

CURRICULUM VITAE

SEE ALSO GOOGLE SCHOLAR, ATTE MOILANEN

1. Full name and date

Moilanen, Atte Jaakko (male)

Date of preparation of this document: Dec. 22, 2018

2. Date and place of birth, nationality, current residence

- date and place of birth 23.3.1968, Helsinki, Finland
- citizenship Finnish
- current residence Vanha Yrtimeaantie 18, 00730 Helsinki
- Address (i) Finnish Natural History Museum (LUOMUS), P.O.Box 17, FI-00014, University of Helsinki, Finland. (ii) Dept. Geosciences and geography, University of Helsinki
Tel: + 358 50 3388 550 (mobile)
E-mail: atte.moilanen@helsinki.fi
www: [https://tuhat.helsinki.fi/portal/fi/persons/atte-moilanen\(e3167f43-260d-4764-9c3b-1c0a7a35ddc7\).html](https://tuhat.helsinki.fi/portal/fi/persons/atte-moilanen(e3167f43-260d-4764-9c3b-1c0a7a35ddc7).html)

3. Education and degrees awarded

- **Docent of Ecology:** June 17, /2002, University of Helsinki. Verifiable from <http://www.helsinki.fi/biotieteet/hallinto/dosentit.pdf>
- **PhD, Population biology, 17.9.1999**, University of Helsinki, Dept. Ecology and Systematics, Division of Population biology. Subject: “*Modeling metapopulation dynamics*”, grade: *eximia*. Post-graduate studies in population biology. Verifiable from the office of the Faculty of Biological and Environmental Sciences.
- **Licentiate in Technology, Applied mathematics, 7.4.1998**, Helsinki University of Technology, Dept. Engineering physics and mathematics. Subject: “*Optimization with evolutionary algorithms and local search*”, grade: *pass with distinction*. Post-graduate studies in applied mathematics.
- **MSc, Computer Science, 25.11.1992**. Lappeenranta University of Technology, Dept. Computer science. Subject: “*Computer assisted comparison and grouping of protein electrophoresis patterns in microbial ecology*”, grade 4/5.
- **College:** Langinkosken lukio 1986, average grade 9.7 (of max 10.0), 5× *laudatur (highest grade)*.

4. Other education and training, qualifications and skills

- Decision makers forest academy, 2015

5. Linguistic skills

- Finnish (native)
- English (almost native; lived 4.5 yrs abroad, written >100 publications in English)
- Swedish (excellent grades from studies, rusty from lack of use)
- German (rudimentary)

6. Current position

- 1/2018 onwards: **Research director** (permanent) Finnish Biodiversity Information Facility (FinBIF) at the Finnish Natural History Museum (50%) and Dept. Geosciences and Geography (50%), University of Helsinki.
- **Principal Investigator** at the University of Helsinki

7. Previous work experience

- 5/2010 → 12/2014 **Professor**, Conservation Decision Analysis, University of Helsinki, Finland.
- 8/2008 → 12/2011 **Principal investigator**, group leader, and **Vice director** at the Center of Excellence in Metapopulation Biology (MRG), a three-time Center of Excellence in Science nominated by the Academy of Finland.

- 8/2003 – 8/2008 *Academy Research Fellow*. Vice director of the MRG.
- 12/2006 – 8/2007 *Academic visitor* to the Australian Centre for Risk Analysis, directed by Professor Mark Burgman at the University Melbourne.
- 8/2002 – 8/2003 *Senior researcher*, Metapopulation Research Group, Univ. Helsinki.
- 9/2000 – 7/2002 Academy of Finland, *post-doc researcher*.
- 1/1999 – 8/2000 Univ. Helsinki, Dept. Ecology and Systematics, researcher.
- 1/1995 – 12/1998 Univ. Helsinki, Dept. Ecology and Systematics, *PhD project*.
- 11/1993 – 12/1994 Univ. Helsinki, Dept. Genetics, research scientist.
- 4/1993 – 10/1993 *Military service*
- 1/1992 – 12/1992 Univ. Helsinki, Dept. Genetics, MSc project.
- 4/1989 – 5/1990 Kymmene Ltd, *information systems design, programming*.
- 1/1988 – 4/1989 Kaakontieto Ltd, *programming*.

8. Research funding, leadership and supervision

Personal research funding to Moilanen as PI (2003-2017): approximately **6M€**

Participant in successful joint bids for approximately **35M€** (including 4 Centers of Excellence)

Major research funding

- Kone Foundation **530k€**, “Next generation methods for ecologically based land use planning”, 2019-2023.
- BioDiversa Funding for project FutureWeb (Academy & EU), 3/2019 - 2/2021. **230k€**
- Vice-director of Academy of Finland Strategic Research project, IBC-Carbon (2018-2023) with personal funding share of approx. 850k€.
- Joint grants lead by Prof. Jane Elith at the University of Melbourne (Species distribution models can be uncertain but relevant for conservation, 2016-2018, ~500 k AUD) and by Dr Ascelin Gordon at the Royal Melbourne Institute of Technology (Evaluating environmental policies with immediate costs and long-term gains, 2015-2017, ~500 k AUD).
- **370k€** for 2015-2017, due to Center of Excellence in Science position from the Academy of Finland for 2015-2017, see www.helsinki.fi/science/metapop.
- Kone Foundation 2012: **182k€** for 2013-2015, topic "*Conservation strategies: their attributes, classification, application, implications, and emergent properties*"
- One out of eight principal investigators in a successful application (~**1M€** share out of ~8M € total: **492k€** for 2012-2014, grant 250444) due to a Center of Excellence in Science position from the Academy of Finland for 2012-2017, see www.helsinki.fi/science/metapop.
- Recipient of an European Research Council Starting (Consolidating) Researcher Grant ERC-StG, **1.5M€** for 1/2011 - 12/2015. http://erc.europa.eu/pdf/ERC_StG2010Results_LS.PDF
- Univ. Helsinki (central admin & Dept. Biosciences) support for ERC, **350k€**, for 2011-2015.
- Finnish Ministry of Environment via the Finnish Forest and Park Service (Metsähallitus): **300k€**, 50% support for 5 year professorship 2010-2014 & **260k€** 2016-2019.
- Helsinki University 3yr research grant 2009-2011, **112k€**.
- Funding 2009-11 from the EU 7th framework prj SCALES; **205k€**. <http://www.scales-project.net/>
- One out of the six principal investigators in a successful application (~**600k€** share out of ~6M € total) for a Center of Excellence in Science position from the Academy of Finland for 2006-2011. www.helsinki.fi/science/metapop
- 5/2003, Academy of Finland, Research Fellow grant, ca. **500k€**. “Reserve network design: ecological and economical factors”

Supervision of post-doc researchers, doctoral students and undergraduate students

- Supervisor of **eight PhD theses** (seven completed), six MSc theses and seven postdocs.
- Post-doc supervisor / young researcher mentor of Drs (past) *Anni Arponen, Saija Sirkiö, Federico Montesino Pouzols, Tuuli Toivonen*, (present) *Jussi Laitila, Enrico Di Minin, Andrea Santangeli*, and *Joona Lehtomäki*.

- Present PhD supervisor of *Mr Peter Kullberg* (2012→2019), Ms Ninni Mikkonen (2018→) and Ms Elina A. Virtanen (2018→).
- PhD supervisor of *Ms Mar Cabeza*, “Metapopulation dynamics and reserve network design”. Thesis passed with distinction 5 / 2003. Funding: Academy of Finland.
- PhD supervisor of *Ms Jonna Katajisto*, “Habitat use and population dynamics of brown bears (*Ursus arctos*) in Scandinavia”. Thesis passed 1/2007, grade *magna*. 2nd supervisor, Prof. Jon Swenson. Funding: Finnish Cultural Foundation.
- PhD supervisor of *Ms Astrid van Teeffelen*. “Where and how to conserve. Extending the scope of spatial reserve network design.”, passed 6/2007, grade *magna*. Funding, Academy of Finland.
- PhD supervisor of *Ms Anni Arponen*. “Weighting and valuing species in reserve planning”. 2006 → 2009. Funding: Helsinki University Science Foundation and the Finnish Ministry of Education. Thesis *passed with distinction*.
- PhD supervisor, of *Mr Joona Lehtomäki*, “Spatial conservation prioritization for Finnish forest conservation management” 2008 → 10/2014. Funding: Helsinki University Science Foundation; Ministry of Environment (via the Finnish Environment Institute, SYKE).
- Assisting PhD supervisor of *Mr Santtu Kareksela* 2009 → 24.1.2015 ~“Prioritization of restoration of peatlands”, Univ. Jyväskylä.
- PhD supervisor, of *Mrs Aija Kukkala*, “Spatial Conservation Planning for Biodiversity and Ecosystem Services – From Concepts and Methods to Policy Agendas in the European Union.” 5/2014 → 21.4.2017. Funding: ERC and the Kone Foundation. Thesis *passed with distinction*.
- MSc supervisor *Ms Astrid van Teeffelen*, *Ms Anni Arponen*, *Mr Joona Lehtomäki*, *Ms Ninni Mikkonen*, *Mr Timo Vaahtoranta*, and *Mr Joel Jalkanen*. LSc supervisor of *Ms Victoria Veach*.

9. Merits in teaching and pedagogical competence

- Developer and lecturer of course “*Working effectively in science*” (2 ECTS) for University of Helsinki 2018→
- Docent of Ecology, University of Helsinki 6/2002
- Developer and lecturer of course “*Concepts and Principles of Spatial Conservation Planning*” (3 ECTS) for University of Helsinki 2011→
- Developer and lecturer of course “*Methods and Software of Spatial Conservation Prioritization*” (3 ECTS) for University of Helsinki 2012→
- Teacher in ca. 15 courses in University of Helsinki and Helsinki University of Technology, including *Advanced Programming for Ecologists*; *Conservation Biology in Fragmented landscapes*.
- Originator of and teacher at 1-day workshop “Zonation framework and software for spatial conservation planning”, conferences including ECCB 2009, ICCB 2012, ECCB 2012, ICCB2015.

10. Awards, prizes and honours

- *Finnish Academy of Science and Letters*: permanent member 2017 onwards
- *Society of Conservation Biology, Europe section Distinguished Service Award for “extraordinary contributions to ecologically based, computational methods to support conservation solutions that successfully tradeoff biodiversity values, costs and alternative land uses and conservation resource allocation”*

11. Other academic merits

Member of international peer evaluation committees of funding applications

- **Application evaluator** for the National Science Foundation NSF, USA; the European Research Council ERC; Swedish Research Council - FORMAS; French National Research Agency ANR; the Swiss National Science Foundation (SNSF); the Netherlands Organization for Scientific Research; the Greek Ministry of Education; the Slovenian Research Council ARRS; the Microsoft foundation.
- Member of the “Rich natural environment” panel of FORMAS - **Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning**, years 2009, 2010, 2011 and 2012

- Member of the "Evolutionary, population and environmental biology" panel of the **Greek Ministry of Education**, 2011.
- **Evaluator for:** Swiss National Centre of Competence in Research (NCCR) program 2013
- **EU BiodivERsA FP7 ERA-NET**, member of SEC scientific evaluation committee, 2012.
- Member of the **IPBES panel** of Finland

Membership in national or international expert groups

- **Member in Finnish IPBES panel 2016-2018**
- **Permanent scientific expert, Finnish national 15% habitat restoration project 2014->**
- **Member of supervisory committee, EU NATNET Life+ project**
- **Society for Conservation Biology, SCB**, life member 45264
- Member of the **IUCN WCPA, World Commission on Protected Areas**, 2011→2014
- Associate to the **Australian Centre of Excellence for Risk Analysis** directed by Professor Mark Burgman; scientific visitor there for 12/2006 → 8/2007 & 6-8/2012. www.acera.unimelb.edu.au
- Key associate to the Australian Research Council's **Centre of Excellence for Environmental Decisions (CEED)**, directed by Professor, FAA, Hugh Possingham, Univ. Queensland, see <http://ceed.edu.au/>, 2011-2017.
- International participating investigator at the **Commonwealth research hub "Applied Environmental Decision Analysis"**, directed by Professor Hugh Possingham, Univ. Queensland, see www.aeda.edu.au, ~2005 → 2011
- One of the "ten significant supervisors" of the **Finnish Graduate School in Wildlife Biology, Conservation and Management (LUOVA)**, 2010→
- **Leading scientist** in a Finnish national integrated project for ecologically-based conservation prioritization in the South-Central Finland Forest Biodiversity Program (METSO); http://www.metsonpolku.fi/metso/www/fi/materiaalit/esitteet/Zonation_ja_METSO_20.06.2011.pdf
<http://www.helsinki.fi/news/archive/6-2011/28-15-49-37.html>
- Member in the national science forum of the **Finnish Ministry of Education** 5/2011
- Member of the program committee of the **Finnish Graduate School in Computational Sciences (FICS)**, 2009-2011.

Positions as editor-in-chief, editor or member of editorial boards of scientific journals

- Subject editor for **Ecography**, 2014→2015
- Member of the editorial board of **Conservation Letters** 2007→2015
- Member of the editorial board of **Biological Conservation**, 2012→ 2017
- **Peerage of Science**, Peer.

Referee for scientific journals

- **Reviewer for ~25 top scientific journals** in the fields of population biology, ecology, landscape ecology and conservation biology, including Nature, Science, Global Change Biology, Ecology Letters, Nature Communications, Frontiers in Ecology and the Environment, The American Naturalist, Biological Reviews, PROC-B, Ecology, Landscape Ecology, J. Vegetation Science, Conservation Biology, Conservation Letters, Ecological Applications, Journal of Applied Ecology, PLOS Computational Biology, PLoSOne, Biology Letters, Environmental Management, Biological Conservation, Diversity and Distributions, Ecography, Oikos, Oryx, J. Environmental Management, J. Biogeography, & J. Forest Economics.

Pre-examiner/examiner of doctoral dissertations

- **Examiner of PhD theses:** PhD theses of Ms Minna-Liisa Rantalainen (Univ. Jyväskylä, Finland), Mr Rohan Sadler (Univ. Western Australia), Ms Alan Moore (Univ. Melbourne), Mr Piero Visconti (Univ. James Cook, Australia), Mr Samuel Lloyd, Imperial College London.

Evaluation of academic/scientific competence

- **Evaluator for professor-level positions:** evaluator for four docentships in Finland; evaluator for five professor-level positions outside of Finland.

12. Scientific and societal impact of research

- Author of **>135 original scientific (ISI) publications** and 10 pieces of software.
- H-index (citations) ISI ≥ 48 (cit. >7500); Google Scholar ≥ 61 (cit. > 13400; ~1300 per year). m-index (h / years since PhD) >3.
- Ranked by the ISI Web of Science globally among leading researchers (sort authors by impact) in the following research areas: conservation planning, spatial conservation prioritization, and biodiversity offsetting.
- Methods & software developed in my group have been applied to environmental decision problems around the world.
- In Finland, methods developed by me (Zonation, ecological decision analysis, etc.) have been in active use broadly across the environmental administration since 2008 (MetZo project).

13. Positions of trust in the society and other societal merits

In addition to global-scope scientific activities, I have actively participated in the operations of the Finnish environmental administration, including the Ministry of Environment, Ministry of Agriculture and Forestry, Natural Heritage Services (Metsähallitus), the Finnish Environment Institute, and regional authorities involved with land use planning and zoning. Projects include spatial prioritizations for the South-Finland forest biodiversity program, impact avoidance of peat mining in Central Finland, biodiversity analyses underlying land use zoning in South Finland, planning the expansion of the South-West Lapland conservation area network, prioritizations for the expansion of the forest protection area network managed by the NHS, prioritization of the Natura 2000 network to identify its priority areas for management, species-level spatial studies (e.g. the capercaillie) and planning of zoning for green infrastructure in South Finland. Recently, I have been responsible for the quantitative methods employed for the planning of habitat restoration across Finnish ecosystems, as implied by the EU biodiversity strategy. By participation in these and other projects, I have brought (comparatively) leading science to Finnish environmental decision making. Also, my recent and ongoing work around biodiversity offsets is generating a lot of attention and demand amongst both the Finnish environmental administration and businesses, also outside Finland.