

# Curriculum Vitae

**Name:** Fredrik Lindberg

**Date of birth:** 7 August, 1974

**Citizenship:** Swedish

**Current position:** Senior lecturer in geography with a focus on physical geography

**University affiliation:** University of Gothenburg, Department of Earth Sciences, Guldhedsgatan 5, 40530, Göteborg, Sweden Tel +46 (0)31 786 2606, e-mail: fredrik.lindberg@gvc.gu.se

## Education

- Doctor of Philosophy, Physical Geography, 2002-2007. Department of Earth Sciences, University of Gothenburg. Dissertation date: September 25, 2007. Dissertation title: *"Spatial variation of the urban climate and its influence on thermal comfort and behaviour"*. Supervisors: Professor Ingegård Eliasson (main) and Professor Sofia Thorsson (co).
- Masters of Science in Physical Geography, 2000-2002. Dissertation title: *"The covariation between building intensity and intra urban air temperature"*, Department of Earth Sciences, University of Gothenburg.
- Master of Sciences in Geography, 1998-2000. Dissertation title: *"An attempt to measure the rate of stone uplift for an area located in Bollebygds community, SW Sweden"*, Department of Earth Sciences, University of Gothenburg.
- Bachelor of Sciences in Geography, 1996-1998. Department of Earth Sciences, University of Gothenburg.

## Academic degree

Associate Professor (docent) in Physical Geography (January 2017)

## Post-doctoral visit

King's College London, Geography, Environmental Monitoring and Modelling group, Professor Sue Grimmond (2009-2010)

## Current post, period of appointment, time for research in the position

Senior lecturer, Department of Earth Sciences, University of Gothenburg, 2022-

## Teaching expertise

- Teacher of undergraduate and graduate courses at Department of Earth Sciences (appr. 50% activity level), University of Gothenburg, Sweden (2022-)
- Teacher of undergraduate and graduate courses at Department of Earth Sciences (appr. 40% activity level), University of Gothenburg, Sweden (2015-2022)
- Responsible for the development of the Master program in Geography at University of Gothenburg, Sweden (2014-)
- Teacher of undergraduate and graduate courses at Department of Earth Science (10% activity level), University of Gothenburg, Sweden (2013-2015)
- Teacher of undergraduate and graduate courses at Department of Earth Science (30% activity level), University of Gothenburg, Sweden (2010-2013)
- Assistant of the graduate course "Micro- and local Climatology - theory and field measurements, 7.5 ECT", Department of Earth Science, University of Gothenburg, Sweden (2009)

- Invited lecturer on “Principles of urban climatology” for a MSc course in Architectural Engineering (Environmental Design) for the University of Bath, United Kingdom (2010)
- Lecturer (20%) of undergraduate human geography GIS courses, University of Gothenburg, Sweden (2008)
- Teaching assistant of undergraduate physical geography and geography courses (20% activity level), University of Gothenburg, Sweden (2002-2007).

### **Course development**

- Third cycle GIS course (Python scripting in GIS), Department of Earth Sciences, University of Gothenburg, Sweden (2018)
- Second cycle course on Urban sustainable Development, Department of Earth Sciences, University of Gothenburg, Sweden (2014)
- Second cycle GIS courses (Urban GIS and Open-Source GIS), Department of Earth Sciences, University of Gothenburg, Sweden (2011)
- First cycle web-based courses in GIS, Department of Earth Sciences, University of Gothenburg, Sweden (2009)

### **Previous positions and periods of appointment**

- Researcher, Physical Geography, Department of Earth Sciences, University of Gothenburg, Sweden (2011-2022)
- Consultant at Tyréns (10%), 2014
- Post-doctoral fellow, King’s College London, Geography, Environmental Monitoring and Modelling group (2009-2010)
- Part-time lecturer, Department of Human and Economic Geography, University of Gothenburg, Sweden (2008)
- GIS-engineer, City Planning Authority, City of Gothenburg, Sweden (2008)
- PhD candidate, Physical Geography, Department of Earth Sciences, University of Gothenburg, Sweden (2002-2007)

### **Awards and special commissions**

- Yearly GIS-award 2008 from ‘GIS i Väst’, 25 TSEK
- Stefan Stenlunds GIS-award 2008 from Lantmäteriet, ESRI S-GROUP and LINFO Norrbotten, 17 TSEK

### **Other academic duties**

- Minor Field Studies officer at the Department of Earth Science (2002-2007)
- Webmaster for the Göteborg Urban Climate Group website (2002-)
- Responsible of software licensing at the Department of Earth Science (2012-)
- Post graduate education board at the Department of Earth Science (2014-2017)
- Advisory board for IT services at Faculty of Natural Sciences (2013-2017)
- Program coordinator of the Master program in Geography at the Department of Earth Science (2014-)
- Responsible of climate stations at the Department of Earth Science (2012-2015)
- Shared head (with Sofia Thorsson) of Göteborg Urban Climate Group at University of Gothenburg (2020-)
- Evaluation board of the proposal for the Helmholtz Institute Freiburg for Urban Climate and Environmental Sciences (HIF-UCES) (March 2023)
- Department council, Department of Earth Sciences (2022-)

- Working group to assign new Dean and faculty board 2024-2030, Faculty of Natural Sciences, GU (2023-)
- External head examiner for the third cycle studies, "Geobiosphere Science with a specialisation in Geographical Information Science NAGBVG02" at the Faculty of Sciences, Lund University (2024)
- External deputy examiner for the third cycle studies, "Geobiosphere Science with a specialisation in Physical Geography and Ecosystem Science NAGBVN02" at the Faculty of Sciences, Lund University (2024)

## Supervision

### Master theses (M = main supervisor)

Jesper Fahlström, 2024, GU (M); Evelina Bladh, 2024, GU (M); Rebecca Johansson, 2023, GU; GU; Madeleine Cleverstam Vikström, 2023, GU (M); Sebastian Daland, 2023, GU (M); Sandra Lucic, 2023, GU, (M); Ida Dolff, 2022, GU, (M); Louise Lindén, 2022, GU, (M); Alexandra Matyas, 2022, GU; Robert Klein, 2022, GU, (M); Julia Cederbrant, 2021, GU, (M); Ville Strålnacke, 2021, GU, (M); Cornelia Wing, 2021, GU; Kristin Blinge, 2020, GU; Ruben Hallberg, 2020, GU; Oskar Bäcklin, 2019, GU; Timmy Nilsson, 2019, GU, (M); Norea Hellberg, 2019, GU; Filip Olsson, 2019, GU; Deria Abda Amin, 2017, GU; Sara Johansson, 2017, GU, (M); Gunnar Palm, 2017, GU, (M); Bengt Myrberg, 2016/17, GU, (M); Charles Hansson, 2014/15, GU, (M); Hanna Hassberg, 2014/15, Lund University (LU)/GU, (M); Niklas Krave, 2014, LU/GU, (M); Natalia Kuska, 2013, GU, (M); Lars Pettersson, 2011, LU/GU, (M); Annika Larsson, 2011, SLU/GU; Deepak Jeswani, 2008, GU, (M); Jesper Björklund, 2008, GU

### PhD candidates, postdoctoral fellows and visiting researcher

Jessika Lönn, Ph.D. student, 2022-, GU, (M)  
 Nils Wallenberg, Postdoctoral fellow, 2022-2024, GU (M)  
 Jeremy Bernard, Marie Skłodowska-Curie Individual Fellowship, 2020-2023, GU (M)  
 Oskar Bäcklin, Ph.D. student, 2020-, GU  
 Hampus Luning, Ph.D. student, 2019-, GU/Sahlgrenska  
 Zeng Liyue, visiting Ph.D. student, 2018-2019, Chongqing University, P. R. China (M)  
 Nils Wallenberg, Ph.D. student, 2018-2022, GU (M)  
 Frans Olofson, Postdoctoral fellow, 2015-2018, GU (M)  
 Jenny Kingberg, Postdoctoral fellow, 2014-2016, GU  
 Nithiyanandam Yogeswaran, visiting PhD-student, 2014, Hong Kong Polytechnic University (M)  
 Yumei Hu, Ph.D. student, 2011-2018, GU  
 Kevin Lau, Postdoctoral fellow, 2013-2014, GU (M)  
 Shiho Onomura, Ph.D, 2011-2015, GU  
 Janina Konarska, Ph.D. 2011-2015, GU

### Doctoral examiner of third-cycle studies

Examiner for PhD-student Cheng Shen (University of Gothenburg) (2022- )

### PhD board evaluation member and faculty opponent

- Substitute on evaluation board on PhD defense of Aifang Chen (University of Gothenburg) (June, 2020)
- Head of evaluation board on PhD defence of Karl Samuelson (University of Gävle) (December, 2021)
- External examiner on viva voce (PhD defence) of Megan Stretton (University of Reading) (December, 2022)

### Scientific funding

- **Värmeböljors inverkan på äldre personers hälsa och välbefinnande - Erfarenheter och adaptiva strategier för utomhusaktiviteter i stadsmiljö** (The Kamprad Family Foundation, 2024-2027, 400 TSEK). PI: Susanne Gustafsson, Co-applicants: Fredrik Lindberg, Pär Bjälkebring (GU), Isabel Hansson (GU), Marie Kivi (GR)
- **Den bebyggda miljön** (Boverket, FORMAS, 2023, 40 TSEK). PI Sofia Thorsson/Fredrik Lindberg
- **Practical guidelines to resilient urban planning against heat stress** (COWI foundation, 2022-2025, 3288 TSEK). PI: Marie Häger (GU/COWI), Co-applicants: GU, Chalmers and COWI DK

- **HEAT: Heat stress in outdoor Environments - Planning the city of the older Adults Today and in a future warmer climate** (FORMAS, 2021-2025, 8000 TSEK). PI: Fredrik Lindberg, Co-applicants: Susanne Gustafsson (JU), Sofia Thorsson (GU), Pär Bjälkebring (GU), Isabel Hansson (GU), Marie Kivi (GR), Erik Johansson LTH and Christofer Åström (UMU)
- **PESCA - Process for establishing sustainable climate change adaptation**, 2022-2023 (VINNOVA, 2022-2023, 3500 TSEK) PI: Göteborgsregionen, Co-applicants: Fredrik Lindberg, Sofia Thorsson, Chalmers, Ale municipality and Acama AB
- **Transformation towards green and blue cities: Conflicts between the sustainable development goals, TRANSSAFE** (FORMAS, 2020-2022 TSEK 3000), PI: Magnus Evander (UU), Co-applicants: Fredrik Lindberg and others
- **Multifunctional blue-green infrastructure - optimizing socio-cultural and environmental aspects for sustainable urban development** (FORMAS, 2020-2024, TSEK 7985), PI: Sofia Thorsson, Co-applicants: Fredrik Lindberg, David Rayner, Jutta Schade, Matthias Borris, Özüm Durgun, Mattias Sandberg, Janina Konarska
- **Development of a heat warning system for outdoor sport events** (In-house (Sahlgrenska Academy), 2019-2020 TSEK 200), PI: Fredrik Lindberg (UG)
- **The influence of warm weather and outdoor-environment design on preschoolers' physical activities and thermal comfort** (FORMAS, 2019-2022 TSEK 3000), PI: Fredrik Lindberg (UG), Co-applicants: Anders Raustorp (UG),
- **Visualising and modelling urban air quality - influence of vegetation, building morphology and traffic emissions** (FORMAS, 2018-2021 TSEK 8992), PI: Håkan Pleijel (UG), Co-applicants: Fredrik Lindberg and others
- **URBANFLUXES - URban ANthropogenic heat FLUX from Earth observation Satellites** (Horizon 2020 - Research and Innovation Programme, 2015-2017, Total/GU T€ 2687/319), PI: Nektarios Chrysoulakis (FORTH), WP-leaders: Fredrik Lindberg and others
- **CLIMPLAN – A fast responsive, modelling system for urban climate sensitive planning applications** (FORMAS, 2013-2018, TSEK 4787, Young researcher grant), PI: Fredrik Lindberg
- **Efficient use of land and energy in Dar es Salaam, Tanzania** (SIDA/VR, 2013-2015, TSEK 3000), PI: Erik Johansson, Co-applicants: Fredrik Lindberg, Sofia Thorsson, Maria Rasmusen
- **Valuation of ecosystem services provided by urban greenery** (FORMAS, 2014-2016, TSEK 8605), PI: Sofia Thorsson, Co-applicants: Fredrik Lindberg, Bengt Gunnarsson, Yvonne Andersson-Sköld, Marcus Hedblom, Åsa Ode Sang, Igor Knez
- **Infrastrukturnära vegetation** (Trafikverket, 2012, TSEK 100), PI: Fredrik Lindberg, Co-applicant: Sofia Thorsson
- **Inventory of urban vegetation using LIDAR technology** (Mistra Urban Futures, 2012, TSEK 198), Main applicant: PI, Co-applicant: Fredrik Lindberg
- **SOLEN – integration of solar energy calculations in the planning process** (City of Göteborg, 2012, 150 TSEK), PI: Fredrik Lindberg
- **Solar Energy from Building Envelopes - SEBE** (VINNOVA, 2011, 735 TSEK), PI: Per Jonsson, Co-applicants: Fredrik Lindberg, Tomas Landelius, Bengt Stridh, Joakim Jeppsson
- **Adapting cities to climate induced risks - a coordinated approach** (FORMAS, 2011-2013, 7000 TSEK), PI: Sofia Thorsson, Co-applicants: Yvonne Andersson-Sköld, Anna Jonsson, Sara Janhäll, Fredrik Lindberg, Mira Ovuka-Andersson and Ulf Moback
- **Potential impact of climate trends and weather extremes on outdoor thermal comfort in European cities - implications for sustainable urban design** (UrbanNet/EU, 2010-2013, 7000 TSEK), PI: Sofia Thorsson, Co-applicants: Ana Monteiro, Lutz Katzschner, Fredrik Lindberg and David Rayner

- **Potential photovoltaic energy production on roof structures**, (SolElprogrammet/Göteborg energy/Länsstyrelsen, 2011, 528 TSEK), PI: Per Jonsson, Co-applicant: Fredrik Lindberg
- **The influence of vegetation and green spaces on human thermal comfort in urban areas – a quantitative approach**. Postdoctoral Fellowship (FORMAS, 2009-2010, 390 TSEK), PI: Fredrik Lindberg
- Smaller financial support has been provided from the following scholarships summing up to 101 TSEK: SSAG - the Swedish Society of Anthropology and Geography), the Sven Lindqvist fund, the Adlerbertska research fund, the Hierta-Retzius fund and the Swedish Cartographic Society.

### Review assignments for scientific journals

Transactions in GIS; Building Information Science; Building and Environment; Climate Research; Landscape and Urban Planning; Boundary Layer Climates; Meteorologischen Zeitschrift; Advances in Meteorology; Geografica Polonica; Urban Geography; Urban Climate (*Certificate of Excellence in Reviewing, 2013*); Journal of Atmospheric and Oceanic Technology; International Journal of Climatology; Theoretical and Applied Climatology; International Journal of Biometeorology; Geophysical Research Letters; Agricultural and Forest Meteorology; Environment and Planning B: Planning and Design; Sustainable Cities and Society; Computers, Environment and Urban Systems; Remote Sensing; Science of the Total Environment, Building Research & Information, Geoscientific Model Development, Nature Climate Change; Remote Sensing of the Environment

### Review assignments for books

Urban Climates, Ch. 5: "Radiation" by T.R. Oke, G. Mills, A. Christen, J. Voogt. 2014.

### Scientific meetings and conferences

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- EGU General Assembly 2023, Vienna, Austria, 23-28 April 2023 – oral presentation
- International Association for Urban Climate Virtual Poster Session, August 2022 – plenary moderator and passive participation
- Swedish Climate Symposium, May, 2022, Norrköping, Sweden – keynote oral presentation
- Uppstartskonferens för Vinnova och Formas utlysningar om klimatanpassning i den byggda miljön, April, 2022, Stockholm, Sweden – poster presentation
- Symposium on Challenges in Applied Human Biometeorology, March, 2020, Freiburg, Germany - oral presentation
- The 10<sup>th</sup> International Conference on Urban Climate (ICUC10), New York, US, 2018 - oral presentation and workshop organizer
- AGILE 2018, 21<sup>st</sup> Conference on Geo-information science, Lund 12-15 June, Sweden - workshop organizer "Introduction to OSGeo and Python programming using PyQGIS"
- International Conference for Free and Open-Source Software for Geospatial (FOSS4G), Boston, US, 2017 - oral presentation
- 21<sup>th</sup> International Congress of Biometeorology, September, 2017, Durham, UK - oral presentation
- The 9<sup>th</sup> International Conference on Urban Climate (ICUC9), Toulouse, France, 2015 - oral and poster presentation
- The 1<sup>st</sup> International QGIS Conference for Users, Educators and Developers, 18-19 May, Nodebo, Denmark
- Position 2015, 17-19 March 2015, Stockholm (Sweden)
- Symposium "Towards integrated modelling of urban systems" 15-17 October 2014, Lyon (France)

- The 8<sup>th</sup> International Conference on Urban Climate (ICUC8), Dublin, Ireland, 2012 - member of the international scientific committee, session chair, oral and poster presentation
- The 4th GAC conference on Atmospheric Science, May 2010 - oral presentation
- NCAS Urban Meteorology Workshop, Urban roughness sub layers - from measurements and CFD to predictive models, March 2009, University of Reading, UK
- Workshop on "The potential impact of climate change on heat stress in different built structures and cities across Europe". Gothenburg, Sweden, 2009 - co-organizer, oral presentation
- The 7<sup>th</sup> International Conference on Urban Climate (ICUC7), Yokohama, Japan, 2009 - member of the international scientific committee, session chair, oral and poster presentation
- Conference of Free and Open-Source Software for Geospatial (FOSS4G), Cape Town, South Africa, 2008
- FORMAS conference "Urban public spaces", Gothenburg, Sweden, 2007 - organizer, oral presentation
- The 6<sup>th</sup> International Conference on Urban Climate (ICUC6), Gothenburg, Sweden, 2006 - organizer, oral and poster presentation
- Nordic GIS-conference, 2004, Gothenburg, Sweden - oral presentation
- The 5<sup>th</sup> International Conference on Urban Climate (ICUC5), Lodz, Poland, 2003 - oral presentation

### **Selection of invited talks**

- Nationellt möte: Tillämpad stadsbyggnad 2023, KTH, Stockholm, Sweden (2023)
- 143<sup>rd</sup> EuroSDR Board of Delegates meeting, Gävle, Sweden (2023)
- Climat Urbain, Amphi Pierre Gilles de Gennes, Paris, France (2023)
- End seminar CityAirSim, Chalmerska huset, Gothenburg, Sweden (2022)
- GISVäst 30 year anniversary, Clarion Post Hotel, Gothenburg, Sweden (2022)
- Kunskapslyftet, Building and Planning office, City of Gothenburg, Sweden (2022)
- Swedish Climate Symposium 2022 in Norrköping, Sweden (2022)
- URBISPHERE online seminar on urban form and function (2020)
- Technische Universität Berlin, Center for Innovation and Science on Building Greening, Germany (2018)
- Technische Universität Berlin, Department of Ecology, Germany (2013)
- Wageningen University and Research Centre, Meteorology and Air Quality Group, Netherlands (2012)
- University of Kassel, Environmental Meteorology, Germany (2011)
- University of Reading, Department of Meteorology, United Kingdom (2011)

### **Selection of experience of communicating results with stakeholders/end users**

- Participated on Swedish national television (SVT) news (Rapport), 2023.
- Hetare blötare städer – *Verket - en plats för kreativitet och möten*, Stadsdelsförvaltningen Centrum, Göteborg, Sweden, 2023
- Klimatsmart – Hur är med det? Public online web-seminars organised by Science Faculty, GU, 2020.
- Participated in national radio on the Swedish Radio (SR), Vetenskapsradion Klotet 2020.

- Participated in regional radio on the Swedish Radio (SR), 2018.
- Attended a workshop in Dar es Salaam on energy efficient and climate sensitive planning, 2016.
- Participated in regional afternoon radio show “Eftermiddag i P4” on the Swedish Radio (SR), 2015.
- Participated in regional morning radio show “P4-morgon” on the Swedish Radio (SR), 2015.
- Two Stakeholder workshops in conjunction to FORMAS-funded project “Adapting cities to climate induced risks - a coordinated approach”, 2011-2013.
- Newspaper article about urban climate and health in Göteborgs Posten, 2014-05-10.
- Participated in the regional news concerning Solar energy in Göteborg, Swedish Television (SVT), 2011.
- Participation in Workshop within Mistra Urban Futures “Climate adapted city planning”, November 2010
- “What lurks in the darkness – the use of a shadow casting algorithm in urban climatology”. Presentation at the “GIS i Väst”-meeting, 2008
- Participated in “Eftersnack” concerning local climate in Göteborg, Swedish Television (SVT), 2008.
- Participated and interviewed in the news program on the Swedish Radio (SR), Norrland, 2005.
- Participated and interviewed in the news program on TV4 Norrland, 2005.
- Newspaper article about the local climate in Luleå in Norrländska Socialdemokraten, 2005.
- Participated and interviewed in the news program at the Swedish Radio (SR), Göteborg, 2008.
- Participated and arranged working symposium “Stadens offentliga rum” in Göteborg, 2007 (FORMAS).

### **Board assignments and non-academic work**

- Board member in *GISväst*, (2013-2019)
- Board member in *QGISSweden* (2016-)
- Board member in *Geografiska föreningen i Göteborg* (2022-)
- Scientific consultant at, Tyréns (2013-2014) including:
  - o *WWW.HEDEN.GO:TEBORG*, (<http://www.tyrens.se/sv/Heden/WWWHEDENGOTEBORG/>)
  - o *Bioclimatic Design Toolkit* – Tyréns UK.
  - o *Tyréns Solplan* – A tool to estimate and visualize potential sun energy production on building roofs
- White architects, Planning proposal around Central station in Göteborg, Sweden (2012)

### **Professional Memberships**

- International Association of Urban Climate (IAUC), Swedish Cartographic Society, GIS-Väst, The Swedish Society for Anthropology and Geography (SSAG), QGIS Sweden (board member), Geografiska föreningen i Göteborg

### **Publications**

#### **Summary statistics (February 2024):**

h-index: 38 (Google Scholar); 34 (Scopus)  
 Total peer-reviewed articles: 68 with 16 as first author  
 Total citations: 6940 (Google Scholar); 4376 (Scopus)

#### **In peer-review journals:**

- Lindberg, F.**, Lindström, A., Stålnacke, V., Sofia Thorsson and Georgia Destouni (2024) Observations and modelling of mosquito prevalence within urban areas – A case study from Uppsala, Sweden. *Urban Ecosystem*. <https://doi.org/10.1007/s11252-024-01511-7>
- Wallenberg N., **Lindberg F.**, Thorsson S., Jungmalm J., Fröberg A., Raustorp A. and Rayner D. (2023) The effects of warm weather on children's outdoor heat stress and physical activity in a preschool yard in Gothenburg, Sweden. *International Journal of Biometeorology*. <https://doi.org/10.1007/s00484-023-02551-y>
- Bernard, J., **Lindberg, F.**, and Oswald, S.: URock 2023a: an open-source GIS-based wind model for complex urban settings, *Geosci. Model Dev.*, 16, 5703–5727, <https://doi.org/10.5194/gmd-16-5703-2023>, 2023.
- Zeng L., **Lindberg F.**, Zhang X., Pan P. and Lu J. (2023) Road surface temperature evaluated with street view-derived parameters in a hot and humid megacity. *Urban Climate*. <https://doi.org/10.1016/j.uclim.2023.101585>.
- Wallenberg N., Rayner, D., **Lindberg, F.** and Thorsson, S. (2023) Present and future heat stress of preschoolers in five Swedish cities. *Climate Risk Management*. <https://doi.org/10.1016/j.crm.2023.100508>.
- Wallenberg, N., **Lindberg, F.**, Holmer, B., and Rayner, D. (2023) An anisotropic parameterization scheme for longwave irradiance and its impact on radiant load in urban outdoor settings. *International journal of biometeorology*. <https://doi.org/10.1007/s00484-023-02441-3>.
- Wallenberg N., **Lindberg, F.**, and Rayner, D. (2022) Locating trees to mitigate outdoor radiant load of humans in urban areas using a metaheuristic hill climbing algorithm – Introducing TreePlanter v1.0. *Geoscientific Modelling Development*. *Geosci. Model Dev.*, 15, 1107–1128.
- Bäcklin O., **Lindberg, F.**, Thorsson, S., Rayner, D., and Wallenberg, N. (2022) Outdoor heat stress at preschools during an extreme summer in Gothenburg, Sweden - Preschool teachers' experiences contextualized by radiation modelling. *Sustainable Cities and Society*. <https://doi.org/10.1016/j.scs.2021.103324>.
- Konarska J, Klingberg J and **Lindberg F** (2021) Applications of Dual-Wavelength Hemispherical Photography in Urban Climatology and Urban Forestry. *Urban Forestry & Urban Greening* 58. <https://doi.org/10.1016/j.ufug.2020.126964>.
- Olvmo M, Holmer B, Thorsson S, Reese H and **Lindberg F** (2020) Sub-arctic palsa degradation and the role of climatic drivers in the largest coherent palsa mire complex in Sweden (Vissátvuopmi), 1955–2016. *Sci Rep* 10, 8937. <https://doi.org/10.1038/s41598-020-65719-1>
- Thorsson, S, Rayner D, Palm G, **Lindberg F**, Carlström E, Börjesson M, Nilson F, Khorram-Manesh A, and Holmer B. (2020) "Is Physiological Equivalent Temperature (Pet) a Superior Screening Tool for Heat Stress Risk Than Wet-Bulb Globe Temperature (Wbgt) Index? Eight Years of Data from the Gothenburg Half Marathon." *British Journal of Sports Medicine*. <https://doi.org/10.1136/bjsports-2019-100632>.
- Lindberg F**, K. F. G. Olofson, T. Sun, C. S. B. Grimmond, and C. Feigenwinter. "Urban Storage Heat Flux Variability Explored Using Satellite, Meteorological and Geodata." *Theoretical and Applied Climatology* (2020). <https://doi.org/10.1007/s00704-020-03189-1>.
- Wallenberg, Nils, **Lindberg F**, Holmer B, and Thorsson S. (2020) "The Influence of Anisotropic Diffuse Shortwave Radiation on Mean Radiant Temperature in Outdoor Urban Environments." *Urban Climate* 31 (2020). <https://doi.org/10.1016/j.uclim.2020.100589>.
- Khorram-Manesh A, Löf T, Börjesson M, Nilson F, Thorsson S, **Lindberg F**, Carlström E. (2020) Profiling Collapsing Half Marathon Runners—Emerging Risk Factors: Results from Gothenburg Half Marathon. *Sports*. 2020; 8(1):2.
- Aminipouri M, Rayner D, **Lindberg F**, Thorsson S, Knudby AJ, Zickfeld K, et al. (2019) Urban tree planting to maintain outdoor thermal comfort under climate change: The case of Vancouver's local climate zones. *Building and Environment*. 2019; 158:226-36.
- Ching, J., D. Aliaga, G. Mills, V. Masson, L. See, M. Neophytou, A. Middel, A. Baklanov, C. Ren, E. Ng, J. Fung, M. Wong, Y. Huang, A. Martilli, O. Brousse, I. Stewart, X. Zhang, A. Shehata, S. Miao, X. Wang, W. Wang, Y. Yamagata, D. Duarte, Y. Li, J. Feddema, B. Bechtel, J. Hidalgo, Y. Roustan, Y. Kim, H. Simon, T. Kropp, M. Bruse, **F. Lindberg**, S. Grimmond, M. Demuzure, F. Chen, C. Li, J. Gonzales-Cruz, B. Bornstein, Q. He, P. Tzu, A. Hanna, E. Erell, N. Tapper, R. K. Mall & D. Niyogi (2019) Pathway using WUDAPT's Digital Synthetic City tool towards generating urban canopy parameters for multi-scale urban atmospheric modeling. *Urban Climate*, 28.

Carlström, E., Börjesson, M., Palm, G., Thorsson, S., **Lindberg, F.**, Holmer, B., Berner, A., Örnings, P., Luning, H., Nilson, F., Gelang, C., Khorram-Manesh, A., (2019) Medical emergencies during a half marathon contest – the influence of weather. : International Journal of Sports Medicine. In Press.

Oswald, S. M., M. Revesz, H. Trimmel, P. Weihs, S. Zamini, A. Schneider, M. Peyerl, S. Krispel, H. E. Rieder, E. Mursch-Radlgruber & **F. Lindberg** (2018) Coupling of urban energy balance model with 3-D radiation model to derive human thermal (dis)comfort. International Journal of Biometeorology. DOI 10.1007/s00484-018-1642-z

Nilson, F., **F. Lindberg**, G. Palm, L. Lundgren, D. Rayner, M. Börjesson, S. Thorsson, A. Khorram-Manesh & E. Carlström (2018) Can participants predict where ambulance-requiring cases occur at a half marathon? Scandinavian Journal of Medicine & Science in Sports, 28, 2760-2766.

Nilson, F., **F. Lindberg**, G. Palm, L. Lundgren, D. Rayner, M. Börjesson, S. Thorsson, A. Khorram-Manesh & E. Carlström (2018) TESTING A NOVEL METHOD FOR IDENTIFYING WHERE SERIOUS MEDICAL ENCOUNTERS OCCUR AT MARATHONS IN ORDER TO IMPROVE MEDICAL PREPAREDNESS AND RUNNERS' SAFETY. Injury Prevention, 24.

Chrysoulakis N., Grimmond C.S.B, Feigenwinter C, **Lindberg F**, Gastellu-Etchegorry J., Marconcini M., Mitraka Z., Stagakis S., Crawford B., Olofson F., L. Landier L., Morrison W. & Parlow E. (2018) Urban energy exchanges monitoring from space. Scientific Reports, 8, 11498.

Feigenwinter, C., Vogt, R., Parlow, E., **Lindberg, F.**, Marconcini, M., Frate, F.D., et al. (2018) Spatial Distribution of Sensible and Latent Heat Flux in the City of Basel (Switzerland). IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing. 2018; (99):1-7.

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*UMEP* – **U**niversal **M**ulti-scale **E**nvironmental **P**redictor. An open source climate sensitive planning tools for practitioners and researchers. Available as a QGIS-plugin at <https://umep-docs.readthedocs.io>

*SOLWEIG 2023a* – **S**olar and **L**ong**W**ave **E**nvironmental **I**rradiance **G**eometry model. A tool that calculates radiant fluxes and mean radiant temperature in complex urban settings. Available through UMEP.

*The Lucy Model V2014a* - **L**arge scale **U**rban **C**onsumption of energy **Y** model. A model that estimates anthropogenic heat fluxes on any location on Earth. Available through UMEP and as stand-alone.

*SEBE 2015a* – Solar Energy on Building Envelopes. A tool that simulates spatial variations of potential photovoltaic energy production on building envelopes in urban areas. Available through UMEP.

*SEES 1.2* – Solar Energy from Existing Structures. A tool that simulates spatial variations of potential photovoltaic energy production on roof structures in urban areas. Available for download from the Göteborg Urban Climate Group webpage (<http://www.gvc.gu.se/english/research/climate/urban-climate/>).

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Practical Workshop — the Urban Multi-scale Environmental Predictor (UMEP), 10th International Conference on Urban Climate/14th Symposium on the Urban Environment, New York, US, August 2018

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