CURRICULUM VITAE – Manfred Dorninger

Dr. Manfred Dorninger
born 10 June 1965
Austrian citizen

Current Position

Assistant Professor at the Department of Meteorology and Geophysics,
University of Vienna, Austria
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Main scientific interests

- Mesoscale phenomena in complex terrain (e.g., life cycle of cold air-pools in valleys and basins)
- Verification of high resolution NWP-models in respect of uncertain observations
- Development of instruments for measurements under extreme climatological conditions

Academic Education

1997	Doctoral degree in natural sciences, University of Vienna, Austria
1992-1997	PhD study at the University of Vienna
1984-1992	Diploma in Meteorology at the University of Vienna

Appointments

since 2004	Assistant Professor at Department of Meteorology and Geophysics, University of Vienna
2001	Research affiliate at Yale University, Conneticut, USA
1993-2004	University assistant at Department of Meteorology and Geophysics, University of Vienna
1990-1992	Research assistant at Department of Meteorology and Geophysics, University of Vienna

Activities/experiences

Convener and Co-convener of several sessions at EGU and EMS meetings

2017-2019	Guest Editor of Meteorologische Zeitschrift for the special issue of the 7th JWGFVR International Verification Methods Workshop
2015-2018	Member of the WMO High Impact Weather Task Team on Evaluation
since 2014	Member of the project committee of MesoVICT (Mesoscale verification inter-comparison in complex terrain) - an official project of JWGFVR
since 2014	Member of the joint working group for forecast verification research (JWGFVR) within WMO
2011-2013	Associate Editor of Meteorologische Zeitschrift for the second special issue on COPS
2009-2011	Associate Editor of Quarterly Journal of Royal Meteorological Society for the special issue “Advances in the understanding of convective processes and precipitation over low-mountain regions through the Convective and Orographically-induced Precipitation Study (COPS)”
2007	Participation in the COPS field campaign, responsible for all scientific surface networks

2005-2010	Member of UNESCO International Hydrological Programme Working Group on "Climatic variability and land cover change impacts on flooding and low flows - at what scales?"
2005-2009	Chairman of working group on verification within MAP D-PHASE
2005-2008	Guest editor of the international journal Meteorology and Atmospheric Physics Special Issue on RISK-AWARE
2005-2007	supersite coordinator of supersite "Stuttgart" within COPS
2005-2009	Steering Committee member of D-PHASE (Demonstration of Probabilistic Hydrological and Atmospheric Simulation of Flooding Events in the Alpine region) a Forecast and Development Project (FDP) of the WWRP
Since 2004	Assistant Professor at Department of Meteorology and Geophysics, University of Vienna
2001	Research affiliate at Yale University, Conneticut, USA
1999	Participation in the MAP field campaign
1996-1999	member of the Coordination and Implementation Group (CIG) in MAP (Mesoscale Alpine Programme)
1993-2004	University assistant at Department of Meteorology and Geophysics, University of Vienna
1992-1997	PhD study at the University of Vienna
1990-1992	Research assistant at Department of Meteorology and Geophysics, University of Vienna
1984-1993	Diploma in Meteorology at the University of Vienna

Selected Publications

1. Bauer, H.-S., T. Weusthoff, **M. Dorninger**, V. Wulfmeyer, T. Schwitalla, T. Gorgas, M. Arpagaus, and K. Warrach-Sagi, 2011: Predictive Skill of a Subset of the D-PHASE Multi-Model Ensemble in the COPS Region. COPS Special Issue of the Q. J. R. Meteorol. Soc. 137, 287-305, DOI: 10.1002/qj.715.
2. Bielli S, Grzeschik M, Richard E, Flamant C, Champollion C, Kiemle C, **Dorninger M**, Brousseau P. 2012. Assimilation of water-vapour airborne lidar observations: impact study on the COPS precipitation forecasts. *Q. J. R. Meteorol. Soc.,* 138, 1652-1667, doi:10.1002/qj.1864
3. Blöschl, G., S. Ardoin-Bardin, M. Bonell, **M. Dorninger,** D. Goodrich, D. Gutknecht, D. Matamoros, B. Merz, P. Shand, and J. Szolgay, 2007: At what scales do climate variability and land cover change impact on flooding and low flows? *Hydrol. Process.,* 21, 1241-1247.
4. Corsmeier, U., N. Kalthoff, Ch. Barthlott, A. Behrendt, P. Di Girolamo, **M. Dorninger,** F. Aoshima, J. Handwerker, Ch. Kottmeier, H. Mahlke, St. Mobbs, G. Vaughan, J. Wickert, and V. Wulfmeyer, 2011: Driving processes for deep convection over complex terrain: A multiscale analysis of observations from COPS-IOP 9c. Q. J. R. Meteorol. Soc. 137(S1): 137–155, doi:10.1002/qj.754.
5. **Dorninger, M**., E. Gilleland, B. Casati, M.P. Mittermaier, E.E. Ebert, B.G. Brown, and L.J. Wilson, 2018: The set-up of the Mesoscale Verification Inter-Comparison over Complex Terrain (MesoVICT) project. *Bulletin of the American Meteorological Society,* **99,** 1887-1906.
6. **Dorninger, M.,** T. Gorgas, 2013: Comparison of NWP-model chains by using novel verification methods. Meteorol. Z., 22, 373-393, doi: 10.1127/0941-2948/2013/0488

7. **Dorninger, M.,** C. D. Whiteman, B. Bica, S. Eisenbach, B. Pospichal, and R. Steinacker, 2011: Meteorological Events Affecting Cold-Air Pools in a Small Basin. *Journal of Applied Meteorology and Climatology*, **50**, 2223–2234.

8. **Dorninger, M.,** S. Schneider, and R. Steinacker, 2008: On the interpolation of precipitation data over complex terrain. Meteorol. Atm. Phys 101, 175-189, doi: 10.1007/s00703-008-0287-6

9. Ebert, E., Brown, B., Chen, J., Coelho, C., **Dorninger, M.,** Göber, M., Mittermaier, M., Nurmi, P., Wilson, L. & Zhu, Y. 2015 Numerical prediction of the earth system: Cross-cutting research on verification techniques in: *Seamless prediction of the earth system: from minutes to months.*: World Meteorological Organisation (WMO), Genf, Schweiz. Chapter 21, p. 403-418.

10. Gorgas T, **Dorninger M.**, 2012a: Concepts for a pattern-oriented analysis ensemble based on observational uncertainties. *Q. J. R. Meteorol. Soc.* 138, 769-784, doi:10.1002/qj.949

11. Gorgas T, **Dorninger M.,** 2012b: Quantifying verification uncertainty by reference data variation. Meteorol. Z., 21, 259-277, DOI 10.1127/0941-2948/2012/0325

12. Kumer V.-M., J. Reuder, **M. Dorninger**, R. Zauner, and V. Grubišić, 2016: Turbulent kinetic energy estimates from profiling wind LiDAR measurements and their potential for wind energy applications. *Renewable Energy,* 99, 898-910, http://dx.doi.org/10.1016/j.renene.2016.07.014

13. Lehner M., C.D. Whiteman and **M. Dorninger**, 2017: Inversion Build-up and Cold-Air Outflow in a Small Alpine Sinkhole. *Boundary Layer Meteorology* 163, 497-522.

14. Rotach, M. W., Ambrosetti, P., Ament, F., Appenzeller, C., Arpagaus, M., Bauer, H.-S., Behrendt, A., Bouttier, F., Buzzi, A., Corazza, M., Davolio, S., Denhard, M., **Dorninger, M.,** Fontannaz, L., Frick, J., Fundel, F., Germann, U., Gorgas, T., Hegg, C., Hering, A., Keil, C., Liniger, M. A., Marsigli, C., McTaggart-Cowan, R., Montani, A., Mylne, K., Ranzi, R., Richard, E., Rossa, A., Santos-Muñoz, D., Schär, C., Seity, Y., Staudinger, M., Stoll, M., Volkert, H., Walser, A., Wang, Y., Werhahn, J., Wulfmeyer, V., Zappa, M., 2009. MAP D-PHASE: Real-time demonstration of weather forecast quality in the Alpine region. Bull. Amer. Meteor. Soc. 90, 1321–1336.

15. Serafin, S., L. Strauss and **M. Dorninger**, 2019: Ensemble reduction using cluster analysis. Q. J. R. Meteorol. Soc., 1-16. https://doi.org/10.1002/qj.3459.

16. Wulfmeyer, V., A. Behrendt, C. Kottmeier, U. Corsmeier, C. Barthlott, G. C. Craig, M. Hagen, D. Althausen, F. Aoshima, M. Arpagaus, H.-S. Bauer, L. Bennett, A. Blyth, C. Brandau, C. Champollion, S. Crewell, G. Dick, P. Di Girolamo, **M. Dorninger,** Y. Dufournet, R. Eigenmann, R. Engelmann, C. Flamant, T. Foken, T. Gorgas, M. Grzeschik, J. Handwerker, C. Hauck, H. H¨oller, W. Junkermann, N. Kalthoff, C. Kiemle, S. Klink, M. K¨onig, L. Krauss, C. N. Long, F. Madonna, S. Mobbs, B. Neininger, S. Pal, G. Peters, G. Pigeon, E. Richard, M. W. Rotach, H. Russchenberg, T. Schwitalla, V. Smith, R. Steinacker, J. Trentmann, D. D. Turner, J. van Baelen, S. Vogt, H. Volkert, T. Weckwerth, H. Wernli, A. Wieser, and M. Wirth, 2011a: The Convective and Orographically-induced Precipitation Study (COPS): the scientific strategy, the field phase, and research highlights. Q. J. R. Meteorol. Soc. 137, 3–30.

17. Zappa, M., M. W. Rotach, M. Arpagaus, **M. Dorninger,** C. Hegg, A. Montani, R. Ranzi, F. Ament, U. Germann, G. Grossi, S. Jaun, A. Rossa, S. Vogt, A. Walser, J. Wehrhan, and C. Wunram, 2008: MAP DPHASE: real-time demonstration of hydrological ensemble prediction systems. *Atmospheric Science Letters*, **9**, 80–87.