

STEFANO SERAFIN

University of Vienna • Department of Meteorology and Geophysics

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<https://img.univie.ac.at/en/about-us/staff/private-homepages/serafin-stefano/stefano.serafin@univie.ac.at>

PERSONAL

Date and place of birth: 21.12.1977 in Como (Italy)
Gender: male
Family status: married, 1 child
Nationality: Italian
ORCID: [0000-0002-5838-7514](https://orcid.org/0000-0002-5838-7514)
ISI Web of Science Researcher ID: [D-7660-2015](https://orcid.org/D-7660-2015)
Scopus Author ID: [11939923400](https://orcid.org/11939923400)
Languages: Italian (mother tongue), English (fluent, C2), German (intermediate, B1)

QUALIFICATIONS, EDUCATION

- Abilitazione Scientifica Nazionale (Italian national scientific qualification)
04/A4 (Geophysics), associate professor level 28.8.2018 – 28.8.2029
02/C1 (Astronomy, astrophysics, earth and planetary physics), associate professor level 11.7.2018 – 11.7.2029
- Doctorate in Environmental Engineering 20.2.2006
University of Trento, Italy, dissertation on *Boundary-layer processes and thermally driven flows over complex terrain*.
- Degree in Environmental Science 12.3.2002
University of Milano-Bicocca, Milan, Italy, full grades (110/110) and honours.
- Scientific high school leaving certificate (Diploma di maturità scientifica) 1996
Liceo Scientifico Castelli, Saronno, Italy, grades: 52/60.

ACADEMIC POSITIONS

- University of Vienna, Austria; Department of Meteorology and Geophysics
Senior scientist 1.6.2020 – present
- University of Innsbruck, Austria; Department of Atmospheric and Cryospheric Sciences
Senior project scientist 1.3.2018 – 31.5.2020
- University of Vienna, Austria; Department of Meteorology and Geophysics
Project scientist 1.9.2016 – 31.7.2018
Assistant professor (Universitätsassistent, Post-Doc) 1.10.2010 – 31.8.2016
- University of Trento, Italy; Department of Civil and Environmental Engineering
Post-doctoral researcher 1.3.2006 – 30.9.2010
Doctoral student 1.11.2002 – 28.2.2006
- University of L'Aquila, Italy; Department of Physics/CETEMPS
Research consultant 1.6.2002 – 30.11.2002

RESEARCH INTERESTS

- *Numerical weather prediction:*
Boundary-layer parameterization; Large-eddy simulation; Limited-area modelling and ensemble forecasting; Parameter estimation with ensemble methods.
- *Mountain meteorology:*
Dynamics of stratified flow over orography; Atmospheric boundary layer over complex terrain; Thermally-driven wind systems; Initiation of deep moist convection; Mountain climate.

Most important research results achieved

- First description of the partitioning of heat transfer processes in the mountain boundary-layer into turbulent and advective components (Serafin and Zardi, 2010).
- Advances in the theoretical understanding, based on analytical modelling, of slope winds (Zardi and Serafin 2015) and lee waves (Sachsperger et al., 2015).
- First quantitative determination, based on radar remote-sensing, of turbulence intensity in breaking mountain waves and atmospheric rotors (Strauss et al., 2015).
- First long-term evaluation of the skill and potential economic value of ensemble forecasts of wind turbine icing at mountain sites (Strauss et al., 2020, 2022).

RESEARCH PROJECTS

- As principal investigator:
 - 2018 – 2022 FWF (Austrian Science Fund) stand-alone project MICIA (P30808-N32), *Multiscale Interactions in Convection Initiation in the Alps*, € 345'562,89.
 - 2012 – 2016 FWF (Austrian Science Fund) stand-alone project STABLEST (P24726-N27), *Stable Boundary Layer Separation and Turbulence*, € 222'953,09.
- Other projects:
 - 2016 – 2019 Austrian Climate and Energy Fund, project ICE CONTROL, *Ensemble-Vereisungsprognosen als Basis zur innovativen Betriebsführung von Windkraftanlagen unter Vereisungsbedingungen*. English: *Ensemble icing forecasts supporting the operation of wind turbines under icing conditions*. PI: Dr. Alexander Beck (ZAMG).
 - 2014 EU-FP7 Research Infrastructure HYDRALAB, project HyIV-CNRS-SECORO, *Influence of secondary orography on boundary-layer separation and rotors*. PI: Dr. Ivana Stiperski (University of Innsbruck).
 - 2005 – 2008 EU-INTERREG IIIB Alpine Space, project FORALPS, *Meteo-hydrological forecast and observations for improved water resource management in the Alps*. PI: Prof. Dino Zardi (University of Trento).
 - 2006 – 2007 EU-INTERREG IIIB CADSES, project HYDROCARE, *Hydrological cycle of the CADSES region*. PI: Dr. Valerio Lucarini (CINFAI).
 - 2004 – 2005 EU-INTERREG IIIB Alpine Space, project METEORISK, *Mitigation of natural risks through improved forecasting of extreme meteorological events*. PI: Dr. Michael Staudinger (ZAMG).

TEACHING

- Lecturer at the University of Vienna (Faculty of Earth Sciences, Geography and Astronomy) in the B.Sc. and M.Sc. programmes in Meteorology, Academic Years between 2010–2011 and 2015–2016, then from 2020–2021 to present.

Lecture and exercise courses on: Fluid Dynamics of the Atmosphere
Boundary-Layer Meteorology
Mountain Meteorology
Mesoscale Dynamics
Fundamentals of Atmospheric Modelling
Thermodynamics of the Atmosphere

Exercise courses on: Applied Numerical Methods in Meteorology
Dynamics of the Atmosphere I
Dynamics of the Atmosphere II

Full record available at <https://ufind.univie.ac.at/en/person.html?id=44077&teaching=true>

- Other teaching duties at the University of Vienna:
 - 2023-present Erasmus+ mobility coordinator for the study courses in Meteorology.
 - 2023 Member of the working group for the revision of Master Thesis guidelines in Meteorology.
 - 2022 Member of the working group for the revision of the B.Sc. and M.Sc. programmes in Meteorology.
 - 2021-2022 Co-lead of the doctoral seminar of the Department of Meteorology and Geophysics.
 - 2020-2021 Chairman of the Meteorological-Geophysikalisches Kolloquium, a seminar cycle jointly organized by the Department of Meteorology and Geophysics and the Austrian weather service ZAMG.
- Lecturer at the 2022 Summer School on Mountain Meteorology, Nanjing University, School of Atmospheric Sciences.

- Guest lecturer (Erasmus teaching staff mobility) of Geophysical Fluid Dynamics at the University of Trento (Doctoral School of Environmental Engineering), Academic Years 2012–2013, 2013–2014 and 2014–2015.
- Assistant teacher and examiner in Atmospheric Physics and Meteorology at the University of Trento (Faculty of Engineering; M.Sc. programme in Environmental and Land Engineering and the B.Sc. programme in Environmental Management Engineering, A.Y. between 2003–04 and 2008–09).
- Supervisor or co-supervisor of 7 bachelor theses, 15 master theses and 3 doctoral dissertations at the Faculty of Earth Sciences, Geography and Astronomy, University of Vienna. Co-supervisor of 1 doctoral dissertation at the Faculty of Geo- and Atmospheric Sciences, University of Innsbruck. Co-supervisor of 6 master and 4 bachelor theses in Environmental and Land Engineering at the Faculty of Engineering of the University of Trento.

OTHER PROFESSIONAL ACTIVITY

- Member of the European Geosciences Union and of the Italian Society of Atmospheric Science and Meteorology. Past member of the American Meteorological Society and of the American Geophysical Union.
- Member of the editorial board of the *Bulletin of Atmospheric Science and Technology*, official journal of the Italian Society of Atmospheric Science and Meteorology (2019–present). Associate editor of *Monthly Weather Review* (2016–2020).
- Reviewing for journals (number of reviews in brackets)
Monthly Weather Review (19), *Quarterly Journal of the Royal Meteorological Society* (12), *Journal of the Atmospheric Sciences* (11), *Boundary-Layer Meteorology* (11), *Journal of Applied Meteorology and Climatology* (10), *Atmospheric Chemistry and Physics* (6), *Journal of Geophysical Research: Atmospheres* (5), *Meteorologische Zeitschrift* (4), *Bulletin of Atmospheric Science and Technology* (4), *Atmospheric Research* (3), *npj Climate and Atmospheric Science* (2), *Atmosphere* (2), *Bulletin of the American Meteorological Society* (1), *Environmental Fluid Mechanics* (1), *Tellus-A* (1), *Advances in Meteorology* (1), *Annals of Geophysics* (1), *Frontiers in Earth Science* (1).
 Full record available at <https://www.webofscience.com/wos/author/rid/D-7660-2015>.
- Reviewing for funding or other agencies (number of reviews in brackets)
 MIUR, Italian Ministry of Education, Universities and Research (1); CINECA, Italian National Supercomputing Centre (2); GAČR, Czech Science Foundation (1); NSF, National Science Foundation, USA (1).
- Community service

2014 – present	Convener or co-convener of the EGU Annual Meeting sessions on “Mountain Weather and Climate” (2022), “Mountain Climatology and Meteorology” (2019–2020), “Mountain Meteorology” (2018) and “Atmospheric Processes over Complex Terrain” (2014–2015–2016).
2017 – present	TEAMx research programme: Member of the Coordination and Implementation Group (2017 – present). Co-chair of the <i>Mountain Boundary Layer Working Group</i> (2020 – present). Programme coordinator (2018–2019). Member of the Scientific Organizing Committee and of the Local Organizing Committee of the <i>First TEAMx workshop</i> (2019).
2021	Co-organizer of the topical session on <i>Real-case large-eddy simulation over complex orography: Motivations, experiences, challenges</i> at the <i>ICAM online event 2021</i> .
2019	Chairman of the Programme Committee of the <i>35th International Conference on Alpine Meteorology</i> .
- Research visits

2015	Department of Civil and Environmental Engineering and Earth Sciences, University of Notre Dame, South Bend, IN (USA).
2014	Geophysical fluid mechanics laboratory, National Center for Meteorological Research, Météo France, Toulouse (France).
2012 and 2014	Earth Observing Laboratory, National Center for Atmospheric Research, Boulder, CO (USA).

INVITED TALKS

- *Prospects for high-resolution data assimilation over complex orography: Motivation, challenges, feasibility*. 36th International Conference on Alpine Meteorology, St. Gallen (CH), 23.6.2023, invited by Dr. Michael Sprenger.
- *TEAMx: A research programme on observing and modelling the mountain boundary layer*. Meteorological Institute Munich, Ludwig-Maximilians-Universität München, Munich (D), 14.1.2020, invited by Dr. Tobias Zinner.

- *Observations and modelling of atmospheric rotors.*
Department of Atmospheric and Cryospheric Science, University of Innsbruck (A), 25.4.2018, invited by Prof. Mathias Rotach.
Institute of Atmospheric Sciences and Climate, National Research Council of Italy, Bologna (I), 14.5.2015, invited by Dr. Silvio Davolio.
- *Daytime processes in the atmospheric boundary layer over mountainous terrain.*
Department of Civil and Environmental Engineering and Earth Sciences, University of Notre Dame, IN (USA), 10.2.2015, invited by Prof. Harindra J.S. Fernando.
- *A case study of nonstationary boundary-layer separation and rotor formation.*
National Center for Atmospheric Research, Boulder, CO (USA), 28.8.2012, invited by Dr. Vanda Grubišić.
Department of Atmospheric Sciences, University of Wyoming, Laramie, WY (USA), 15.8.2012, invited by Dr. Samuel Haimov.
Department of Meteorology and Geophysics, University of Innsbruck (A), 16.5.2012, invited by Prof. Alexander Gohm.
- *Idealized simulations of thermally driven winds over mountainous terrain.*
Department of Geophysics, University of Zagreb (HR), 24.01.2012, invited by Prof. Branko Grisogono.
Department of Atmospheric Physics, Johannes-Gutenberg University of Mainz (D), 30.08.2011, invited by Prof. Volkmar Wirth.
Department of Meteorology and Geophysics, University of Vienna (A), 30.11.2010, invited by Prof. Leopold Haimberger.

PARTICIPATION TO CONFERENCES

- 36th International Conference on Alpine Meteorology; Sankt Gallen (CH), 18.6.–23.6.2023
- 4° Congresso Nazionale dell'Associazione Italiana di Scienze dell'Atmosfera e Meteorologia; Milan (I), 15–19.2.2022.
- 35th International Conference on Alpine Meteorology; Riva del Garda (I), 2.9.–6.9.2019
- EGU General Assembly 2019; Vienna (A), 8.4–12.4.2019
- 1° Congresso Nazionale dell'Associazione Italiana di Scienze dell'Atmosfera e Meteorologia; Bologna (I), 10–13.9.2018.
- EGU General Assembly 2018; Vienna (A), 9.4–13.4.2018
- 34th International Conference on Alpine Meteorology; Reykjavík (IS), 19.6.–23.6.2017
- EGU General Assembly 2016; Vienna (A), 17.4–22.4.2016
- 8th European Conference on Severe Storms; Wiener Neustadt (A), 14.9–18.9.2015
- 33rd International Conference on Alpine Meteorology; Innsbruck (A), 31.8.–4.9.2015
- 26th IUGG Assembly 2015; Prague (CZ), 22.6.–2.7.2015
- EGU General Assembly 2015; Vienna (A), 12.4.–17.4.2015
- 21st Symposium on Boundary Layers and Turbulence; Leeds (UK), 9.6.–13.6.2014
- EGU General Assembly 2014; Vienna (A), 27.4–2.5.2014
- AGU Fall Meeting 2013; San Francisco (USA), 9.12.–13.12.2013
- 32nd International Conference on Alpine Meteorology; Kranjska Gora (SI), 3.6.–7.6.2013
- EGU General Assembly 2013; Vienna (A), 7.4.–12.4.2013
- 15th Conference on Mountain Meteorology; Steamboat Springs (USA), 20.8.–24.8.2012
- EGU General Assembly 2012; Vienna (A), 23.4.–27.4.2012
- 4. Österreichischer Meteorologentag; Klagenfurt (A), 3.1.–4.11.2011
- 31st International Conference on Alpine Meteorology; Aviemore (UK), 23.5.–27.5.2011
- 30th International Conference on Alpine Meteorology; Rastatt (D), 11.5.–15.5.2009
- Convegno Nazionale di Fisica della Terra Fluida e Problematiche Affini; Ischia (I), 11.6.–15.6.2007
- 29th International Conference on Alpine Meteorology; Chambéry (F), 4.6.–8.6.2007
- EGU General Assembly 2007; Vienna (A), 16.4.–20.4.2007
- 28th International Conference on Alpine Meteorology and MAP Meeting; Zadar (HR), 23.5.–27.5.2005
- XXIX Convegno di Idraulica e Costruzioni Idrauliche; Trento (I), 7.9.–10.9.2004
- 27th International Conference on Alpine Meteorology and MAP Meeting; Brig (CH), 18.5.–23.5.2003

PARTICIPATION TO TRAINING COURSES AND WORKSHOPS

- Third TEAMx Workshop
Organizers: University of Innsbruck, ETH Zürich
Zürich (CH), 15.6.–16.6.2023

- Second TEAMx Workshop
Organizers: University of Innsbruck
Virtual, 10.5.-12.5.2021
- First TEAMx Workshop
Organizers: University of Trento, University of Innsbruck, Italian Society of Atmospheric Science and Meteorology
Rovereto (I), 28.8.-30.8.2019
- Verification in complex terrain: Spatial Verification Methods and NWP Model Performance
Organizer: University of Vienna, Department of Meteorology and Geophysics
Vienna (A), 8.7.-9.7.2019
- Observational campaigns for better weather forecasts
Organizer: ECMWF, European Centre for Medium-Range Weather Forecasts
Reading (UK), 10.6.-13.6.2019
- Synthesis Workshop on Mountain Meteorology and Climatology: Drivers, Processes and Related Impacts
Organizer: MRI, Mountain Research Initiative
Vienna (A), 12.4.2019
- Annual Seminar 2017. Ensemble prediction: past, present and future
Organizer: ECMWF, European Centre for Medium-Range Weather Forecasts
Reading (UK), 11.9.-14.9.2017
- Training course on Predictability and Ocean-Atmosphere Ensemble Forecasting
Organizer: ECMWF, European Centre for Medium-Range Weather Forecasts
Reading (UK), 8.5.-12.5.2017
- Workshop on Advances in Meso- and Micrometeorology
Organizer: University of Zagreb, Faculty of Science, Department of Geophysics
Donja Stubica (HR), 3.11.-4.11.2014
- Wave-Turbulence Interactions in Stable Atmospheric Boundary Layers
Organizer: Geophysical Turbulence Program (GTP), NCAR
Boulder (USA), 24.7.-25.7.2012
- Croatian-USA Workshop on Mesometeorology
Organizer: Croatian Meteorological and Hydrological Service
Pisarovina (HR), 18.6.-20.6.2012
- HiRCoT 2012 Workshop: High Resolution Modelling in Complex Terrain
Organizer: University of Natural Resources and Life Sciences, Institute of Meteorology
Vienna (A), 21.2.-23.2.2012
- 19° Scuola Estiva di Calcolo Parallelo (19th Summer School on High Performance Computing)
Organizer: CINECA (Italian National Supercomputing Centre)
Bologna (I), 5.7.-16.7.2010
- Joint NCAR-NCAS WRF Users Workshop and Tutorial
Organizer: NCAR, NCAS
Cambridge (UK), 28.9.-2.10.2009
- GRASS, Free and Open Source GIS: Theory and Applications
Organizer: University of Trento, Department of Civil and Environmental Engineering
Trento (I), 27.6.-30.6.2006
- Summer School on Mountain Meteorology: Orographic effects on precipitation
Organizer: University of Trento, Department of Civil and Environmental Engineering
Trento (I), 25.7.-30.7.2004
- Meteorology and Regional Weather Forecasting
Organizer: University of Trento, Faculty of Mathematical, Physical and Natural Sciences
Trento (I), 1.12.-5.12.2003
- Prediction of Turbulent Flows
Organizer: Isaac Newton Institute for Mathematical Sciences
Cambridge (UK), 7.11.2003
- 5th International SRNWP-Workshop on Non-Hydrostatic Modelling
Organizer: Deutscher Wetterdienst

Bad-Orb (D), 27.10.-29.10.2003

- Summer School on Mountain Meteorology: Thermally driven winds in mountainous terrain
Organizer: University of Trento, Department of Civil and Environmental Engineering
Trento (I), 17.8.-22.8.2003
- Grand Combin Summer School on Fundamental Problems in Geophysical and Environmental Fluid Mechanics: Physics and Predictability of Rainfall and Floods
Organizer: CIMA, International Centre on Environmental Monitoring
Saint-Oyen (I), 25.6.-5.7.2002

AWARDS AND RECOGNITIONS

- 2022: [Highlight article](#) on *Reviews of Geophysics*.
- 2022: [Highlight paper](#) on *Geoscientific Model Development*.
- 2017: [Featured research article](#) on the *Quarterly Journal of the Royal Meteorological Society*.
- 2016: [Featured research article](#) on the *Quarterly Journal of the Royal Meteorological Society*.
- 2005: 2nd-best student poster presentation at the 28th International Conference on Alpine Meteorology and MAP Meeting.
- 2002: 3-yr scholarship at the Doctoral School of Environmental Engineering, University of Trento (first candidate in ranking).

A Peer-reviewed scientific articles

Supervised or co-supervised student work is denoted with a *

- 1 *Göbel, M., **S. Serafin** and M.W. Rotach (2023): Adverse impact of terrain steepness on thermally-driven initiation of orographic convection, *Weather Clim. Dynam.*, in press.
- 2 Weinkaemmerer, J., M. *Göbel, **S. Serafin**, I. Bašták-Đurán, J. Schmidli (2023): Boundary-layer plumes over mountainous terrain in idealized large-eddy simulations, *Q. J. R. Meteorol. Soc.*, in press.
- 3 Strauss, L., **S. Serafin** and M. Dorninger (2022): Probability forecasts of ice accretion on wind turbines derived from multi-physics and neighbourhood ensembles. *Q. J. R. Meteorol. Soc.*, **148**, 2446-2467.
DOI: [10.1002/qj.4311](https://doi.org/10.1002/qj.4311)
Scopus EID: [2-s2.0-85133132475](https://scopus.com/record/display?id=2-s2.0-85133132475)
Web Of Science accession number: [000819329200001](https://www.webofscience.com/olap/doi/10.1002/qj.4311)
- 4 Manzato, A., **S. Serafin**, M.M. Miglietta, D.J. Kirshbaum and W. Schulz (2022): A pan-Alpine climatology of lightning and convective initiation *Mon. Wea. Rev.*, **150**, 2213-2230.
DOI: [10.1175/MWR-D-21-0149.1](https://doi.org/10.1175/MWR-D-21-0149.1)
Scopus EID: [2-s2.0-85140143444](https://scopus.com/record/display?id=2-s2.0-85140143444)
- 5 M.W. Rotach, **S. Serafin**, H.C. Ward, M. Arpagaus, I. Colfescu, J. Cuxart, S.F.J. De Wekker, V. Grubišić, N. Kalthoff, T. Karl, D.J. Kirshbaum, M. Lehner, S. Mobbs, A. Paci, E. Palazzi, A. Bailey, J. Schmidli, C. Wittmann, G. Wohlfahrt, and D. Zardi (2022): A collaborative effort to better understand, measure and model atmospheric exchange processes over mountains. *Bull. Amer. Meteorol. Soc.*, **103**, E1282-E1295.
DOI: [10.1175/BAMS-D-21-0232.1](https://doi.org/10.1175/BAMS-D-21-0232.1)
Scopus EID: [2-s2.0-85131596576](https://scopus.com/record/display?id=2-s2.0-85131596576)
- 6 Pepin, N.C., E. Arnone, A. Gobiet, K. Haslinger, S. Kotlarski, C. Notarnicola, E. Palazzi, P. Seibert, **S. Serafin**, W. Schöner, S. Terzago, J.M. Thornton, M. Vuille and C. Adler (2022): Climate changes and their elevational patterns in the mountains of the world. *Rev. Geophys.*, **60**, e2020RG000730.
DOI: [10.1029/2020RG000730](https://doi.org/10.1029/2020RG000730)
Scopus EID: [2-s2.0-85127260411](https://scopus.com/record/display?id=2-s2.0-85127260411)
Web Of Science accession number: [000777485900004](https://www.webofscience.com/olap/doi/10.1029/2020RG000730)
- 7 *Göbel, M., **S. Serafin** and M.W. Rotach (2022): Numerically consistent budgets of potential temperature, momentum, and moisture in Cartesian coordinates: application to the WRF model. *Geosci. Model Dev.*, **15**, 669-681.
DOI: [10.5194/gmd-15-669-2022](https://doi.org/10.5194/gmd-15-669-2022)
Scopus EID: [2-s2.0-85124097084](https://scopus.com/record/display?id=2-s2.0-85124097084)
Web Of Science accession number: [000751177700001](https://www.webofscience.com/olap/doi/10.5194/gmd-15-669-2022)
- 8 Strauss, L., **S. Serafin** and M. Dorninger (2020): Skill and potential economic value of forecasts of ice accretion on wind turbines. *J. Appl. Meteor. Climatol.*, **59**, 1845-1864.
DOI: [10.1175/JAMC-D-20-0025.1](https://doi.org/10.1175/JAMC-D-20-0025.1)
Scopus EID: [2-s2.0-85095965662](https://scopus.com/record/display?id=2-s2.0-85095965662)
Web Of Science accession number: [000606836900005](https://www.webofscience.com/olap/doi/10.1175/JAMC-D-20-0025.1)
- 9 Fuchs, F., F.M. Schneider, P. Kolínský, **S. Serafin**, G. Bokelmann (2019): Rich observations of local and regional infrasound phases made by the AlpArray seismic network after refinery explosion. *Sci. Rep.*, **9**, 13027.
DOI: [10.1038/s41598-019-49494-2](https://doi.org/10.1038/s41598-019-49494-2)
Scopus EID: [2-s2.0-85072011387](https://scopus.com/record/display?id=2-s2.0-85072011387)
Web Of Science accession number: [000484988100001](https://www.webofscience.com/olap/doi/10.1038/s41598-019-49494-2)
- 10 **Serafin, S.**, L. Strauss and M. Dorninger (2019): Ensemble reduction using cluster analysis. *Q. J. R. Meteorol. Soc.*, **145**, 659-674.
DOI: [10.1002/qj.3458](https://doi.org/10.1002/qj.3458)
Scopus EID: [2-s2.0-85061057940](https://scopus.com/record/display?id=2-s2.0-85061057940)
Web Of Science accession number: [000463971800017](https://www.webofscience.com/olap/doi/10.1002/qj.3458)
- 11 Schneider, F.M., F. Fuchs, P. Kolínský, E. Caffagni, **S. Serafin**, M. Dorninger, G. Bokelmann, AlpArray Working Group (2018): Seismo-acoustic signals of the Baumgarten (Austria) gas explosion detected by the AlpArray seismic network. *Earth and Planetary Science Letters*, **502**, 104-114.
DOI: [10.1016/j.epsl.2018.08.034](https://doi.org/10.1016/j.epsl.2018.08.034)
Scopus EID: [2-s2.0-85053396519](https://scopus.com/record/display?id=2-s2.0-85053396519)
Web Of Science accession number: [000447567800010](https://www.webofscience.com/olap/doi/10.1016/j.epsl.2018.08.034)

- 12 **Serafin, S.**, B. Adler, J. Cuxart, S.F.J. De Wekker, A. Gohm, B. Grisogono, N. Kalthoff, D.J. Kirshbaum, M.W. Rotach, J. Schmidli, I. Stiperski, Ž. Večenaj and D. Zardi (2018): Exchange processes in the atmospheric boundary layer over mountainous terrain. *Atmosphere*, **9**, 102 (special issue on "Atmospheric Processes over Complex Terrain").
DOI: [10.3390/atmos9030102](https://doi.org/10.3390/atmos9030102)
Scopus EID: 2-s2.0-85044034187
Web Of Science accession number: 000428305800024
- 13 Kirshbaum, D.J., B. Adler, N. Kalthoff, C. Barthlott and **S. Serafin** (2018): Moist orographic convection: physical mechanisms and links to surface-exchange processes. *Atmosphere*, **9**, 80 (special issue on "Atmospheric Processes over Complex Terrain").
DOI: [10.3390/atmos9030080](https://doi.org/10.3390/atmos9030080)
Scopus EID: 2-s2.0-85042554645
Web Of Science accession number: 000428305800002
- 14 *Scheffknecht, P., **S. Serafin** and V. Grubišić (2017): A long-lived supercell over mountainous terrain. *Q. J. R. Meteorol. Soc.*, **143**, 2973-2986.
DOI: [10.1002/qj.3127](https://doi.org/10.1002/qj.3127)
Scopus EID: 2-s2.0-85039422816
Web Of Science accession number: 000418796900001
- 15 Giovannini, L., L. Laiti, **S. Serafin** and D. Zardi (2017): The thermally driven diurnal wind system of the Adige Valley in the Italian Alps. *Q. J. R. Meteorol. Soc.*, **143**, 2389-2402.
DOI: [10.1002/qj.3092](https://doi.org/10.1002/qj.3092)
Scopus EID: 2-s2.0-85026296179
Web Of Science accession number: 000414551000006
- 16 **Serafin, S.**, L. Strauss and V. Grubišić (2017): Climatology of westerly wind events in the lee of the Sierra Nevada. *J. Appl. Meteor. Climatol.*, **56**, 1003-1023.
DOI: [10.1175/JAMC-D-16-0244.1](https://doi.org/10.1175/JAMC-D-16-0244.1)
Scopus EID: 2-s2.0-85017500895
Web Of Science accession number: 000399680900001
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B Indexed reports and conference proceedings

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C Grey literature

- 35 **Serafin, S.**, M. Arpagaus, I. Colfescu, J. Cuxart, S.F.J. De Wekker, M. Evans, V. Grubišić, N. Kalthoff, T. Karl, D.J. Kirshbaum, M. Lehner, S. Mobbs, A. Paci, E. Palazzi, A. Raudzens Bailey, M.W. Rotach, J. Schmidli, G. Wohlfahrt, D. Zardi (2019): TEAMx: Multi-scale transport and exchange processes in the atmosphere over mountains—Programme and experiment. Department of Atmospheric and Cryospheric Sciences, University of Innsbruck. 42 pp. ISBN 978-3-99106-003-1, DOI: 10.15203/99106-003-1.
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URL: https://meteo.boku.ac.at/report/BOKU-Met_Report_21_online.pdf
- 37 **Serafin, S.** (2006): Boundary-layer processes and thermally driven flows over complex terrain. Università degli Studi di Trento. 194 pp. ISBN-10: 88-8443-131-X, ISBN-13: 978-88-8448-131-8.
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D International conference contributions

Key: (T) Talk; (P) Poster; Highlighted items were presented personally.

Awarded conference contributions: 66–Second best student poster presentation award to Lukas Strauss. 69–Best student oral presentation award to Johannes Sachsperger; 79–Best student poster presentation award to Lukas Strauss; 87–Outstanding student poster award to Lukas Strauss; 93–Best student poster presentation award to Johannes Sachsperger; 99–Best student poster award to Valerie-Marie Kumer; 125–Second best student poster presentation award to Stefano Serafin.

- 1 (P) Fritz, M., **S. Serafin** and M. Weissmann (2023): Parameter estimation for boundary-layer turbulence models over heterogeneous terrain. *9th International Symposium on Data Assimilation*, Bologna (I), 16.9.–20.9.2023.
- 2 (P) **Serafin., S.**, L. Jung, L. Wolfgruber and M. Weissmann (2023): Data assimilation in the turbulence grey zone. *9th International Symposium on Data Assimilation*, Bologna (I), 16.9.–20.9.2023.
- 3 (P) Hutter, V., **S. Serafin**, M. Weissmann and D. Leuenberger (2023): Probabilistic observation pre-processing for ensemble-based data assimilation: An application to surface temperature observations in Alpine terrain. *9th International Symposium on Data Assimilation*, Bologna (I), 16.9.–20.9.2023.
- 4 (T) Necker, T., L. Wolfgruber, **S. Serafin**, M. Dorninger and M. Weissmann (2023): How to use the fractions skill score for ensemble forecast verification. *EMS Annual Meeting*, Bratislava (SK), 4.9.–8.9.2023.
- 5 (T) **Serafin, S.** (2023): Prospects for high-resolution data assimilation over complex orography: Motivation, challenges, feasibility. *36th International Conference on Mountain Meteorology*, Sankt Gallen (CH), 18.6.–23.6.2023.
- 6 (T) Manzato, A., **S. Serafin**, M. M. Miglietta, D. J. Kirshbaum and W. Schulz (2023): A pan-Alpine climatology of lightning and convective initiation. *36th International Conference on Mountain Meteorology*, Sankt Gallen (CH), 18.6.–23.6.2023.
- 7 (T) Rotach, M., M. Arpagaus, S. De Wekker, D. Kirshbaum, P. Knippertz, M. Lehner, S. Mobbs, A. Paci, E. Palazzi, **S. Serafin**, H. Ward, C. Wittmann, D. Zardi (2023): TEAMx - State of affairs. *36th International Conference on Mountain Meteorology*, Sankt Gallen (CH), 18.6.–23.6.2023.

- 8 (T) Weinkaemmerer, J., M. Göbel, I. Bašták-Đurán, **S. Serafin** and J. Schmidli (2023): Boundary-layer plumes and slope winds over hilly terrain in idealized large-eddy simulations. *36th International Conference on Mountain Meteorology*, Sankt Gallen (CH), 18.6.–23.6.2023.
- 9 (T) Hutter, V., **S. Serafin**, M. Weissmann and D. Leuenberger (2023): Probabilistic observation pre-processing for ensemble-based data assimilation: An application to surface temperature observations in Alpine terrain. *36th International Conference on Mountain Meteorology*, Sankt Gallen (CH), 18.6.–23.6.2023.
- 10 (T) Seity, Y., E. Avolio, M. Dorninger, D. Mayer, M. M. Miglietta, D. Ricard, J. Schmidli, **S. Serafin**, S. Singh, C. Wittmann (2023): A model inter-comparison study of convective events over the Alpine region. *36th International Conference on Mountain Meteorology*, Sankt Gallen (CH), 18.6.–23.6.2023.
- 11 (T) Giovannini, L., E. Bazile, P. Deidda, S. Ferrarese, E. Ferrero, B. Goger, A. Gohm, A. Golzio, R. Honnert, M. Köhler, D. Oettl, L. Pauly, Q. Rodier, J. Schmidli, Y. Seity, **S. Serafin**, P. Sheridan, S. Singh, S. Trini Castelli, C. Wastl, S. Westerhuis, A. Zonato (2023): A model intercomparison study of the thermally-driven wind system in an Alpine valley. *36th International Conference on Mountain Meteorology*, Sankt Gallen (CH), 18.6.–23.6.2023.
- 12 (T) Manzato, A., **S. Serafin**, M. M. Miglietta, D. J. Kirshbaum, W. Schulz and G. Fasano (2022): A pan-Alpine climatology of lightning and convective initiation. *17th Plinius Conference on Mediterranean Risks*, Frascati (I), 12.10.–15.10.2022.
- 13 (P) **Serafin, S.** and E. Potter (2022): An idealized study of convection initiation along orographic drylines. *International Mountain Conference 2022*, Innsbruck (A), 10.9.–15.9.2022.
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- 15 (T) Göbel, M., **S. Serafin** and M.W. Rotach (2022): Idealized simulations of orographically-induced thermal circulations triggering deep moist convection. *EMS Annual Meeting*, Bonn (DE), 4.9.–9.9.2022.
- 16 (T) Schöner, W., N.C. Pepin, E. Arnone, A. Gobiet, K. Haslinger, S. Kotlarski, C. Notarnicola, E. Palazzi, P. Seibert, **S. Serafin**, S. Terzago, J. Thornton, M. F. Vuille and C. Adler (2022): Elevational patterns of climate change – an assessment of temperature and precipitation for the mountain regions of the world. *EGU General Assembly 2022*, Vienna (A), 4.4.–8.4.2022.
- 17 (T) **Serafin, S.** and E. Potter (2022): An idealized study of convection initiation along orographic drylines *EGU General Assembly 2022*, Vienna (A), 4.4.–8.4.2022.
- 18 (T) Kugler, L., N. Pierotti, **S. Serafin** and M. Weissmann (2022): Assimilating cloud-affected visible and infrared satellite observations in idealized simulations *EGU General Assembly 2022*, Vienna (A), 4.4.–8.4.2022.
- 19 (T) Pepin, N.C., E. Arnone, A. Gobiet, K. Haslinger, S. Kotlarski, C. Notarnicola, E. Palazzi, P. Seibert, **S. Serafin**, W. Schoener, S. Terzago, J. Thornton, M. F. Vuille and C. Adler (2021): Enhanced climate changes in mountain regions: High elevation trends in temperature and precipitation and their comparison with lowlands. *AGU Fall Meeting 2021*, New Orleans (USA), 13.12.–17.12.2021.
- 20 (T) Strauss, L., **S. Serafin**, M. Dorninger (2019): Very uncertain observations – Exploring the impact of observational uncertainty on the skill of icing forecasts. *EMS Annual Meeting*, Copenhagen (DK), 9.9.–13.9.2019.
- 21 (T) Rotach, M.W., M. Arpagaus, J. Cuxart, S.F.J. De Wekker, V. Grubišić, N. Kalthoff, D.J. Kirshbaum, M. Lehner, S. Mobbs, A. Paci, E. Palazzi, **S. Serafin** and D. Zardi (2019): The First TEAMx Workshop - A summary of achievements after a week-end of contemplation. *35th International Conference on Mountain Meteorology*, Riva del Garda (I), 2.9.–6.9.2019.
- 22 (P) Siller, M., **S. Serafin**, and M. W. Rotach (2019): Convection initiation favoured by large-amplitude mountain waves. *35th International Conference on Mountain Meteorology*, Riva del Garda (I), 2.9.–6.9.2019.
- 23 (P) Göbel, M., **S. Serafin**, and M. W. Rotach (2019): Idealized simulations of thermally-induced convective destabilization over mountains. *35th International Conference on Mountain Meteorology*, Riva del Garda (I), 2.9.–6.9.2019.
- 24 (P) Castelli, E., B.M. Dinelli, E. Papandrea, S. Casadio, M.M. Miglietta, A. Tiesi, J. Sachsperger, **S. Serafin** (2019): Atmospheric lee waves over the Aegean Sea detected from AIRWAVE Total Column Water Vapor estimates and simulated with WRF. *35th International Conference on Mountain Meteorology*, Riva del Garda (I), 2.9.–6.9.2019.
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- 26 (P) **Serafin, S.**, M.W. Rotach, M. Lehner, B. Goger, and I. Stiperski (2019): Modelling and observing the atmospheric boundary layer over mountains. *ECMWF Workshop: Observational campaigns for better weather forecasts*, Reading (UK), 10.6.–13.6.2018.

- 27 (T) Rotach, M.W., M. Arpagaus, J. Cuxart, S.F.J. De Wekker, V. Grubišić, N. Kalthoff, D.J. Kirshbaum, M. Lehner, S. Mobbs, A. Paci, E. Palazzi, **S. Serafin** and D. Zardi (2019): TEAMx, a coordinated effort to investigate transport and exchange processes in the atmosphere over mountains. *ECMWF Workshop: Observational campaigns for better weather forecasts*, Reading (UK), 10.6.–13.6.2018.
- 28 (P) Siller, M., **S. Serafin** and M.W. Rotach (2019): Convection initiation in connection with a mountain wave episode. *EGU General Assembly 2019*, Vienna (A), 7.4.–12.4.2019.
- 29 (T) Fuchs, F., F. M. Schneider, P. Kolínský, **S. Serafin**, G. Bokelmann and the AlpArray Working Group (2019): Complex propagation of explosion-generated infrasound revealed by the large-scale AlpArray seismic network. *EGU General Assembly 2019*, Vienna (A), 7.4.–12.4.2019.
- 30 (T) Strauss, L., **S. Serafin**, M. Dorninger, S. Bourgeois, T. Burchhart, and A. Beck (2018): Can we predict icing of structures and wind turbines reliably using high-resolution ensemble forecasts? *EMS Annual Meeting: European Conference for Applied Meteorology and Climatology*, Budapest (H), 3.9.–7.9.2018.
- 31 (T) Schneider, F., F. Fuchs, P. Kolínský, E. Caffagni, M. Dorninger, **S. Serafin**, G. Bokelmann and the AlpArray Working Group (2018): Seismo-acoustic signals of the Baumgarten (Austria) gas explosion detected by the AlpArray seismic network. *36th General Assembly of the European Seismological Commission*, Valletta (MT), 2.9.–7.9.2018.
- 32 (P) Grubišić, V., **S. Serafin**, L. Strauss, and J. Sachspurger (2018): Observations and Modeling of Atmospheric Rotors. *18th Conference on Mountain Meteorology*, Santa Fe (USA), 25.6.–29.6.2018.
- 33 (T) Rotach, M.W., M. Arpagaus, J. Cuxart, S.F.J. De Wekker, V. Grubišić, N. Kalthoff, D.J. Kirshbaum, M. Lehner, S.D. Mobbs, A. Paci, **S. Serafin** and D. Zardi (2018): Why You Should Remember What TEAMx Means. *18th Conference on Mountain Meteorology*, Santa Fe (USA), 25.6.–29.6.2018.
- 34 (P) **Serafin, S.**, L. Strauss, J. Sachspurger and V. Grubišić (2018): Observations and modelling of atmospheric rotors. *EGU General Assembly 2018*, Vienna (A), 8.4.–13.4.2018.
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- 36 (P) Strauss, L., **S. Serafin**, M. Dorninger, S. Bourgeois and T. Burchhart (2018): Probabilistic forecasts of wind turbine icing in Central Europe. *EGU General Assembly 2018*, Vienna (A), 8.4.–13.4.2018.
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- 39 (T) Burchhart, T., M. Fink, L. Strauss, **S. Serafin**, M. Dorninger, A. Beck, C. Wittmann, S. Bourgeois, R. Cattin (2018): ICE CONTROL: Potential of innovative icing measurements and icing forecasts to optimize the operation of wind farms during icing conditions. *Winterwind, International Wind Energy Conference 2018*, Åre (SE), 5.2.–7.2.2018.
- 40 (T) Bourgeois, S., P. Froidevaux, T. Burchhart, M. Fink, L. Strauss, **S. Serafin**, M. Dorninger, A. Beck, C. Wittmann, F. Weidle (2018): Forecasting ice accretion on rotor blades: Validation against webcam and ice detectors. *Winterwind, International Wind Energy Conference 2018*, Åre (SE), 5.2.–7.2.2018.
- 41 (T) Strauss, L., **S. Serafin** and M. Dorninger (2017): Probabilistic forecasts of ice formation on wind turbines with a limited-area ensemble prediction system. *EMS Annual Meeting: European Conference for Applied Meteorology and Climatology*, Dublin (IE), 4.9.–8.9.2017.
- 42 (P) **Serafin, S.**, L. Strauss and M. Dorninger (2017): A comparison of ensemble reduction methods. *EMS Annual Meeting: European Conference for Applied Meteorology and Climatology*, Dublin (IE), 4.9.–8.9.2017.
- 43 (T) Dorninger, M., L. Strauss, **S. Serafin**, A. Beck, C. Wittmann, F. Weidle, F. Meier, S. Bourgeois, R. Cattin, T. Burchhart and M. Fink (2017): ICE CONTROL – The challenge of reasonable icing forecasts for optimizing wind energy production *EMS Annual Meeting: European Conference for Applied Meteorology and Climatology*, Dublin (IE), 4.9.–8.9.2017.
- 44 (T) Sachspurger, J., **S. Serafin**, V. Grubišić, I. Stiperski and A. Paci (2017): A simple model for the amplitude of lee waves on the boundary-layer inversion. *34th International Conference on Alpine Meteorology*, Reykjavik (IS), 19.6.–23.6.2017.
- 45 (P) **Serafin, S.**, L. Strauss, M. Dorninger, A. Beck, C. Wittmann, S. Bourgeois, R. Cattin, T. Burchhart, M. Fink (2017): Measurements and probabilistic forecasting of ice formation on wind turbines at a hilltop site in Germany. *34th International Conference on Alpine Meteorology*, Reykjavik (IS), 19.6.–23.6.2017.

- 46 (T) Grubišić, V., L. Strauss and **S. Serafin** (2017): Atmospheric rotors, downslope windstorms and severe turbulence in a deep long valley. *34th International Conference on Alpine Meteorology*, Reykjavik (IS), 19.6.–23.6.2017.
- 47 (T) Giovannini, L., L. Laiti, **S. Serafin**, D. Zardi (2017): The thermally driven wind system of the Adige Valley in the Alps. *34th International Conference on Alpine Meteorology*, Reykjavik (IS), 19.6.–23.6.2017.
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- 85 (P) Goger, B., **S. Serafin**, I. Stiperski and V. Grubišić (2014): Large eddy simulations of flow over double-ridge orography. *EGU General Assembly 2014*, Vienna (A), 27.4.–2.5.2014.
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- 98 (P) Strauss, L., **S. Serafin**, and V. Grubišić (2013): Estimating turbulence in mountainous regions from airborne *in situ* and remotely-sensed data. *EGU General Assembly 2013, Vienna (A)*, 7.4.–12.4.2013.
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- 113 (P) Laiti, L., **S. Serafin** and D. Zardi (2010): Numerical simulation of local atmospheric circulations in the pre-alpine area between Lake Garda and Verona. *10th EMS Annual Meeting*, Zurich (CH), 13.9.–17.9.2010.
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E National conference contributions (Italy and Austria)

Awarded conference contributions: 136–Best poster award, ex aequo, to Lukas Strauss; 137–Best poster award, ex aequo, to Andrea Bergner.

- 129 (T) Serafin, S. and M. Siller (2022): Convection initiation along an orographic dryline in the lee of the Apennines. *4° Congresso Nazionale dell'Associazione Italiana di Scienze dell'Atmosfera e Meteorologia*, Milan (I), 15-19.2.2022.

- 130 (T) Schneider, F. M., F. Fuchs, P. Kolinsky, E. Caffagni, M. Dorninger, **S. Serafin**, and G. Bokelmann (2018): Seismo-acoustic signals of the Baumgarten (Austria) gas explosion detected by the AlpArray seismic network. *PANGEO Austria 2018*, Vienna (A), 24.9.-26.9.2018
- 131 (P) Giovannini L., L. Laiti, **S. Serafin**, D. Zardi (2018): The thermally driven diurnal wind system of the Adige Valley in the Italian Alps. *1° Congresso Nazionale dell'Associazione Italiana di Scienze dell'Atmosfera e Meteorologia*, Bologna (I), 10-13.9.2018
- 132 (P) Rotach, M.W., M. Arpagaus, J. Cuxart, S.F.J. De Wekker, V. Grubišić, N. Kalthoff, D.J. Kirshbaum, M. Lehner, S.D. Mobbs, A. Paci, E. Palazzi, **S. Serafin**, D. Zardi (2018): Introducing TEAMx: "Multi-scale transport and exchange processes in the atmosphere over mountains – Programme and experiment". *1° Congresso Nazionale dell'Associazione Italiana di Scienze dell'Atmosfera e Meteorologia*, Bologna (I), 10-13.9.2018
- 133 (T) Schneider, F. M., F. Fuchs, P. Kolinsky, E. Caffagni, M. Dorninger, S. Serafin, and G. Bokelmann (2018): Seismo-acoustic signals of the Baumgarten (Austria) gas explosion detected by the AlpArray seismic network. *78. Jahrestagung der DGG*, Leoben (A), 12.2.-15.2.2018
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- 135 (T) Sachsperger, J., **S. Serafin** and V. Grubišić (2015): Dynamik von Leewellen an der Grenzschichtinversion. *6. Österreichischer MeteorologInnentag*, Wien (A), 5.11.-6.11.2015.
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- 137 (P) Bergner, A., L. Strauss, **S. Serafin** and V. Grubišić (2015): Beobachtungen von Grenzschichtablösung in einem tiefen Tal. *6. Österreichischer MeteorologInnentag*, Wien (A), 5.11.-6.11.2015.
- 138 (T) Krennert, T., A. Kainz and **S. Serafin** (2015): An extended perspective for Deep Moist Convective Initiation in the Alpine Region? *6. Österreichischer MeteorologInnentag*, Wien (A), 5.11.-6.11.2015.
- 139 (P) **Serafin, S.**, V. Grubišić, L. Strauss and D. Zardi (2011): Large-eddy simulation of boundary-layer processes over mountainous topography. *4. Österreichischer MeteorologInnentag*, Klagenfurt (A), 3.11.-4.11.2011.
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- 144 (P) Bozzo, A., **S. Serafin** and D. Zardi (2007): Downscaling statistico di previsioni di precipitazione finalizzato alla modellazione idrologica. *Convegno Nazionale di Fisica della Terra Fluida e Problematiche Affini*, Ischia (I), 11.6.-15.6.2007.
- 145 (P) **Serafin, S.**, and D. Zardi (2006): Flussi non locali nello strato limite atmosferico convettivo: rivisitazione dei fondamenti teorici e degli approcci modellistici. *XXX Convegno di Idraulica e Costruzioni Idrauliche*, Rome (I), 10.9.-15.9.2006.
- 146 (P) Pasetto, A., **S. Serafin** and D. Zardi (2006): Un contributo alla gestione sostenibile delle risorse idriche dalla climatologia e dalla meteorologia: il progetto INTERREG "Foralps". *XXX Convegno di Idraulica e Costruzioni Idrauliche*, Rome (I), 10.9.-15.9.2006.
- 147 (P) de Franceschi, M., **S. Serafin**, D. Zardi, M. Aniello and M. Sitta (2004): Un evento di gelata tardiva in Valle dell'Adige: confronto tra misure sperimentali e modellazione numerica. *XXIX Convegno di Idraulica e Costruzioni Idrauliche*, Trento (I), 7.9.-10.9.2004. Proceedings, vol. II, 243-250.
- 148 (P) **Serafin, S.**, A. Bertò, A. Buzzi, R. Ferretti and D. Zardi (2004): Applicazione di tecniche di cluster analysis alla verifica di previsioni di precipitazione. *XXIX Convegno di Idraulica e Costruzioni Idrauliche*, Trento (I), 7.9.-10.9.2004. Proceedings, vol. II, 321-326.

F Citation report

	Total number of citations	WoS 666	Scopus 724	Scholar 948	# in list
1	Serafin et al., ATM, 2018	114	115	150	12
2	Kirshbaum et al., ATM, 2018	94	97	129	13
3	Serafin and Zardi, JAS, 2010a	56	57	73	28
4	Pepin et al., RG 2022	49	54	73	6
5	Serafin and Zardi, JAS, 2010b	47	49	58	29
6	Giovannini et al., QJRMS, 2017	40	43	55	15
7	Strauss et al., QJRMS, 2015	38	41	59	22
8	Serafin and Zardi, JAS, 2011	26	29	33	27
9	Schneider et al., EPSL, 2018	24	24	29	11
10	Strauss et al., JAS, 2016	23	29	37	21
11	Sachsperger et al., FES, 2015	20	23	28	23
12	French et al., JAS, 2015	16	18	22	24
13	Grubišić et al., JAS, 2015	14	14	20	25
14	Zardi and Serafin, QJRMS, 2015	14	16	26	26
15	Fuchs et al., SR 2019	13	15	22	9
16	Scheffknecht et al., QJRMS, 2017	13	15	17	14
17	Sachsperger et al., QJRMS, 2016	11	10	15	20
18	Sachsperger et al., QJRMS, 2017	10	13	16	17
19	Serafin et al., JAMC, 2017	9	9	8	16
20	Stiperski et al., ATM, 2017	8	7	9	18
21	Serafin and Ferretti, JAMC, 2007	7	8	12	30
22	Serafin et al., BLM, 2016	6	6	11	19
23	Rotach et al., BAMS 2022	5	5	7	5
24	Strauss et al., JAMC 2020	4	6	8	8
25	Serafin et al., QJRMS, 2019	3	3	3	10
26	Manzato et al., MWR 2022	2	0	0	4
27	Strauss et al., QJRMS 2022	0	3	7	3
28	Göbel et al., GMD 2022	0	1	0	7
29	<i>Grey literature</i>	0	14	21	31-32-33-34-35

Key:

- BAMS: *Bulletin of the American Meteorological Society*, JIF = 8.766 (Q1) and SJR = 3.367 (Q1).
- JAS: *Journal of the Atmospheric Sciences*, JIF = 3.184 (Q2) and SJR = 1.853 (Q1).
- QJRMS: *Quarterly Journal of the Royal Meteorological Society*, JIF = 3.739 (Q2) and SJR = 1.744 (Q1).
- JAMC: *Journal of Applied Meteorology and Climatology*, JIF = 2.923 (Q3) and SJR = 1.079 (Q2).
- BLM: *Boundary-Layer Meteorology*, JIF = 2.949 (Q3) and SJR = 1.107 (Q2).
- ATM: *Atmosphere*, JIF = 2.686 (Q3) and SJR = 0.699 (Q2).
- RG: *Reviews of Geophysics*, JIF = 22.000 (Q1 in "Geochemistry and Geophysics") and SJR = 8.087 (Q1 in "Geophysics").
- EPSL: *Earth and Planetary Science Letters*, JIF = 5.255 (Q1 in "Geochemistry and Geophysics"), SJR = 2.289 (Q1 in "Geophysics").
- GMD: *Geoscientific Model Development*, JIF = 6.135 (Q1 in "Geosciences, Multidisciplinary") and SJR = 3.238 (Q1 in "Earth and Planetary Sciences (miscellaneous)").
- FES: *Frontiers in Earth Science*, JIF = 3.498 (Q2 in "Geosciences, Multidisciplinary"), SJR = 1.104 (Q1 in "Earth and Planetary Sciences (miscellaneous)").
- SR: *Scientific Reports*, JIF = 4.380 (Q1 in "Multidisciplinary sciences"), SJR = 1.240 (Q1 in "Multidisciplinary").

Values of the Clarivate Journal Impact Factor (JIF) and of the Scimago Journal Rank (SJR) refer to year 2020. Quantile indications refer to the categories "Meteorology and Atmospheric Sciences" (for JCR) and "Atmospheric Science" (for SJR), unless otherwise stated. Entries in *italics* in the citation table are not peer-reviewed.