

CV Remco van de Beek



Work experience

2019-present	Senior researcher at SMHI, Norrköping, Sweden
2018-2019	Postdoctoral researcher at SMHI, Norrköping, Sweden
2017-2018	Owner of WeatherFocus, Boven-Leeuwen, The Netherlands
2012-2017	Meteorological researcher at MeteoGroup, Wageningen, The Netherlands
2010-2011	Remote-sensing specialist and agro-meteorologist at EARS, Delft, The Netherlands
2004-2013	PhD Hydrometeorology at Hydrology and Quantitative Water Management Department, Wageningen University, The Netherlands
2003	Research Assistant at Meteorology Department, Wageningen University, The Netherlands

Expertise

- Weather radar
- Precipitation from microwave links
- Large dataset verification
- (Geo)statistical analysis
- Precipitation

Skills

- R, Python, Pascal, Delphi, Fortran

- Project Management (AgilePM Foundation and Practitioner)
- Linux/Bash
- MySQL
- Data formats (Grib, NetCDF and HDF5)

Selection of previous work

At SMHI

- Improving precipitation derivation from microwave links
- Analyzing large datasets of raw and converted microwave link data
- Quality checking and converting rain gauge data
- Contributing to proposals

At WeatherFocus

- Weather radar product development
- Linux bash-scripting
- Weather model data processing

At MeteoGroup

- Radar product improvement and development
- Statistical verification of large meteorological datasets
- Statistical post-processing of meteorological models
- Deriving precipitation from MeteoSat data
- Writing and presenting consultancy and technical reports

At EARS

- Energy Balance Monitoring System improvement using Meteosat data
- Crop Growth Model improvement
- Research start of growing season using Meteosat data
- Analyse 30 years of change of the growing regions western Africa
- Research relative evapotranspiration as indicator for crop insurance
- Maize, sorghum, millet and potato yield estimation for Africa and Europe

For PhD

- Derive equations to describe the climatological semi-variance of precipitation
- Multi-year X-band radar and rain gauge dataset analysis
- Install and maintain a dense rain gauge network
- Analyse C-band radar, disdrometer and rain gauge data
- Precipitation cell identification and tracking
- Co-organiser of Sense Summer Symposium 2005 'Kyoto and Beyond: a good climate for responding to Climate Change?', Ede, the Netherlands

Education

- 2013** **PhD "Rainfall variability in the Netherlands from radars, rain gauges, and disdrometers"** at Hydrology and Quantitative Water Management Department, Wageningen University, The Netherlands
- 2004** **MSc Soil, Water and Atmosphere, specialization in Meteorology** at Meteorology Department, Wageningen University, The Netherlands

MSc Thesis and Internships

- Thesis at Meteorology Department, Wageningen University, The Netherlands: Derive the radiation and energy balance from NOAA-14 satellite data using the SEBAL method. These data were verified using Large Aperture Scintillometer (LAS) measurements. As a follow-up a student researcher job of 4 months was offered to further apply the SEBAL method to Spain.
- Internship at Royal Dutch Meteorological Institute (KNMI), The Netherlands: Set up a verification system for the On Screen Field Modification (OSFM) method implemented in the Weather Room.
- Internship at Meteorology Department, University of Pretoria, South Africa: Set up the Conformal Cubic Atmospheric Model (CCAM) and model the effect of Madagascar on the climate of Southern Africa. Also assisted with teaching students Fortran.

Publications

- van de Beek, C. Z., H. Leijnse, P. Hazenberg, and R. Uijlenhoet, 2016: Close-range radar rainfall estimation and error analysis. *Atmos. Meas. Tech. Discuss.*, 9:3837-3850, doi:10.5194/amt-9-3837-201
- van het Schip-Haverkamp, T., van den Berg, W., van de Beek, C. Z., 2015: Using ensembles in water management: forecasting dry and wet episodes. Geophysical Research Abstracts of the European Geosciences Union General Assembly, Vienna, Austria
- van de Beek, C. Z., F. Bijlsma, H. Hartmann and D. van Dijke, 2014: A new method for clutter removal. Abstract for ERAD 2014, Garmisch-Partenkirchen, Germany
- van de Beek, C. Z., F. Bijlsma, H. Hartmann and D. van Dijke, 2013: A new method for clutter removal. Abstract for 11th International Precipitation Conference, Ede, the Netherlands
- van de Beek, C. Z., H. Leijnse, P. Hazenberg, R. Uijlenhoet, 2012: Close-range radar rainfall estimation and error analysis. Abstract for ERAD 2012, Toulouse, France
- van de Beek, C. Z., H. Leijnse, P. J. J. F. Torfs, and R. Uijlenhoet, 2011: Seasonal semi-variance of Dutch rainfall at hourly to daily scales. *Adv. Water Resour.*, 45:76-85
- van de Beek, C. Z., H. Leijnse, P. J. J. F. Torfs, and R. Uijlenhoet, 2011: Climatology of daily rainfall semivariance in The Netherlands. *Hydrol. Earth Sys. Sci.*, 15:171-183
- van de Beek, C. Z., H. Leijnse, J. N. M. Stricker, R. Uijlenhoet, and H. W. J. Russchenberg, 2010: Performance of high-resolution X-band radar for rainfall measurement in The Netherlands. *Hydrol. Earth Sys. Sci.*, 14:1-17
- Leijnse, H., R. Uijlenhoet, C. Z. van de Beek, A. Overeem, T. Otto, M. H. Unal, Y. Dufournet, H. W. J. Russchenberg, J. Figueras I Ventura, H. Klein Baltink and I. Holleman, 2009: Precipitation Science at CESAR, The Netherlands. *J. of Hydrometeorology* 11(6):1322-1329
- van de Beek, C. Z., H. Leijnse, J. N. M. Stricker, R. Uijlenhoet and H. W. J. Russchenberg, 2009: Rainfall estimation using a high-resolution X-band radar. Geophysical Research Abstracts of the European Geosciences Union General Assembly 2009, Vienna, Austria
- van de Beek, C. Z., H. Leijnse, P. J. J. F. Torfs, R. Uijlenhoet, 2009: Semivariance of rainfall in the Netherlands. Geophysical Research Abstracts of the European Geosciences Union General Assembly 2009, Vienna, Austria

- Figueras I Ventura, J., C. Z. van de Beek, H. W. J. Russchenberg, R. Uijlenhoet, 2009: Preliminary Study on the Feasibility of Performing Quantitative Precipitation Estimation Using X-band Radar. Proceedings of the 8th International Symposium on Tropospheric Profiling, Delft, the Netherlands
- van de Beek, C. Z., H. Leijnse, P. J. J. F. Torfs, R. Uijlenhoet, 2009: Semivariance of Rainfall in the Netherlands. Proceedings of the 8th International Symposium on Tropospheric Profiling, Delft, the Netherlands
- van de Beek, C. Z., H. Leijnse, J. N. M. Stricker, R. Uijlenhoet and H. W. J. Russchenberg, 2008: An intercomparison of X-band radar with rain gauges in the Netherlands. Proceedings of the 5th European Conference on Radar in Meteorology and Hydrology, Helsinki, Finland
- van de Beek, C. Z., H. Leijnse, J. N. M. Stricker, R. Uijlenhoet and H. W. J. Russchenberg, 2008: Performance of high-resolution X-band radar for rain measurement in the Netherlands evaluated using a multi-year data set. Proceedings of the International Symposium on Weather Radar and Hydrology, Grenoble, France
- van de Beek, C. Z., H. Leijnse, J. N. M. Stricker, R. Uijlenhoet and H. W. J. Russchenberg, 2007: Performance of high-resolution X-band radar for rain measurement in the Netherlands evaluated using a multi-year data set. Proceedings of the 9th International Conference on Precipitation, Paris, France
- van de Beek, C. Z., H. Leijnse, J. N. M. Stricker, R. Uijlenhoet and H. W. J. Russchenberg, 2006: Precipitation measurement using high-resolution X-band radar. Proceedings of the 4th European Conference on Radar in Meteorology and Hydrology, Barcelona, Spain
- van de Beek, C. Z., R. Uijlenhoet and I. Holleman, 2005: Spatial classification of precipitation from operational radar data. Preprints of the 32nd AMS Conference on Radar Meteorology, Boston, USA
- Steeneveld, G. J., S. Axelsen, C. Z. van de Beek, W.-J. van de Berg, B. van Dienenhoven, M. Gorska, M. Shongwe, H. Leijnse, S. Philips, H. Tost, B. J. H. van de Wiel, 2005. Nederlands onderzoek naar weer en klimaat: een selectie van het Buys Ballot Symposium 2005. *Meteorologica*, 14(4), pp 19-22

Conference Presentations

- 2019, Rainrate estimation improvement for microwave links, Microwave Link user community meeting, Garmisch-Partenkirchen, Germany, Oral Presentation
- 2019, Rain in Sweden: A variogram perspective at different time scales, Microwave Link user community meeting, Garmisch-Partenkirchen, Germany, Oral Presentation

- 2019, Finding an optimal grid resolution, Microwave Link user community meeting, Garmisch-Partenkirchen, Germany, Oral Presentation
- 2015, Rich Water World an adaptive water management tool, European Geosciences Union General Assembly, Vienna, Austria, Poster presentation
- 2014, A new method for clutter removal, 8th European Conference on Radar in Meteorology and Hydrology, Garmisch-Partenkirchen, Germany, Oral Presentation
- 2013, A new method for clutter removal, 11th International Precipitation Conference, Ede, the Netherlands, Poster presentation
- 2012, Close-range radar rainfall estimation and error analysis, 7th European Conference on Radar in Meteorology and Hydrology, Toulouse, France, Oral Presentation
- 2009, Rainfall estimation using a high-resolution X-band radar, European Geosciences Union General Assembly, Vienna, Austria, Poster presentation
- 2009, Semivariance of rainfall in the Netherlands, European Geosciences Union General Assembly, Vienna, Austria, Poster presentation
- 2009, Semivariance of Rainfall in the Netherlands, 8th International Symposium on Tropospheric Profiling, Delft, the Netherlands, Poster presentation
- 2008, An intercomparison of X-band radar with rain gauges in the Netherlands, 5th European Conference on Radar in Meteorology and Hydrology, Helsinki, Finland, Oral presentation
- 2008, Performance of high-resolution X-band radar for rain measurement in the Netherlands evaluated using a multi-year data set, International Symposium on Weather Radar and Hydrology, Grenoble, France, Poster presentation
- 2007, Performance of high-resolution X-band radar for rain measurement in the Netherlands evaluated using a multi-year data set, 9th International Conference on Precipitation, Paris, France, Poster presentation
- 2006, Precipitation measurement using high-resolution X-band radar, 4th European Conference on Radar in Meteorology and Hydrology, Barcelona, Spain, Poster presentation
- 2005, Spatial classification of precipitation from operational radar data, Buys Ballot Symposium 2005, The Netherlands, Poster presentation
- 2005, Spatial classification of precipitation from operational radar data, 32nd AMS Conference on Radar Meteorology, Boston, USA, Poster presentation

Languages

Dutch	Native
English	Professional working proficiency
German	Elementary proficiency
Afrikaans	Elementary proficiency