaceborne gravimetry techniques*. UH 1991.
- Ove Christian Dahl Omang: *The Challenge of Precise Geoid Determination – Applied to Norwegian Extremities: Glaciers, Fjords and Mountains*. Norwegian Agricultural U. (NLH), Ås, Norway 2001 (one of two opponents).

- Artu Ellmann: *The geoid for the Baltic countries determined by the least squares modification of Stokes' formula*. KTH May 2004.
- Ramin Kiamehr: *Precise Gravimetric Geoid Model for Iran Based on GRACE and SRTM data and the Least-Squares Modification of Stokes' Formula with Some Geodynamic Interpretations*. KTH Oct. 2006.
- Pasi Pertilä: *Acoustic Source Localization in a Room Environment and at Moderate Distances*. Tampere U. of Technology (TUT) Jan. 2009.
- Tuomo Pirinen: *Confidence Scoring of Time Delay Based Direction of Arrival Estimates and a Generalization to Difference Quantities*. TUT Dec. 2009.
- Kristian Breili: *Investigations of surface loads of the Earth – geometrical deformations and gravity changes*. Norwegian U. of Life Sciences (UMB), Ås, Norway 2010 (one of three opponents).
- Mikko Parviainen: *Self-Localization in Ad-Hoc Indoor Acoustic Networks*, TUT 2016 (one of two opponents).
- Silja Märdla: *Regional geoid modelling by the least squares modified Hotine formula using gridded gravity disturbances*, Tallinn University of Technology 2017 (one of two opponents).

11.2 Doctoral dissertation pre-reviewerships:

- Wang Zhitong: *Geoid and Crustal Structure in Fennoscandia*. UH 1998.
- Matti Ollikainen: *Determination of Orthometric Heights Using GPS Levelling*, UH 1997.
- Mikko Takalo: *Automated Calibration of Precise Levelling Rods in Finland*, HUT 2000.
- Andres Rüdja: *Geodetic datums, reference systems and geodetic networks in Estonia*. UH 2004.
- Heikki Virtanen, *Studies of Earth Dynamics with the Superconducting Gravimeter*, UH 2007.
- Maaria Nordman, *Improving GPS Time Series for Geodynamic Studies*, UH 2009.
- Mikko Parviainen, *Self-Localization in Ad-Hoc Indoor Acoustic Networks* Tampere U. of Tech. 2016.
- Klaus Bittermann, *Semi-empirical sea-level modelling*, U. of Potsdam 2016.

11.3 Doctoral promotion committee memberships:

- Gothenburg 2007-11-02, Chalmers U. of Technology:
Martin Lidberg: Geodetic Reference Frames in Presence of Crustal Deformations
Opponent: Geoffrey Blewitt
- Stockholm 2013-11-08, KTH:
Zhao, Yueming: Key Technologies in Low-cost Integrated Vehicle Navigation Systems
Opponent: Hossein Nahavandchi
- Potsdam 2016-05-20, U. of Potsdam:
Klaus Bittermann: Semi-empirical sea-level modelling

11.4 Licentiate dissertation pre-reviewerships:

- Jaakko Mäkinen: *Maankuoren vertikaaliliikkeiden mallintaminen ja vaikutus korkeusjärjestelmiin*. HY 1993.
- Jaana Järvinen: *Utilisation of GPS Satellite Measurement Methods in Data Acquisition for GIS Applications*. HUT 2001.

11.5 Academic competence assessments:

- Professor II space geodesy, Norwegian Agricultural U., Ås 1997.
- Lecturer in Civil Eng., Technion, Israel 1998 (Lecturer = lower level assistant prof., non tenured).
- “Försteamanuens”, surveying, Inst. for Mapping Science, Norwegian Agricultural U., Ås 1999.
- Evaluating the scientific works of Dr. Gamal Seleem in 2003, and those of Dr. K.H. Zahran in 2006, both for the National Research Institute of Astronomy and Geophysics, Helwan (Egypt).
- Docentship of Dr. Markku Poutanen, HU 2002.

- Professor / Assoc. prof / Assistant prof. / Lecturer in Geodesy, Cyprus U. of Technology, 2010.
- Professor of Geodesy, Technical U. of Denmark, 2013.
- 2015-... Chair, Teaching Competence Assessment Committee, School of Engineering, Aalto U.
- Docentship of Dr. Jonas Ågren, KHT, 2016.
- Tenure track postdoctoral position in geodesy, Norwegian U. of Life Sciences (UMB), Ås, Norway (evaluation committee of three), 2017.
- 2015-2016, 2017 Member, then Chair, then Member again, Departmental Tenure Track Committee for Professor in Geoinformatics, Dept. of the Built Environment, Aalto U.

11.6 Other expert tasks:

- Participated in review of Estonian research and development institutions in geodesy for the Estonian Higher Education Accreditation Centre, November 5-10, 2002.
- Participated in review of Estonian curricula in Land Surveying, Land Management and Geodesy for the Estonian Higher Education Accreditation Centre, February 12-18, 2007.
- Participated in the Reaccreditation Review of the Faculties of Geodesy and of Geotechnical Engineering, both U. of Zagreb, for the Accreditation Council of the Croatian Agency for Science and Higher Education, March 25-29, 2012.
- 2013 (four weeks) visiting lecturer in Digital Photogrammetry; Inst. for Land Administration, Bahir Dar U., Ethiopia.
- Participated in the evaluation of Collaborative Research Centre 1128 "*Relativistic Geodesy and Gravimetry with Quantum Sensors*" (Geo-Q) in Hannover, Germany, March 5-6, 2014, and again January 23-34, 2018.
- 2014 (three weeks) visiting lecturer in Advanced Remote Sensing, Entoto Observatory and Research Center, Addis Ababa, Ethiopia.
- 2015, 2016 (three weeks each) visiting lecturer in Digital Photogrammetry, Entoto Observatory and Research Center, Addis Ababa, Ethiopia.
- Participated in evaluation, University of Luxembourg. October 12-14, 2016.
- Evaluation of the base network design for the Länsimetro (Helsinki-Espoo metro extension) project. Two reports, 2015, 2017.
- Participated in evaluation of the proposed Civil Engineering Curriculum in Surveying Technology at Gävle University, Sweden, 2018. Evaluation Committee convened by the Swedish Higher Education Authority, Stockholm.

11.7 Scientific trusted offices:

- 1995-1999 book review editor for Europe, Journal of Geodesy.
- 1990-1999 President, Int. Association of Geodesy (IAG) Subcomm. for the Geoid in Europe.
- 1990-1999 National representative for Finland, IAG Comm. XII (Int. Geoid Commission).
- 1999-2003 President, IAG International Gravity and Geoid Comm.
- 2003-2011 President, IAG Subcomm. 2.2: Spatial-Temporal Structure of the Gravity Field.
- 1995-2003, 2015-... Member, Editorial Board, Journal of Geodesy.
- 1998-2006 Member of the Nordic Geodetic Commission's Presidium.
- 2003-2004 Member, Editorial Board, Nordic Journal of Surveying and Real Estate Research.
- 2004-2015 Editor-in-Chief, Nordic Journal of Surveying and Real Estate Research.
- 2008-2009 Co-ordinator, for TKK Department of Surveying, of Research Assessment Exercise.
- <2007 - ... Member, Editorial Board, Geodesy and Cartography (Vilnius).
- 2011-2017 Member, Steering Group of Aalto-1 satellite project.

12 Societal impact of research:

Interviewed by Päivi Repo of Helsingin Sanomat on the finding of the BIFROST project (G.A. Milne et al., 2001) that the postglacial rebound includes a horizontal component, and that thus Finland and Sweden move apart. Appeared March 31, 2001 on page C15.

Interviewed in February 2003 by Annvi Gardberg of Radio Vega's (YLE's Swedish-language branch) "Inblick" programme on the theme "Is Big Brother Watching?", about the ability to position cell phones by GPS (air time 10 minutes).

Interview, Radio Vega "Kvantumsprång", November 2006 on GPS (air time 10 minutes, Swedish).

The publication list discloses active participation in the public debate around climate science, specifically sea-level rise, e.g. Rahmstorf & Vermeer (2011), Vermeer (2010, 2011), Rahmstorf & Vermeer (2009), Vermeer (2010).

"Tekniikan Päivät" (Technology Fair) 2012. Presentation (30 minutes) "Maa, meri ja jää – geodeetin seikkailut merenpinnan tutkimuksessa" (*Land, Sea and Ice – a Geodesist's Adventures in Sea-Level Research*), January 14, 2012, Dipoli, Espoo.

Interview December 2014 by the Ethiopian Broadcasting Corporation, on Remote Sensing. Location: Entoto Observatory.

Interview May 18, 2015 by Helsingin Sanomat's Paavo Teittinen: "Professorit pitävät Shellin ilmastokenaariota hälyttävänä – "Etelä-Eurooppa aavikoituisi" (*Professors find Shell's climate scenarios alarming – Southern Europe would become a desert*).

URL: <http://www.hs.fi/talous/a1305956134275>.

Interview December 2016 by Jón Bjarki Magnússon of *Correctiv* (Berlin), published July 28, 2017, re-published in *Slate* August 7, 2017: "The Only Place in the World Where Sea Level Is Falling, Not Rising" URL: <https://correctiv.org/en/investigations/climate/article/2017/07/28/sea-rise-finland-sweden/>, http://www.slate.com/articles/health_and_science/science/2017/08/why_sea_level_is_falling_in_finland_and_sweden.html.

Lecture notes to be found under URL: <http://users.aalto.fi/~mvermeer>

13 Trusted offices in society

- Wrote the *Review of the GPS deformation monitoring studies, commissioned by Posiva Oy on the Olkiluoto, Kiviö and Romuvaara sites, 1994-2000* for the Finnish Radiation and Nuclear Safety Authority, in 2002.
- 1999: Chair, Finnish Geophysical Society.
- 1999: Chair, Finnish Society for the Surveying Sciences.
- 2000-2015 Member, National Committee for Geodesy and Geophysics.
- 2000-... Member, National COSPAR committee.
- 1999: Member, Committee for the Modernization of the Finnish Co-ordinate Systems.
- 2004-2005 Member, Committee for the Modernization of the Finnish Height System.
- 2000-2002 and 2002-2004 Member, American Geophysical Union's Information Technology committee.
- 2005-2007 Member, Board, URSA Amateur Astronomical Society; 2006-2007 Vice-Chair.
- 2004-2014 Member, Board, Finnish Geodesists' Club, sometimes Chair. The Club organized several Theme Events:
<http://www.kolumbus.fi/eino.uikkanen/GeodeettienKerho/index.html>.
- 2005-2011 Chair, Honkatie 1 Housing Corporation (a dozen households).

14 Other

- Active participation in Open Source software development, e.g., major contributions to LyX (<http://www.lyx.org>).
- Co-ordinator-in-charge of Aalto-L^AT_EX software development (volunteer position, since 2018).