

CURRICULUM VITAE - JAFET C.M. ANDERSSON

PERSONAL INFORMATION

Nationality: Swedish, born 5th December 1979
 Languages: Swedish (native), English (proficient), French (independent)
 Website: www.jafet.org
 ORCID: <http://orcid.org/0000-0001-5269-7549>
 LinkedIn: www.linkedin.com/in/jafet-andersson



RESEARCH INTERESTS

- Water availability, use, productivity, management, and predictability
- Climate change, disaster risk reduction, food security, infrastructure and ecosystems
- Computer simulation, mobile information technology, and capacity development
- Uncertainty, knowledge and parsimony

EMPLOYMENTS

Scientific leader, Hydrology Research, Swedish Meteorological and Hydrological Institute (SMHI) Research field: “Large-scale hydrological modelling”. Team leader for research group (6-8 staff) and co-lead of research unit (30 staff). Systematic development of the research field including: strategy development and implementation, quality and innovation, financing, publication, and networking. 2018 – present

Parental leave 7 months 2018
8 months 2016

Senior researcher, Hydrology Research, Swedish Meteorological and Hydrological Institute (SMHI). Hydrological R&D on water resources availability, dynamics, quantification, accuracy, and application in monitoring, forecasting, climate change analyses, infrastructure design, and agricultural water management on catchment, river basin, continental and global scales (<https://smhi.se/hydrology-research>). Development of open-source computational methods and tools: the hydrological model HYPE (<http://hypecode.smhi.se>), the MEMO algorithm for rainfall estimation using telecommunication networks (<https://smhi.se/memo>), high-performance computation, and a range of analytical tools. Capacity building targeting African water professionals involving recruitment, teaching, supervision, and hands-on practical training. Scientific publication (16 peer-reviewed articles, h-index: 10), conference participation and workshop organisation. Supervision of six post-doctoral researchers. Project management (e.g. coordinator of the EU project FANFAR). Securing financing through research grant applications from Swedish research councils (VR, VINNOVA, FORMAS), EU (FP7, Horizon2020), ESA, and development agencies (Sida, DFID). 2011 – present

Teaching assistant and student supervision, ETH Zurich and the Swiss Federal Institute of Aquatic Science and Technology (Eawag), Switzerland. *Teaching assistance on:* Sustainability in water supply, water resources and aquatic ecosystems; Globalization of water resources management; Agro-hydrological simulation tools and uncertainty; and Computational tools in statistics and geographic information systems (GIS). *Supervision of student theses on:* Potential impacts of climate change on crop growth in West Africa, Agriculturally induced nutrient enrichments of groundwater in Iran, Crop water use and reservoir 2007 – 2011

management in the Zambezi river basin, and Catchment-scale nutrient cycling in China.

- Seminar organiser, the Swiss Federal Institute of Aquatic Science and Technology (Eawag), Switzerland.** 2007 – 2011
Instigator and leader of organisation committee, identification of speaker candidates, supplementary research meetings organiser, and general administration.
- Session organiser, the World Water Week conference in Stockholm, Sweden.** 2006, 2004
Organisation and management of poster sessions, technical assistance in time-critical problem solving.
- Environmental officer at the County Administrative Board in the Jönköping county, Sweden.** 2005, 2003 & 2002
Fieldwork in environmental surveillance (water, fish and crayfish sampling for biological remediation and resource planning), review of national environmental policy goals (through report 2005:32 on surface ozone), land owner contacts (e.g. regarding the sensitive crayfish fishing), validation of a fish production model for lake Vättern, database maintenance, and GIS analyses.
- Officer at the Municipality of Jönköping, Sweden.** 2001
Compilation and evaluation of a questionnaire survey regarding water, sanitation and waste services. Inventory of municipal emergency water supply.
- Metal industry worker,** Farmartjänst, Habo, Sweden. 1998

EDUCATION & TRAINING

- Doctor of Sciences (Ph.D.) at ETH Zurich and the Swiss Federal Institute of Aquatic Science and Technology (Eawag), Switzerland** 2007 – 2011
Dissertation title: The potential impacts of enhanced soil moisture and soil fertility on smallholder crop yields in Southern Africa. *Subject:* Environmental Science. *Supervisors:* Prof. Dr. Bernhard Wehrli, Prof. Dr. Alexander Zehnder, Prof. Dr. Hong Yang. *Date of defence:* 9th March 2011. *Derived skills and experience:* project management, high-performance computer simulations in hydrology and agricultural science, impact of climate data on model performance, scenario analysis, uncertainty analysis, acquisition, management and analysis of large data sets (SQL, GIS), programming, scientific publication, communication, and funding acquisition.
- Master of Science in Water and Environmental Studies at Linköping University, Sweden:** 2004 – 2006
water management, global water resources and livelihood security, hydrological modelling, transboundary river basin management, environmental history, research methodology, geostatistics. ECTS grades: 5 A and 3 B. In this degree also:
Minor Field Study in Botswana, Namibia and Angola. *Topic:* Analysing land cover changes in the Okavango river basin during the Angolan civil war (1979–2001) using satellite remote sensing and water quality measurements. *Derived skills & experience:* funding acquisition, project management, and conducting science in developing-country conditions. The thesis is available on my website. ECTS grade: A.
- Bachelor of Science, Honours in Freshwater Science at University of Stirling, Scotland:** 2000 – 2004
hydrology (surface and groundwater), aquatic ecology (riverine, lacustrine, wetland, estuarine, coastal, and marine), water policy and governance, remote sensing and GIS, statistics, earth science, aquaculture, and environmental resources. Grade: First Class Honours (highest possible). In this degree also:
Exchange studies at the University of California, Davis, CA, U.S.A. (2002–2003): hydrology (surface and groundwater), hydraulics,

hydrological processes in ecosystems, hydrological field methods, aquaculture, aquatic ecology, and geomorphology. Grade Point Average: 3.938 (of maximum 4.0).

Conscript as a musician at the Royal Swedish Army Northern Band. 1999
Leader of the horn section, conducting classes at the Music Conservatory of the Swedish Armed Forces.

International Baccalaureate Diploma at the Per Brahegymnasiet, Jönköping, Sweden. Subjects: French, English, chemistry, macro-economy, mathematics, Swedish, and theory of science. Grade: 36 of 45. 1995 – 1998

AWARDS & RECOGNITIONS

Highlighted by The Economist: *Counting raindrops using mobile-phone towers*, <https://www.economist.com/science-and-technology/2017/09/30/counting-raindrops-using-mobile-phone-towers> 30th September 2017

Highlighted by Nature: *Mobile-phone signals bolster street-level rain forecasts*. Tollefson, J., *Nature*, 544, 146–147, <http://dx.doi.org/10.1038/nature.2017.21799> 2017

Undergraduate Excellence Award, University of California, Davis, U.S.A. 2003

Dean's Honours List (twice), University of California, Davis, U.S.A. 2003

ASSIGNMENTS

UNESCO International Hydrological Programme (IHP): Delegate in the Swedish IHP committee. 2013-2015

SUPERVISION

Name & year	Type
Claudia Canedo (2020-	Post-doctoral researcher
Léonard Santos (2019-2020)	Post-doctoral researcher
Louise Crochemore (2016-2018)	Post-doctoral researcher
Rafael Pimentel (2016-2018)	Post-doctoral researcher
Luis Pineda (2016-2018)	Post-doctoral researcher
Abdulghani Hasan (2016-2018)	Post-doctoral researcher
Farid Traoré (2013-2015)	Post-doctoral researcher
Four M.Sc. students at ETH Zurich	MSc students

LANGUAGES

Language	Reading	Listening	Speaking	Writing
Swedish	Native, C2	Native, C2	Native, C2	Native, C2
English	Proficient, C2	Proficient, C2	Proficient, C2	Proficient, C2
French	Independent, B2	Independent, B1	Basic, B1	Basic, A2
German	Independent, B1	Independent, B1	Basic, A1	Basic, A1

Note: Classification according to the Common European Framework of Reference for languages of the Council of Europe (<http://europass.cedefop.europa.eu/>) with the following scale: Basic user (A1, A2), Independent user (B1, B2), Proficient user (C1, C2) where A1 is the lowest and C2 is the highest.

COMMUNICATION SKILLS

- Oral communication: excellent skills gained through rhetoric courses and numerous presentations
- Written communication: excellent skills gained through writing scientific publications, grant applications, methodological documentations, etc.
- Visual communication: very good skills gained through the recurring need to meaningfully present large numeric information

ORGANISATION & MANAGERIAL SKILLS

- Leadership: team leader for research group (6-8 staff) and co-lead of research unit (30 staff).
- Project management: coordination, planning, resource allocation, collaboration, reporting in several projects (e.g. FANFAR, Niger-HYPE, SUDPLAN, SIRIUS, IMPACT2C).
- Organizing workshops (e.g. on HYPE modelling in West Africa) and conference sessions (e.g. at the World Water Week).

PUBLIC SERVICES, OPEN DATA & OPEN-SOURCE SOFTWARE

FANFAR (2018-present): Coordination and design of the FANFAR pre-operational flood forecasting and alerts system, including its public visualisation portal, providing daily updated 1-10day hydrological forecasts alerts for West Africa since September 2018, <https://fanfar.eu/>

MEMO® (2016-present): Design and data delivery to the first-ever public demonstrator of live rainfall monitoring using commercial microwave links, <https://smhi.se/memo>

HYPEweb (2013-present): contributing model results to the public operational water and climate service with hydrological forecasts, climate change impacts assessments, and historical open data for Europe, Arctic and the Globe, <http://hypeweb.smhi.se/>

HYPETools (2014-present) Contributing various utility functions to HYPETools - a R package for working with HYPE hydrological model files, <https://github.com/rcapell/HYPETools>

HYPE (2011-present) Developing concepts and code in the HYPE (Hydrological Predictions for the Environment) open-source community at <http://hypecode.smhi.se/>

ACQUISITION OF FUNDS

Project	Grant
HYPE-ERAS: Hydrology, permafrost and resilience in Eastern Russian Arctic an Subarctic. Funding from Formas, the Swedish Research Council for sustainable development for four partners. Objective: improve understanding of the impacts of climate warming on hydrological regimes, river ice, permafrost thawing and landscape changes and the corresponding societal challenges of flood hazards, river ice road infrastructure and land loss of agricultural land by subsidence. Role: co-applicant	EUR: 823 000 Year: 2019
Innovative observations. Funding from the Swedish Meteorological and Hydrological Institute, to further test environmental monitoring using microwave links in telecommunication networks. Role: main applicant.	SEK: 150 000 Year: 2019
Future City Flow stage 3 Funding from VINNOVA, Sweden's innovation agency for 12 partners, to further develop and test decision support systems for effective system optimisation of wastewater infrastructure. Dnr.: 2019-04701. Role: co-applicant.	SEK: 12 364 240 Year: 2019
FANFAR - Reinforced cooperation to provide operational flood forecasting and alerts in West Africa. Funding from the European Commission for six partners to reinforce the cooperation between West African and European hydrologists, ICT experts, decision analysts, and end-user communities to provide a co-designed, co-adapted, integrated, and co-operated streamflow forecasting and alert pilot system for West Africa. http://cordis.europa.eu/project/rcn/213114_en.html . Grant no.: 780118. Role: coordinator and main applicant.	EUR: 1 999 533 Year: 2018
Ericsson Weather Data (EWD) Rwanda – Real Time Monitoring in Cellular Networks. Funding from the UK Department for International Development's Business Innovation Facility for four partners. Aim: to develop and test rainfall monitoring using microwave links in tropical conditions in Rwanda and to identify business models for developing countries. BIF Contract: BPF-CF-062. Role: co-applicant.	GBP: 291 000 Year: 2018

Hydrology-TEP Contractual Change Notice (CCN). Funding for seven partners from the European Space Agency to further develop and apply the Hydrology-TEP. Role: co-applicant.	EUR: 299 900 Year: 2018
MEMO – Microwave based environmental monitoring. Funding from VINNOVA, Sweden’s innovation agency, for three partners to further develop rainfall monitoring using microwave links in telecommunication networks, and to explore the potential to utilize such links to monitor snowfall, fog and air quality. Ref. no.: 2017-03297. Role: co-applicant.	SEK : 2 473 400 Year: 2017
Thematic Exploitation Platform – Hydrology. Funding from the European Space Agency for seven partners to design and develop a platform to utilize Earth Observations in hydrological applications. Grant no.: 4000113523/15/I-NB. Role: co-applicant	EUR: 999 477 Year: 2015
Swedish Research Links. Funding from the Swedish Research Council, Development Research, Research Links programme. Collaboration to sustain the lifeline of West Africa – participatory analyses of Niger River fluxes in a changing climate. Ref. No: 2014-4206. Role: co-applicant	SEK: 750 000 Year: 2014
Requip Ipazia. Project funding from the Swiss National Science Foundation to extend the high-performance computing cluster capacity of the Swiss Federal Institute of Aquatic Science and Technology (Eawag). Role: co-applicant	USD: 186 000 Year: 2009
Minor Field Study grant from the Swedish International Development Cooperation Agency (Sida). Role: main applicant	USD: 4 000 Year: 2005

PUBLICATIONS

Peer-reviewed international journal articles

- P1. Massazza, G., Tarchiani, V., **Andersson, J.C.M.**, Ali, A., Ibrahim, M.H., Pezzoli, A., De Filippis, T., Rocchi, L., Minoungou, B., Gustafsson, D., Rosso, M. (2020). Downscaling Regional Hydrological Forecast for Operational Use in Local Early Warning: HYPE Models in the Sirba River. *Water*, 12(12):3504. <https://doi.org/10.3390/w12123504>
- P2. Arheimer, B., Pimentel, R., Isberg, K., Crochemore, L., **Andersson, J. C. M.**, Hasan, A., and Pineda, L. (2020): Global catchment modelling using World-Wide HYPE (WWH), open data, and stepwise parameter estimation, *Hydrol. Earth Syst. Sci.*, 24, 535–559, <https://doi.org/10.5194/hess-24-535-2020>
- P3. van de Beek, R. (C. Z.), Olsson, J., **Andersson, J.C.M.** (2020): Optimal grid resolution for precipitation maps from commercial microwave link networks, *Adv. Sci. Res.*, 17, 79–85, <https://doi.org/10.5194/asr-17-79-2020>
- P4. **Andersson, J.C.M.**, Arheimer, B., Traoré, F., Gustafsson D., Ali, A. (2017). Process refinements improve a hydrological model concept applied to the Niger River basin. *Hydrological Processes*, 31(25), 4540-4554, <https://doi.org/10.1002/hyp.11376>
- P5. Donnelly, C., Greuell, W., **Andersson, J.**, Gerten, D., Pisacane G., Roudier, P., Ludwig, F. (2017). Impacts of climate change on European hydrology at 1.5, 2 and 3 degrees mean global warming above preindustrial level. *Climatic Change*, 143(1-2), 13-26, <https://doi.org/10.1007/s10584-017-1971-7>
- P6. **Andersson, J.C.M.**, Ali, A., Arheimer, B., Gustafsson, D., Minoungou, B. (2017). Providing peak river flow statistics and forecasting in the Niger River basin. *Physics and Chemistry of the Earth*, <http://dx.doi.org/10.1016/j.pce.2017.02.010>
- P7. Aich V., Liersch S., Vetter T., Fournet S., **Andersson J.C.M.**, Calmanti S., van Weert F.H.A., Hattermann F.F., Paton E.N. (2016). Flood projections within the Niger River Basin under future land use and climate change. *Science of the Total Environment*, 562, 666-677, <http://dx.doi.org/10.1016/j.scitotenv.2016.04.021>

- P8. Roudier, P., **Andersson, J.C.M.**, Donnelly, C., Feyen, L., Greuell, W., Ludwig, F. (2016). Projections of future floods and hydrological droughts in Europe under a +2°C global warming. *Climatic Change*, 135(2), 341-355, <http://dx.doi.org/10.1007/s10584-015-1570-4>
- P9. Donnelly, C., **Andersson, J.C.M.**, Arheimer, B. (2016). Using flow signatures and catchment similarities to evaluate the E-HYPE multi-basin model across Europe. *Hydrological Sciences Journal*, 61(2), 255-273, <http://dx.doi.org/10.1080/02626667.2015.1027710>
- P10. **Andersson, J.C.M.**, Pechlivanidis, I.G., Gustafsson, D., Donnelly, C., Arheimer, B. (2015). Key factors for improving large-scale hydrological model performance. *European Water*, 49, 77–88, http://www.ewra.net/ew/pdf/EW_2015_49_06.pdf
- P11. Aich, V., Liersch, S., Vetter, T., **Andersson, J.C.M.**, Müller, E.N., Hattermann, F.F. (2015). Climate or Land Use?—Attribution of Changes in River Flooding in the Sahel Zone. *Water*, 7, 2796–2820, <http://dx.doi.org/10.3390/w7062796>
- P12. Andersson, J.C.M., Zehnder, A.J.B., Wehrli, B., Jewitt, G.P.W., Abbaspour, K.C., Yang, H. (2013). Improving crop yield and water productivity by ecological sanitation and water harvesting in South Africa. *Environmental Science & Technology*, 47(9), 4341–4348, <http://dx.doi.org/10.1021/es304585p>
- P13. Andersson, J.C.M., Zehnder, A.J.B., Wehrli, B., Yang, H. (2012). Improved SWAT model performance with time-dynamic Voronoi tessellation of climatic input data in Southern Africa. *Journal of the American Water Resources Association*, 48, 480–493, <http://dx.doi.org/10.1111/j.1752-1688.2011.00627.x>
- P14. Andersson, J.C.M., Zehnder, A.J.B., Rockström, J., Yang, H. (2011). Potential impacts of water harvesting and ecological sanitation on crop yield, evaporation and river flow regimes in the Thukela river basin, South Africa. *Agricultural Water Management*, 98(7), 1113–1124, <http://dx.doi.org/10.1016/j.agwat.2011.02.004>
- P15. Schmid Neset, T.-S., Singer, H., Longrée, P., Bader, H.-P., Scheidegger, R., Wittmer, A., **Andersson, J.C.M.** (2010). Understanding consumption-related sucralose emissions – A conceptual approach combining *substance-flow analysis with sampling analysis*. *Science of the Total Environment*, 408(16), 3261–3269, <http://dx.doi.org/10.1016/j.scitotenv.2010.04.003>
- P16. **Andersson, J.C.M.**, Zehnder, A.J.B., Jewitt, G.P.W., Yang, H. (2009). Water availability, demand and reliability of in situ water harvesting in smallholder rain-fed agriculture in the Thukela River Basin, South Africa. *Hydrology and Earth System Sciences*. 13, 2329–2347, <http://dx.doi.org/10.5194/hess-13-2329-2009>

Other publications

- O1. **Andersson J.**, Santos L., Isberg K., Gustafsson D., Musuuza J., Minoungou B., Crochemore L. (2020). *FANFAR Deliverable 3.2: Report documenting and explaining the hydrological models*. FANFAR Consortium, SMHI, Norrköping, Sweden. <https://fanfar.eu/resources/>
- O2. Lienert J., **Andersson J.**, Hofmann D., Silva Pinto F., Kuller M. (2020) *FANFAR Deliverable 2.2: Report on the co-design workshops in FANFAR to create a flood forecast and alert system for West Africa*. Eawag, Dübendorf, Switzerland and FANFAR Consortium. <https://fanfar.eu/resources/>
- O3. Kuller M., **Andersson J.**, Lienert J. (2020) Report of the FANFAR Workshop 3 @ Hotel De Bently, 10th–14th February 2020, Abuja, Nigeria. FANFAR Consortium. <https://fanfar.eu/resources/>
- O4. Minoungou B., **Andersson J.**, Ali. A., Hamatan M. (2019) *FANFAR Deliverable 3.3: Information derivation*. FANFAR Consortium, SMHI, Norrköping, Sweden. <https://fanfar.eu/resources/>
- O5. Silva Pinto F., Lienert J., **Andersson J.** (2019) *Stakeholder Feedback Report – FANFAR workshop 2*. 8pp. Eawag, Dübendorf, Switzerland and FANFAR Consortium. <https://fanfar.eu/resources/>
- O6. Olsson, J., **Andersson, J.C.M.**, Berg, P., Hansryd, J., and B. Arheimer. Operational rainfall monitoring by microwave links: a case study in Gothenburg, Sweden (2019, マイクロ波リンクを用いた降雨観測—スウェーデン・イエテボリの事例 ス). *Journal of Hydrological System – Water Cycle Storage and Penetration (水循環 貯留と浸透)*, vol. 112, p. 15-17, Association for Rainwater Storage and Infiltration Technology, Japan, ISSN 1346-6089.

- O7. **Andersson, J.C.M.**, Arheimer, B. Hjerdt N. (2016) Combine and Share Essential Knowledge for Sustainable Water Management. *The Solutions Journal*, 7(3), 30-32, <https://www.thesolutionsjournal.com/article/combine-share-essential-knowledge-sustainable-water-management/>
- O8. **Andersson, J.C.M.** (2011). *The potential impacts of enhanced soil moisture and soil fertility on smallholder crop yields in Southern Africa*. Doctoral dissertation, Diss. ETH No. 19600, Swiss Federal Institute of Technology Zurich (ETH Zurich), Zurich, Switzerland, <http://dx.doi.org/10.3929/ethz-a-006472209>
- O9. **Andersson, J.C.M.** (2006). *Land cover change in the Okavango river basin – Historical changes during the Angolan civil war, contributing causes and effects on water quality*. M.Sc. thesis at the Department of Water and Environmental Studies at Linköping University, Linköping, Sweden. ISRN: LIU-TEMA/V/MPWLS-D-06/003-SE. <http://jafet.org/pro/publications/10>
- O10. **Andersson, J.C.M.** (2005) *Övervakning av marknära ozon i Jönköpings län 2002-2004. (Monitoring of surface ozone 2002-2004 in the Jönköping County, Sweden.)*. Report 2005:32, Länsstyrelsen i Jönköpings län, Sweden (The County Administrative Board of the Jönköping County, Sweden.), <http://jafet.org/pro/publications/9>
- O11. **Andersson, J.C.M.** (2004) *Recovery of benthic macro-invertebrates from low-flow conditions at sites with a restricted versus unrestricted hyporheic zone*. B.Sc. Honours thesis at the Institute of Aquaculture at University of Stirling, Stirling, Scotland, <http://jafet.org/pro/publications/8>
- O12. **Andersson, J.C.M.** (2003) *Life history, status and distribution of Klamath river Chinook Salmon*. Department of Geology, University of California, Davis, CA, USA, <http://jafet.org/pro/publications/7>

CONFERENCE CONTRIBUTIONS

- C1. **Andersson J.** [invited] Panelist at the SMHI, SIWI and Swedish Water House *Webinar on the Water and Climate crisis*. 30th September 2020, online, <https://vimeo.com/466114067/1f9067355e>
- C2. **Andersson J.** [invited]. *Nederbördsräkning med mobiltelefonnät – kvalitet och möjlig användning för korttidsprognoser*. Föreningen Vatten möte om samhällets tillämpningar av väderprognoser, 11th November 2020, Online. <https://youtu.be/RzSjxljKHkA?t=11983>
- C3. Photiadou B., Arheimer B., Gyllensvärd F., Berg P., **Andersson J.**, Pechlivanidis I. *The HYPEweb global climate and water service: Addressing user needs for water-related sectors by providing scientific estimates of past, present and future water resources across the globe*. WMO data conference, 16th–19th November, Online.
- C4. **Andersson J.**, Ali A., Arheimer B., Crochemore L., Gbobaniyi B., Gustafsson D., Hamatan M., Kuller M., Lienert J., Machefer M., Magashi U., Mathot E., Minoungou B., Naranjo A., Ndayizigiye T., Pacini F., Silva Pinto F., Santos L., Shuaib A. *Flood forecasting and alerts in West Africa – experiences from co-developing a pre-operational system at regional scale*. EGU General Assembly 2020, Online, 4th–8th May 2020, EGU2020-7660, <https://doi.org/10.5194/egusphere-egu2020-7660>
- C5. Lienert J., **Andersson J.**, Silva Pinto F. *Co-designing a flood forecasting and alert system in West Africa with decision-making methods: the transdisciplinary project FANFAR*. EGU General Assembly 2020, Online, 4th–8th May 2020, EGU2020-8127, <https://doi.org/10.5194/egusphere-egu2020-8127>
- C6. Arheimer B., Crochemore L., Pineda R., Isberg K., Pineda L., Hasan A., **Andersson, J.** *Lessons learnt from quality-checking observed and simulated river flow data worldwide*. EGU General Assembly 2020, Online, 4th–8th May 2020, EGU2020-8292, <https://doi.org/10.5194/egusphere-egu2020-8292>
- C7. Minoungou B., **Andersson J.**, Ali A., Hamatan M. *Using seasonal forecast information to strengthen resilience and improve food security in Niger River Basin*. EGU General Assembly 2020, 4th–8th May 2020, EGU2020-9006, <https://doi.org/10.5194/egusphere-egu2020-9006>
- C8. van de Beek R. (C. Z.), **Andersson J.**, Olsson J., Hansryd J. *Five years of commercial microwave link network derived rainfall research in Sweden*, EGU General Assembly 2020, Online, 4th–8th May 2020, EGU2020-7969, <https://doi.org/10.5194/egusphere-egu2020-7969>

- C9. Lumley D., l'Ons D., Nivert G., Wilson A., Bengtsson S., Berg P., **Andersson J.**, Hansryd J., Berggreen-Clausen S., Gustafsson L.-G. *Improved on-line catchment simulation with new rain forecast tools*. Nordic Waste Water Conference (NordIWA) 2019, 23rd – 25th September 2019, Helsinki, Finland.
- C10. van de Beek R., **Andersson J.**, Berg P., Hansryd J., Olsson J., Arheimer B. *Observation, evaluation and application of rainfall from microwave link networks in Sweden*. Annual Meeting of the European Meteorological Society, Lyngby, Denmark, 9th – 13th September 2019, EMS2019-580. <https://meetingorganizer.copernicus.org/EMS2019/orals/33679>
- C11. Arheimer B., **Andersson J.** *The Big Picture: Inclusive capacity development in water forecasting and climate-change adaptation*. World Water Week 25th – 30th August 2019, Stockholm, Sweden.
- C12. van de Beek R., **Andersson J.**, Hansryd J. *Rain monitoring with commercial microwave link networks in Sweden*. Symposium on the hydrometeorological usage of data from commercial microwave link networks, 25th– 28th June 2019, Garmisch-Partenkirchen, Germany.
- C13. van de Beek R., **Andersson J.**, *Methodology improvement of microwave link derived rain rate in Sweden*. Symposium on the hydrometeorological usage of data from commercial microwave link networks, 25th– 28th June 2019, Garmisch-Partenkirchen, Germany.
- C14. van de Beek R., **Andersson J.**, *Finding an optimal grid resolution*. Symposium on the hydrometeorological usage of data from commercial microwave link networks, 25th– 28th June 2019, Garmisch-Partenkirchen, Germany.
- C15. **Andersson J.**, Olsson J., van de Beek R., Hansryd J. Andersson H. *Open high-resolution signal strength data from a commercial microwave link network in Gothenburg, Sweden*. Symposium on the hydrometeorological usage of data from commercial microwave link networks, 25th– 28th June 2019, Garmisch-Partenkirchen, Germany.
- C16. **Andersson, J.**, van de Beek, R., Berg, P., Hansryd, J., Olsson, J., Arheimer, B. *Rainfall monitoring by microwave link networks in Sweden*. 11th International Workshop on Precipitation in Urban Areas (UrbanRain18), 5th– 7th December, 2018, Pontresina, Switzerland. <https://doi.org/10.3929/ethz-b-000347520>
- C17. Chwala C., Leijnse H., Overeem A., Uijlenhoet R., Messer H., Alpert P., Doumounia A., Tricarico D., Fencl M., Bareš V., Afzal M.S., Shah S.H.H., Roversi G., Alberoni P.P., **Andersson, J.**, van de Beek R., de Michele C., D'Amico M., Nebuloni R., Kunstmann H. *Rainfall observation using commercial microwave links: An overview of ongoing projects around the globe and Countrywise QPE from commercial microwave link networks performs great, so why is it not yet available?*, 9th workshop of the International Precipitation Working Group (IPWG), Seoul, South Korea, 5th November 2018.
- C18. Olsson, J., **Andersson, J.C.M.**, Berg, P., Hansryd, J., and B. Arheimer. *Operational rainfall monitoring by microwave links: a case study in Gothenburg, Sweden*. IWA World Water Congress & Exhibition, 16th – 21st September 2018, Tokyo, Japan.
- C19. Gustafsson D., **Andersson J.**, Brito F., Martinez B., Arheimer B. *New tool to share data and models in hydrological forecasting, based on the ESA TEP*. EGU2018-18723, EGU General Assembly, 8th–13th April 2018, Vienna, Austria.
- C20. Arheimer B., **Andersson J.**, Crochemore L., Hasan A., Isberg K., Pers C., Pimentel R., Pineda L., Rosberg J. *Catchment modelling at the global scale using the World-Wide HYPE(WWH)*. EGU2018-18679, EGU General Assembly, 8th–13th April 2018, Vienna, Austria.
- C21. Pineda L., **Andersson J.**, Hundecha Y., Crochemore L., Hasan A., Pimentel R., Isberg K., Arheimer B. *Global patterns of streamflow signatures and their physiographic controls based on observations from some ten thousands of catchments*. EGU2018-16569, EGU General Assembly, 8th–13th April 2018, Vienna, Austria.
- C22. Crochemore L., Pimentel R., Pineda L., Hasan A., Pechlivanidis I., Isberg K., **Andersson J.**, Arheimer B. *Understanding and evaluating catchment memory from a global hydrological model*. EGU2018-15041, EGU General Assembly, 8th–13th April 2018, Vienna, Austria.
- C23. Pimentel R., Crochemore L., Hasan A., Pineda L., Berg P., Pechlivanidis I., Isberg K., Andersson J., Arheimer B. *Correction of high elevation precipitation at global scale for hydrological modelling*. EGU2018-10966, EGU General Assembly, 8th–13th April 2018, Vienna, Austria.

- C24. **Andersson, J.** [invited], *Användning av data från mobiltelefonnät för att förbättra nederbördsobservationer – MicroWeather*. Svenska Meteorologiska Sällskapet, 20th March 2018, Norrköping, Sweden.
- C25. **Andersson, J.** [invited] *Challenges and opportunities in the use of hydrological modelling to provide status and outlook information – Examples from Sweden, Europe, Niger River, Arctic, India, and WorldWide-HYPE*. Initial Planning Meeting of the WMO Global Hydrological Status and Outlook System (HydroSOS), 26th–28th September 2017, Entebbe, Uganda. http://www.wmo.int/pages/prog/hwrrp/chy/hydrosos/documents/presentations/day2/Session5-Jafet_Andersson-SMHI.pdf
- C26. **Andersson, J.C.M.**, Berg, P., Hansryd, J., Jacobsson, A., Olsson, J., Wallin, J. *Microwave links improve operational rainfall monitoring in Gothenburg, Sweden*. 15th International Conference on Environmental Science and Technology, 31st August – 2nd September 2017, Rhodes, Greece. Conference paper CEST2017_00249 in the CEST2017 Proceedings: https://cest2017.gnest.org/sites/default/files/presentation_file_list/cest2017_00249_oral_paper.pdf
- C27. Bao, L., Larsson, C., Mustafa, M., Selin, J., **Andersson, J.C.M.**, Hansryd, J., Riedel, M., Andersson, H. *A brief description on measurement data from an operational microwave network in Gothenburg, Sweden*. 15th International Conference on Environmental Science and Technology, 31st August – 2nd September 2017, Rhodes, Greece. Conference paper CEST2017_00472 in the CEST2017 Proceedings: https://cest2017.gnest.org/sites/default/files/presentation_file_list/cest2017_00472_oral_paper.pdf
- C28. Ivarsson, C.-L., Olsson, J., Pers, C., Hundecha, Y., **Andersson, J.** *High-resolution ensemble flood forecasting: a case study in Høje Å, Sweden*. 15th International Conference on Environmental Science and Technology, 31st August – 2nd September 2017, Rhodes, Greece. Conference paper CEST2017_01002 in the CEST2017 Proceedings: https://cest2017.gnest.org/sites/default/files/presentation_file_list/cest2017_01002_poster_paper.pdf
- C29. **Andersson, J.C.M.**, Arheimer, B., Traoré, F., Gustafsson D., Ali, A. *Process refinements in HYPE model set-up for the Niger River basin*. IAHS Scientific Assembly 2017, 10th–14th July 2017, Port Elizabeth, South Africa.
- C30. **Andersson, J.C.M.**, Berg, P., Hansryd, J., Jacobsson, A., Olsson, J., Wallin, J. *Mobile phone networks improve operational rainfall monitoring in Gothenburg, Sweden*. Embrace the Water, 12th–14th June 2017, Gothenburg, Sweden.
- C31. **Andersson, J.**, Arheimer B. *Irrelevant water-management scales for flood prevention, water harvesting and eutrophication control*. EGU General Assembly 2017, 23th–28th April 2017, Vienna, Austria.
- C32. Arheimer B., **Andersson, J.**, Crochemore, L., Donnelly, C., Gustafsson, D., Hasan, A., Isberg, K., Pechlivanidis, I., Pimentel, R., Pineda, L. *Global, continental and regional water balance estimates from HYPE catchment modelling*. EGU General Assembly 2017, 23th–28th April 2017, Vienna, Austria.
- C33. Berg, P., **Andersson, J.**, Arheimer, B., Gustafsson D. *Near realtime corrections of meteorological forcing data to initialize hydrological forecasts*. EGU General Assembly 2017, 23th–28th April 2017, Vienna, Austria.
- C34. **Andersson, J.C.M.** A set of presentations during the “Atelier d’échanges scientifiques et de formation sur l’opérationnalisation du modèle hydrologique Niger-HYPE” (Scientific exchange and training workshop on the operationalization of the Niger-HYPE hydrological model), 7-11 November 2016, Niamey, Niger. Titles: *Le modèle hydrologique Niger-HYPE, Dynamiques des ressources en eau dans le bassin du fleuve Niger, Extrêmes hydrologiques dans des climats passés et futurs, Accéder aux informations sur l’eau par la plateforme HypeWeb, Utilisation du modèle Niger-HYPE sur un ordinateur local, Au-delà du modèle Niger-HYPE: fonctionnalités additionnelles du HYPE et implantation sur d’autres bassins hydrologiques*.
- C35. Arheimer B., Strömbäck L., **Andersson J.**, Donnelly C., Gustafsson D., Pechlivanidis I., Strömquist J. *Open hydrological data at hypeweb.smhi.se*. EGU General Assembly 2016, 17th–22th April 2016, Vienna, Austria.

- C36. Donnelly, C., **Andersson, J.C.M.**, Olsson, J., Bosshard, T., Yang, W., Berg, P., Arheimer, B. *Robust impacts of climate change in Europe and why study scale is important for adaptation*. AGU Fall Meeting, 14th–18th December 2015, San Francisco, USA.
- C37. **Andersson, J.C.M.**, Ali, A., Arheimer, B., Gustafsson, D., Minoungou, B. *Providing infrastructure design variables and flood forecasting in the Niger River basin*, in Proceedings of the 16th WaterNet/WARFSA/GWP-SA Symposium “Infrastructural Planning for Water Security in Eastern and Southern Africa”, 28th–30th October 2015, Pointe Aux Piments, Mauritius, <http://www.waternetonline.org/downloads/proceedings>
- C38. **Andersson, J.C.M.**, Arheimer, B. *Building resilience to floods and droughts in the Niger River basin – hydrological predictions for sustainable water use and climate change adaptation*. The Swedish Research Council's Result Seminar Development Research, 28th May 2015, Stockholm, Sweden.
- C39. **Andersson, J.C.M.**, Ali, A.; Arheimer, B.; Traoré F. *Strengthening resilience through collaborative research and open information*. World Water Week, 23rd–28th August 2015, Stockholm, Sweden. Available online at <http://poster.worldwaterweek.org/Default.aspx?s=E3-32-26-82-95-BA-7F-76-44-BC-FC-75-C9-20-85-59>
- C40. Strömbäck, L., **Andersson, J.C.M.**, Donnelly, C., Gustafsson, D., Isberg, K., Pechlivanidis, I., Strömquist, J., Arheimer, B. *Repurposing of open data through large scale hydrological modelling – hypeweb.smhi.se*. EGU General Assembly 2015, 12th – 17th April 2015, Vienna, Austria.
- C41. Strömbäck, L., **Andersson, J.C.M.**, Donnelly, C., Gustafsson, D., Isberg, K., Pechlivanidis, I., Strömquist, J., Arheimer, B. *Providing open hydrological data for decision making and research – hypeweb.smhi.se*. EGU General Assembly 2015, 12th – 17th April 2015, Vienna, Austria.
- C42. Donnelly, C., **Andersson, J.C.M.**, Arheimer, B., Gustafsson, D., Hundecha, Y., Pechlivanidis, I.G. *Spatiotemporal model evaluation across Europe: A methodology based on expert knowledge, multiple datasets, physiography, flow signatures and performance metrics*. EGU General Assembly 2015, 12th – 17th April 2015, Vienna, Austria.
- C43. **Andersson, J.C.M.**, Donnelly, C., Greuell, W., Ludwig, F., Schaphoff, S., Gerten, D., Roudier, P., Feyen, L., Pisacane, G., Fekete, B. *Hur skulle Europas hydrologi kunna påverkas av 2°C varmare klimat? - Likheter och skillnader mellan fem kontinentala modeller*. Hydrologidagarna 2015, 31st March, Gothenburg, Sweden.
- C44. Hirpa Y. H., Kuentz, A., Pechlivanidis, I., **Andersson, J.C.M.**, Arheimer B. *Multi-basin hydrological modeling at a pan-European scale using a combination of catchment classification and regional parameter estimation*. AGU Fall Meeting, 15th–19th December 2014, San Francisco, USA.
- C45. **Andersson, J.C.M.**, Andersson, L., Arheimer, B., Bosshard, T., Graham, L.P., Nikulin, G., Kjellström E. *Experience from assessments of climate change effects on the water cycle in Africa*, in Proceedings of the 15th WaterNet/WARFSA/GWP-SA Symposium “IWRM for harnessing socio-economic development in Eastern and Southern Africa”, 29th–31st October 2014, Lilongwe, Malawi, <http://www.waternetonline.org/downloads/proceedings>
- C46. **Andersson, J.C.M.**, Arheimer, B., Gustafsson, D., Hjerdt, N., Hundecha, Y., Strömbäck, L. *Building sustainability by combining and sharing knowledge in the water domain*. IARU Sustainability Science Congress “Global Challenges: Achieving Sustainability”, 22nd–24th October 2014, Copenhagen, Denmark.
- C47. **Andersson, J.C.M.**, Ali, A., Arheimer, B., Traoré F. *Niger-HYPE: How may climate change affect floods and droughts in the Niger River basin? / Comment le changement climatique pourrait affecter les inondations et sécheresses dans le bassin du fleuve Niger?*, Paper no. 2. in van Lanen H.A.J.; Demuth, S.; van der Heijden, A. (eds.) Poster proceedings of the 7th Global FRIEND-Water conference “Hydrology in a Changing World: Environmental and Human Dimensions”, 7th–10th October 2014, Montpellier, France. Published by Wageningen University, Wageningen and UNESCO, Paris.
- C48. Greuell, W, **Andersson, J.**, Gerten, D., Ludwig, F., Pisacane, G., Roudier, P. *A multi-model study of the impact of climate change on water in Europe*. 7th International Scientific Conference on the Global Energy and Water Cycle, 14th–17th July 2014, The Hague, Netherlands.

- C49. Arheimer, B., **Andersson, J.**, Donnelly, C., Lindström, G. *Using catchment similarities and flow signatures to evaluate multi-basin models*. EGU General Assembly 2014, 27th April – 2nd May 2014, Vienna, Austria.
- C50. **Andersson, J.C.M.** *A new hydrological model for the Niger river*, Programme International de Formation Avancée Changement Climatique - atténuation et adaptation. 9th–11th December 2013, Ouagadougou, Burkina Faso.
- C51. Johnell, A. and **Andersson, J.C.M.** *Swedish report on IHP-related activities and priorities*, The 2013 UNESCO International Hydrological Programme regional Meeting of Europe & North America, 21th–22th October 2013, Oslo, Norway.
- C52. **Andersson, J.C.M.** *Computational approaches to address water resources challenges and agricultural development*. 25th–26th September 2013, Uppsala, Sweden. Proceedings of the Agricultural Research for Development Conference, SLU-Global Report 2013:3, ISBN 978-91-576-9186-6. (solicited)
- C53. **Andersson, J.C.M.**, Pechlivanidis, I.G., Gustafsson, D., Donnelly, C., Arheimer., B. *Key Factors for Improving Large-scale Hydrological Model Performance*. The 13th International Conference on Environmental Science and Technology, 5th–7th September 2013, Athens, Greece.
- C54. Donnelly, C., Dahné, J., **Andersson, J.C.M.**, Arheimer, B. *Potential impacts of climate change on hydrological extremes across Europe*. EGU General Assembly 2012, 22nd – 27th April 2012, Vienna, Austria.
- C55. Arheimer., B., **Andersson, J.C.M.**, Donnelly, C., Nyström, K., Pers. C.B., Wallman, P. *The HYPE open source community with examples of new code*. EGU General Assembly 2012, 22nd – 27th April 2012, Vienna, Austria.
- C56. Strömbäck, L., Olsson, J., **Andersson, J.C.M.** *Hydrological climate services through the SUDPLAN EU-project [in Swedish]*. The Swedish Hydrological Council (SHR) conference on “Hydrological Modelling for the Society – yesterday, today, and future challenges”, 14th–15th March 2012 in Norrköping, Sweden.
- C57. **Andersson, J.C.M.** *Improved SWAT model performance with time-dynamic Voronoi tessellation of climatic input data in Southern Africa*. The Global Catchment Initiative conference on the Global Dimensions of Change in River Basins. The Global Water Systems Project, 6th–8th December 2010 in Bonn, Germany.
- C58. **Andersson, J.C.M.** *Potential impacts of water harvesting on hydrological fluxes of river basins*. EGU General Assembly 2010, 2nd–7th May 2010, Vienna, Austria.
- C59. **Andersson, J.C.M.** Yang, H., Zehnder, A.J.B., Rockström, J. *Potential impacts of water harvesting and ecological sanitation on crop yields, evaporation and river flow regimes*. 2010 Congress of the Institute of Biogeochemistry and Pollutant Dynamics, Department of Environmental Sciences, ETH Zurich. 9th April, 2010 in Zurich, Switzerland.
- C60. **Andersson, J.C.M.** *Agricultural management in the Thukela river basin, South Africa*. SWAT Workshop, 23rd–25th February 2010 in Dübendorf, Switzerland.
- C61. **Andersson, J.C.M.**, Yang, H., Zehnder, A.J.B., Jewitt, G.P.W. *Simulating Crop Yield and Water Productivity in Smallholder and Commercial Agricultural Systems in the Thukela River Basin, South Africa*. 10th WaterNet/GWP-SA Symposium, 28th–30th October 2009 in Entebbe, Uganda.
- C62. **Andersson, J.C.M.**, Yang, H., Zehnder, A.J.B. *Water availability, demand and reliability of in situ water harvesting in smallholder rain-fed agriculture in the Thukela River Basin, South Africa*. Stockholm Resilience Centre workshop on “Approaches and challenges in hydrological modelling of meso-scale catchments under agricultural influence”. 24th–27th August 2009 in Stockholm, Sweden.
- C63. **Andersson, J.C.M.** *How Reliable is Water Harvesting?* The World Water Week, 16th–22nd August 2009 in Stockholm, Sweden.
- C64. **Andersson, J.C.M.**, Yang, H., Zehnder, A.J.B. *SWAT Capable of Simulating Smallholder Food Production*. ETH Zurich North-South Centre conference on “How to ensure food security today and tomorrow? Agriculture in the face of new and urgent global needs”. 12th December 2008 in Zurich, Switzerland.

COMPUTER PROFICIENCY

I have used many software packages professionally, of which some are listed below. I also have a keen interest for computers and technology, which enables me to learn quickly.

Name	Software category	Level of proficiency
Linux	Operating system	Very good
Windows	Operating system	Very good
Amazon Cloud	High-performance computing	Good
NSC	High-performance computing	Good
IPAZIA	High-performance computing	Good
R	Statistics, programming, GIS, computation	Very good
Bash	Programming	Good
Fortran	Programming	Basic
Python	Programming	Basic
Perl	Programming	Basic
SWAT	Hydrological and agricultural modelling	Good
HYPE	Hydrological modelling	Very good
HEC	Hydrological modelling	Basic
Flowpath	Groundwater modelling	Basic
SQLite	Database (SQL)	Basic
ArcGIS, QGIS	Geographic Information System (GIS)	Very good
Google Drive, Dropbox	Collaborative cloud systems	Good
MS Office	Word processing, Spread sheet, Presentation, Database, Email	Very good

FIELDWORK SKILLS

Fieldwork has been central to my education and experience. Below follows some selected examples of acquired field skills.

Description	Level of proficiency
Discharge measurement	Good
Water quality sampling	Basic
Precipitation measurement	Good
Infiltration measurement	Basic
Snow depth measurement	Basic
Evaporation measurement	Basic
Sediment measurements	Basic
Aquifer tests, pumping tests	Basic
GPS localisation, sampling, verification	Good
Soil classification	Basic
Stream characterisation and mapping	Good
Surveying	Basic
Fish, crayfish, and macro-invertebrate sampling	Basic

PEER REVIEW & EXAMINATIONS

I have peer-reviewed manuscripts for the following scientific journals: Hydrology and Earth System Sciences (2), Agricultural Water Management (1), Water SA (1), Physics and Chemistry of the Earth (1), Journal of Hydrology (1), Journal of the American Water Resources Association (1), Natural Hazards and Earth System Sciences (1). Examiner: MSc. thesis of A.S. Chetty at University of KwaZulu-Natal, South Africa (2016).