

STEFANO SERAFIN

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PERSONAL

Date and place of birth: 21.12.1977 in Como (Italy)
Gender: male
Nationality: Italian
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ISI Web of Science Researcher ID: [D-7660-2015](https://orcid.org/D-7660-2015)
Scopus Author ID: [11939923400](https://orcid.org/11939923400)
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Languages: Italian (mother tongue)
English (fluent, CEFR level C2)
German (basic, CEFR level A2)
CEFR: Common European Framework of Reference for Languages

EDUCATION

- Doctorate in Environmental Engineering 20.2.2006
University of Trento, Italy
Dissertation: *Boundary-layer processes and thermally driven flows over complex terrain*.
Supervisor: Prof. Dino Zardi.
- 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 Innsbruck, Austria; Department of Atmospheric and Cryospheric Sciences
Project scientist 1.3.2018 – present
- University of Vienna, Austria; Department of Meteorology and Geophysics
Project scientist 1.9.2016 – present
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

- *Mountain meteorology:*
Dynamics of stratified flow over topography, thermally-driven wind systems, atmospheric boundary layer over complex terrain, initiation of deep moist convection.
- *Numerical weather prediction:*
Boundary-layer parameterization, limited-area ensemble forecasting, stochastic parameterization.

RESEARCH PROJECTS

- As principal investigator:
 - 2018–2021 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*.
 - 2014 EU-FP7 Research Infrastructure HYDRALAB, project HyIV-CNRS-SECORO, *Influence of secondary orography on boundary-layer separation and rotors*.
 - 2005–2008 EU-INTERREG IIIB Alpine Space, project FORALPS, *Meteo-hydrological forecast and observations for improved water resource management in the Alps*.
 - 2006–2007 EU-INTERREG IIIB CADSES, project HYDROCARE, *Hydrological cycle of the CADSES region*.
 - 2004–2005 EU-INTERREG IIIB Alpine Space, project METEORISK, *Mitigation of natural risks through improved forecasting of extreme meteorological events*.

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.
 - Lecture and exercise courses on: Fundamentals of Atmospheric Modelling
Mesoscale Dynamics
Thermodynamics of the Atmosphere
 - Exercise courses on: Applied Numerical Methods in Meteorology
Micrometeorology
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>
- Guest lecturer (Erasmus teaching staff mobility) at the University of Trento (Doctoral School of Environmental Engineering), Academic Years between 2012–2013 and 2014–2015.
 - Lecture course on: Geophysical Fluid Dynamics
- Assistant teacher and examiner at the University of Trento (Faculty of Engineering) in the 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.
 - Courses on: Atmospheric Physics
Meteorology
- Supervisor of 6 bachelor theses, co-supervisor of 8 master theses and 2 doctoral dissertations at the Faculty of Earth Sciences, Geography and Astronomy, University of Vienna. 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

- Reviewing for journals (number of reviews in brackets)
Monthly Weather Review (associate editor 2016–2018; 8), Quarterly Journal of the Royal Meteorological Society (8), Journal of Applied Meteorology and Climatology (8), Journal of the Atmospheric Sciences (7), Boundary-Layer Meteorology (6), Meteorologische Zeitschrift (2), Bulletin of the American Meteorological Society (1), Journal of Geophysical Research: Atmospheres (1), Tellus-A (1), Atmosphere (1), Atmospheric Research (1), Advances in Meteorology (1), Annals of Geophysics (1), Frontiers in Earth Science (1).

- Reviewing for funding or other agencies
NSF, USA National Science Foundation (1); CINECA, Italian National Supercomputing Centre (2).
- Community service
Convener or co-convener of the EGU Annual Meeting sessions on “Mountain Meteorology” (2018) and “Atmospheric Processes over Complex Terrain” (2014–2016).
- Research visits
February 2015: Department of Civil and Environmental Engineering and Earth Sciences, University of Notre Dame, South Bend, IN (USA).
July and October 2014: Geophysical fluid mechanics laboratory, National Center for Meteorological Research, Météo France, Toulouse (France).
August-September 2014 and July-August 2012: Earth Observing Laboratory, National Center for Atmospheric Research, Boulder, CO (USA).

INVITED TALKS

- Observations and modelling of atmospheric rotors.
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.

AWARDS

- Second best student poster presentation at the 28th International Conference on Alpine Meteorology and MAP Meeting, 2005.
- Three-year scholarship at the Doctoral School of Environmental Engineering, University of Trento (first candidate in ranking), 2002.

PROFESSIONAL MEMBERSHIPS (PRESENT AND PAST)

- Associazione Italiana di Scienze dell'Atmosfera e Meteorologia (Italian Society of Atmospheric Science and Meteorology), European Geosciences Union, American Meteorological Society, American Geophysical Union.

PARTICIPATION TO CONFERENCES

- EGU General Assembly 2018; Vienna (A), 8.4–13.4.2018
- 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

- 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

PUBLICATIONS

A Peer-reviewed scientific articles

- 1 **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](https://scopus.com/record/display?id=s2.0-85044034187)
- 2 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](https://scopus.com/record/display?id=s2.0-85042554645)
- 3 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](https://scopus.com/record/display?id=s2.0-85039422816)
Web Of Science accession number: [000418796900001](https://www.ncbi.nlm.nih.gov/pubmed/000418796900001)
- 4 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](https://scopus.com/record/display?id=s2.0-85026296179)
Web Of Science accession number: [000414551000006](https://www.ncbi.nlm.nih.gov/pubmed/000414551000006)
- 5 **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](https://scopus.com/record/display?id=s2.0-85017500895)
Web Of Science accession number: [000399680900001](https://www.ncbi.nlm.nih.gov/pubmed/000399680900001)

- 6 Sachspurger, J., **S. Serafin**, V. Grubišić, I. Stiperski and A. Paci (2017): The amplitude of lee waves on the boundary-layer inversion. *Q. J. R. Meteorol. Soc.*, **143**, 27-36.
DOI: [10.1002/qj.2915](https://doi.org/10.1002/qj.2915)
Scopus EID: [2-s2.0-85009228779](https://scopus.eid.net/scopus/displayedFields?id=2-s2.0-85009228779)
Web Of Science accession number: [000394990800003](https://www.webofscience.com/olap/doi/10.1002/qj.2915)
- 7 Stiperski, I., **S. Serafin**, A. Paci, H. Ágústsson, A. Belleudy, R. Calmer, K. Horvath, C. Knigge, J. Sachspurger, L. Strauss and V. Grubišić (2017): Water tank experiments on stratified flow over double mountain-shaped obstacles at high-Reynolds number. *Atmosphere*, **8**, 13 (special issue on " *Atmospheric Gravity Waves*").
DOI: [10.3390/atmos8010013](https://doi.org/10.3390/atmos8010013)
Scopus EID: [2-s2.0-85011032501](https://scopus.eid.net/scopus/displayedFields?id=2-s2.0-85011032501)
Web Of Science accession number: [000396165100012](https://www.webofscience.com/olap/doi/10.3390/atmos8010013)
- 8 **Serafin, S.**, S.F.J. De Wekker and J.C. Knievel (2016): A mesoscale model-based climatology of nocturnal boundary-layer characteristics over the complex terrain of north-western Utah. *Bound.-Layer Meteorol.*, **159**, 495-519.
DOI: [10.1007/s10546-015-0044-6](https://doi.org/10.1007/s10546-015-0044-6)
Scopus EID: [2-s2.0-84930268467](https://scopus.eid.net/scopus/displayedFields?id=2-s2.0-84930268467)
Web Of Science accession number: [000376412400003](https://www.webofscience.com/olap/doi/10.1007/s10546-015-0044-6)
- 9 Sachspurger, J., **S. Serafin** and V. Grubišić (2016): Dynamics of rotor formation in uniformly stratified two-dimensional flow over a mountain. *Q. J. R. Meteorol. Soc.*, **142**, 1201-1212.
DOI: [10.1002/qj.2746](https://doi.org/10.1002/qj.2746)
Scopus EID: [2-s2.0-84977901839](https://scopus.eid.net/scopus/displayedFields?id=2-s2.0-84977901839)
Web Of Science accession number: [000375935600001](https://www.webofscience.com/olap/doi/10.1002/qj.2746)
- 10 Strauss, L., **S. Serafin** and V. Grubišić (2016): Atmospheric rotors and severe turbulence in a long deep valley. *J. Atmos. Sci.*, **73**, 1481-1506.
DOI: [10.1175/JAS-D-15-0192.1](https://doi.org/10.1175/JAS-D-15-0192.1)
Scopus EID: [2-s2.0-84962206253](https://scopus.eid.net/scopus/displayedFields?id=2-s2.0-84962206253)
Web Of Science accession number: [000372403500003](https://www.webofscience.com/olap/doi/10.1175/JAS-D-15-0192.1)
- 11 Strauss, L., **S. Serafin**, S.J. Haimov and V. Grubišić (2015): Turbulence in breaking mountain waves and atmospheric rotors estimated from airborne in situ and Doppler radar measurements. *Q. J. R. Meteorol. Soc.*, **141**, 3207-3225.
DOI: [10.1002/qj.2604](https://doi.org/10.1002/qj.2604)
Scopus EID: [2-s2.0-84952300081](https://scopus.eid.net/scopus/displayedFields?id=2-s2.0-84952300081)
Web Of Science accession number: [000366860500023](https://www.webofscience.com/olap/doi/10.1002/qj.2604)
- 12 Sachspurger, J., **S. Serafin** and V. Grubišić (2015): Lee waves on the boundary-layer inversion and their dependence on free-atmospheric stability. *Front. Earth Sci.*, **3**, 70 (research topic on " *The Atmosphere over Mountainous Regions*").
DOI: [10.3389/feart.2015.00070](https://doi.org/10.3389/feart.2015.00070)
Scopus EID: [2-s2.0-85016403141](https://scopus.eid.net/scopus/displayedFields?id=2-s2.0-85016403141)
Web Of Science accession number: [000421619700040](https://www.webofscience.com/olap/doi/10.3389/feart.2015.00070)
- 13 French, J.R., S.J. Haimov, L.D. Oolman, V. Grubišić, **S. Serafin**, and L. Strauss (2015): Wave-induced boundary-layer separation in the lee of the Medicine Bow Mountains. Part I: Observations. *J. Atmos. Sci.*, **72**, 4845-4863.
DOI: [10.1175/JAS-D-14-0376.1](https://doi.org/10.1175/JAS-D-14-0376.1)
Scopus EID: [2-s2.0-84950251564](https://scopus.eid.net/scopus/displayedFields?id=2-s2.0-84950251564)
Web Of Science accession number: [000366334700001](https://www.webofscience.com/olap/doi/10.1175/JAS-D-14-0376.1)
- 14 Grubišić, V., **S. Serafin**, L. Strauss, S.J. Haimov, J.R. French and L.D. Oolman (2015): Wave-induced boundary-layer separation in the lee of the Medicine Bow Mountains. Part II: Numerical modeling. *J. Atmos. Sci.*, **72**, 4865-4884.
DOI: [10.1175/JAS-D-14-0381.1](https://doi.org/10.1175/JAS-D-14-0381.1)
Scopus EID: [2-s2.0-84950291930](https://scopus.eid.net/scopus/displayedFields?id=2-s2.0-84950291930)
Web Of Science accession number: [000366334900001](https://www.webofscience.com/olap/doi/10.1175/JAS-D-14-0381.1)
- 15 Zardi, D., and **S. Serafin** (2015): An analytic solution for time-periodic thermally-driven slope flows. *Q. J. R. Meteorol. Soc.*, **141**, 1968-1974.
DOI: [10.1002/qj.2485](https://doi.org/10.1002/qj.2485)
Scopus EID: [2-s2.0-84939466004](https://scopus.eid.net/scopus/displayedFields?id=2-s2.0-84939466004)
Web Of Science accession number: [000360203800037](https://www.webofscience.com/olap/doi/10.1002/qj.2485)

- 16 **Serafin, S.** and D. Zardi (2011): Daytime development of the convective and mountain boundary layers under fair weather conditions: A comparison by means of idealized numerical simulations. *J. Atmos. Sci.*, **68**, 2128-2141.
DOI: [10.1175/2011JAS3610.1](https://doi.org/10.1175/2011JAS3610.1)
Scopus EID: 2-s2.0-80053209820
Web Of Science accession number: 000295157100018
- 17 **Serafin, S.** and D. Zardi (2010): Daytime heat transfer processes related to slope flows and turbulent convection in an idealized mountain valley. *J. Atmos. Sci.*, **67**, 3739-3756.
DOI: [10.1175/2010JAS3428.1](https://doi.org/10.1175/2010JAS3428.1)
Scopus EID: 2-s2.0-78649456123
Web Of Science accession number: 000284740600018
- 18 **Serafin, S.** and D. Zardi (2010): Structure of the atmospheric boundary layer in the vicinity of a developing upslope flow system: A numerical model study. *J. Atmos. Sci.*, **67**, 1171-1185.
DOI: [10.1175/2009JAS3231.1](https://doi.org/10.1175/2009JAS3231.1)
Scopus EID: 2-s2.0-77953330700
Web Of Science accession number: 000276829400016
- 19 **Serafin, S.** and R. Ferretti (2007): Sensitivity of a mesoscale model to microphysical parameterizations in the MAP-SOP events IOP2b and IOP8. *J. Appl. Meteor. Climatol.*, **46**, 1438-1454.
DOI: [10.1175/JAM2545.1](https://doi.org/10.1175/JAM2545.1)
Scopus EID: 2-s2.0-35548935580
Web Of Science accession number: 000250005900010

B Indexed reports and conference proceedings

- 20 Arnold, D., D. Morton, I. Schicker, P. Seibert, M.W. Rotach, K. Horvath, J. Dudhia, T. Satomura, M. Müller, G. Zängl, T. Takemi, **S. Serafin**, J. Schmidli and S. Schneider (2012): Issues in high-resolution atmospheric modeling in complex topography – The HiRCoT workshop, *Croatian Meteorological Journal*, **47**, 3-11.
URL: <http://hrcak.srce.hr/115906>
Scopus EID: 2-s2.0-84894256068
- 21 **Serafin, S.**, and D. Zardi (2005): Critical evaluation and proposed refinement of the Troen and Mahrt (1986) boundary layer model. *28th International Conference on Alpine Meteorology and MAP Meeting, Zadar (HR)*, 23.5.–27.5.2005. *Croatian Meteorological Journal*, **40**, 464-467.
URL: <http://hrcak.srce.hr/64666>
Scopus EID: 2-s2.0-31344458032
- 22 **Serafin, S.**, A. Bertò, and D. Zardi (2005): Application of cluster analysis techniques to the verification of quantitative precipitation forecasts. *28th International Conference on Alpine Meteorology and MAP Meeting, Zadar (HR)*, 23.5.–27.5.2005. *Croatian Meteorological Journal*, **40**, 395-398.
URL: <http://hrcak.srce.hr/64621>
Scopus EID: 2-s2.0-31344470981
- 23 Richard E., N. Asencio, R. Benoit, A. Buzzi, R. Ferretti, P. Malguzzi, **S. Serafin**, G. Zängl and J.F. Georgis (2002): Intercomparison of the simulated precipitation fields of the MAP/IOP2b with different high-resolution models. *10th Conference on Mountain Meteorology and MAP Meeting, Park City (USA)*, 17.6.–21.6.2002.
URL: <https://ams.confex.com/ams/pdfpapers/40549.pdf>
Web Of Science accession number: 000185048700050

C Reports and monographs

- 24 Arnold, D., D. Morton, I. Schicker, P. Seibert, M.W. Rotach, K. Horvath, J. Dudhia, T. Satomura, M. Müller, G. Zängl, T. Takemi, **S. Serafin**, J. Schmidli and S. Schneider (2012): High Resolution Modelling in Complex Terrain. Report on the HiRCoT 2012 Workshop, Vienna, 21-23 February 2012. BOKU-Met Report 21. Institut für Meteorologie, Universität für Bodenkultur, Wien. 44 pp. ISSN 1994-4179.
URL: https://meteo.boku.ac.at/report/BOKU-Met_Report_21_online.pdf
- 25 **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.
URL: http://www.ing.unitn.it/dica/eng/monographs/pdf/Monographs_9.pdf

D International conference contributions

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

Awarded conference contributions: **33**–Second best student poster presentation award to Lukas Strauss. **36**–Best student oral presentation award to Johannes Sachsperger; **46**–Best student poster presentation award to Lukas Strauss; **54**–Outstanding student poster award to Lukas Strauss; **60**–Best student poster presentation award to Johannes Sachsperger; **66**–Best student poster award to Valerie-Marie Kumer; **92**–Second best student poster presentation award to Stefano Serafin.

- 1 (P) 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.
- 2 (P) **Serafin, S.**, L. Strauss, J. Sachsperger and V. Grubišić (2018): Observations and modelling of atmospheric rotors. *EGU General Assembly 2018*, Vienna (A), 8.4.–13.4.2018.
- 3 (P) 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 seismological stations of the AlpArray. *EGU General Assembly 2018*, Vienna (A), 8.4.–13.4.2018.
- 4 (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.
- 5 (T) Rotach, M.W.R., M. Arpagaus, J. Cuxart, S.F.J. De Wekker, V. Grubišić, N. Kalthoff, D.J. Kirshbaum, M. Lehner, S. Mobbs, A. Paci, **S. Serafin** and D. Zardi (2018): A coordinated effort to investigate Transport and Exchange Processes in the Atmosphere over Mountains-Experiment (TEAMx). *EGU General Assembly 2018*, Vienna (A), 8.4.–13.4.2018.
- 6 (T) Strauss, L., **S. Serafin**, M. Dorninger, S. Bourgeois and T. Burchhart (2018): Assessment of high-resolution probabilistic forecasts of icing in Germany for the winter 2016/17. *Winterwind, International Wind Energy Conference 2018*, Åre (SE), 5.2.–7.2.2018.
- 7 (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.
- 8 (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.
- 9 (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.
- 10 (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.
- 11 (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.
- 12 (T) Sachsperger, 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*, Reykjavík (IS), 19.6.–23.6.2017.
- 13 (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*, Reykjavík (IS), 19.6.–23.6.2017.
- 14 (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*, Reykjavík (IS), 19.6.–23.6.2017.
- 15 (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*, Reykjavík (IS), 19.6.–23.6.2017.

- 16 (P) Stiperski, I., **S. Serafin**, A. Paci, V. Krieger, H. Ágústsson, A. Belleudy, R. Calmer, K. Horvath, C. Knigge, J. Sachsperger, L. Strauss, V. Grubišić (2017): Water tank experiments on stratified flow over double mountain-shaped obstacles at high-Reynolds number *34th International Conference on Alpine Meteorology*, Reykjavík (IS), 19.6.–23.6.2017.
- 17 (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 – Towards optimizing wind energy production during icing events. *EGU General Assembly 2017*, Vienna (A), 23.4.–28.4.2017.
- 18 (P) Weissinger, M., L. Strauss, **S. Serafin**, M. Dorninger, T. Burchhart and M. Fink (2017): Synoptic versus regional causes of icing on wind turbines at an exposed wind farm site in Germany. *EGU General Assembly 2017*, Vienna (A), 23.4.–28.4.2017.
- 19 (T) Strauss, L., **S. Serafin**, M. Dorninger, A. Beck, C. Wittmann, S. Bourgeois, R. Cattin and T. Burchhart (2017): ICE CONTROL–Measurements and probabilistic forecasting of icing events in Austria and Germany. *Winterwind, International Wind Energy Conference 2017*, Skellefteå (SE), 6.2.–8.2.2017.
- 20 (T) Giovannini, L., L. Laiti, D. Zardi and **S. Serafin** (2016): Investigation of the diurnal wind system in the Alpine Adige Valley. *16th EMS Annual Meeting & 11th European Conference on Applied Climatology (ECAC)*, Trieste (I), 12.9.–16.9.2016.
- 21 (P) Giovannini, L., L. Laiti, **S. Serafin** and D. Zardi (2016): Investigation of the diurnal wind system in the Alpine Adige Valley. *17th Conference on Mountain Meteorology*, Burlington (USA), 27.6.–1.7.2016.
- 22 (P) Sachsperger, J., **S. Serafin**, I. Stiperski, V. Grubišić, A. Paci and A. Belleudy (2016): The amplitude of lee waves forming on the boundary layer inversion. *17th Conference on Mountain Meteorology*, Burlington (USA), 27.6.–1.7.2016.
- 23 (P) **Serafin, S.** and S.F.J. De Wekker (2016): A modelling study of the factors governing the convective boundary layer height over isolated mountain ridges. *17th Conference on Mountain Meteorology*, Burlington (USA), 27.6.–1.7.2016.
- 24 (P) Strauss, L., **S. Serafin** and V. Grubišić (2016): Observations and numerical simulations of downslope flow separation at a valley inversion. *EGU General Assembly 2016*, Vienna (A), 17.4.–22.4.2016.
- 25 (P) Sachsperger, J., **S. Serafin**, I. Stiperski and V. Grubišić (2016): An analytical model for the amplitude of lee waves forming on the boundary layer inversion. *EGU General Assembly 2016*, Vienna (A), 17.4.–22.4.2016.
- 26 (T) Sachsperger, J., **S. Serafin** and V. Grubišić (2016): Dynamics of lee waves on the boundary layer inversion. *EGU General Assembly 2016*, Vienna (A), 17.4.–22.4.2016.
- 27 (T) De Wekker, S.F.J., and **S. Serafin** (2016): Investigating convective boundary layer heights over mountain ridges. *96th American Meteorological Society Annual Meeting*, New Orleans (USA), 10.1.–14.1.2016.
- 28 (T) Silver, Z., R. Dimitrova, T. Zsedrovits, H.J.S. Fernando, L.S. Leo, S. Di Sabatino, **S. Serafin**, Y. Wang, E. Creegan, M. Felton and C. Hocut (2016): WRF Simulations of Synoptic Flow Modification over Mountainous Terrain during MATERHORN Observation Periods. *96th American Meteorological Society Annual Meeting*, New Orleans (USA), 10.1.–14.1.2016.
- 29 (P) Krennert, T., A. Kainz and **S. Serafin** (2015): An extended perspective for Deep Moist Convective Initiation in the Alpine Region? *European Conference on Severe Storms 2015*, Wiener Neustadt (A), 14.9.–18.9.2015.
- 30 (P) Scheffknecht, P., **S. Serafin** and V. Grubišić (2015): A long-lived supercell in Alpine environment. *European Conference on Severe Storms 2015*, Wiener Neustadt (A), 14.9.–18.9.2015.
- 31 (P) Giovannini, L., L. Laiti, **S. Serafin** and D. Zardi (2015): A climatological analysis of diurnal winds in the Adige valley in the Alps. *33rd International Conference on Alpine Meteorology*, Innsbruck (A), 31.8.–4.9.2015.
- 32 (T) **Serafin, S.** and S.F.J. De Wekker (2015): A factor-separation study of convective boundary layer development over non-uniform land use and topography. *33rd International Conference on Alpine Meteorology*, Innsbruck (A), 31.8.–4.9.2015.
- 33 (T) Strauss, L., **S. Serafin** and V. Grubišić (2015): Severe turbulence in a deep valley associated with rotors and interacting cross-mountain and up-valley flows. *33rd International Conference on Alpine Meteorology*, Innsbruck (A), 31.8.–4.9.2015.
- 34 (P) Strauss, L., **S. Serafin** and V. Grubišić (2015): Using Google Earth for visualization of meteorological data in complex terrain. *33rd International Conference on Alpine Meteorology*, Innsbruck (A), 31.8.–4.9.2015.
- 35 (P) Scheffknecht, P., **S. Serafin** and V. Grubišić (2015): Simulations of a long-lived supercell over complex terrain. *33rd International Conference on Alpine Meteorology*, Innsbruck (A), 31.8.–4.9.2015.

- 36 (P) Sachspurger, J., **S. Serafin** and V. Grubišić (2015): Analogies between wave trapping- and interfacial wave theory. *33rd International Conference on Alpine Meteorology*, Innsbruck (A), 31.8.–4.9.2015.
- 37 (T) Sachspurger, J., **S. Serafin** and V. Grubišić (2015): The impact of mountain width and stratification on wave-induced rotor formation. *33rd International Conference on Alpine Meteorology*, Innsbruck (A), 31.8.–4.9.2015.
- 38 (T) De Wekker, S.F.J., **S. Serafin**. and J. Knievel (2015): A mesoscale model-based climatology of daytime atmospheric boundary layer heights over complex terrain. *33rd International Conference on Alpine Meteorology*, Innsbruck (A), 31.8.–4.9.2015.
- 39 (P) Stiperski, I., H. Ágústsson, P.G. Baines, A. Belleudy, V. Grubišić, K. Horvath, C. Knigge, A. Paci, J. Sachspurger, **S. Serafin** and L. Strauss (2015): Observations of lee wave and rotor development over double ridges in a stratified water tank. *33rd International Conference on Alpine Meteorology*, Innsbruck (A), 31.8.–4.9.2015.
- 40 (T) Sachspurger, J., **S. Serafin** and V. Grubišić (2015): Dynamics of Rotor Formation in Single-Layer Mountain Flows. *26th IUGG Assembly 2015*, Prague (CZ), 22.6.–2.7.2015.
- 41 (P) Stiperski, I., H. Ágústsson, P.G. Baines, V. Grubišić, K. Horvath, C. Knigge, A. Paci, J. Sachspurger, **S. Serafin** and L. Strauss (2015): Stratified water tank experiments of lee wave and rotor development in flow over double ridges. *26th IUGG Assembly 2015*, Prague (CZ), 22.6.–2.7.2015.
- 42 (P) Scheffknecht, P., **S. Serafin** and V. Grubišić (2015): A Modeling Case Study of an Alpine Supercell. *EGU General Assembly 2015*, Vienna (A), 12.4.–17.4.2015.
- 43 (P) Strauss, L., **S. Serafin** and V. Grubišić (2015): Mountain wave-induced turbulence: Elevated turbulence zones over a double mountain ridge. *EGU General Assembly 2015*, Vienna (A), 12.4.–17.4.2015.
- 44 (T) Sachspurger, J., **S. Serafin** and V. Grubišić (2015): Interfacial and trapped waves in flows over mountains. *EGU General Assembly 2015*, Vienna (A), 12.4.–17.4.2015.
- 45 (T) Giovannini, L., L. Laiti, **S. Serafin** and D. Zardi (2015): A climatological analysis of diurnal winds in the Adige Valley in the Alps. *5th International Conference on Meteorology and Climatology of the Mediterranean*, Istanbul (TR), 2.3.–4.3.2015.
- 46 (P) De Wekker, S.F.J., and **S. Serafin** (2014): Understanding the spatial variability of convective boundary layer depth around an isolated mountain with a factor separation approach. *16th Conference on Mountain Meteorology*, San Diego (USA), 18.8.–22.8.2014.
- 47 (P) Strauss, L., V. Grubišić, **S. Serafin** and R. Mühlgassner (2014): Mountain Waves and Rotors - Revisiting the Concept of the "Lower Turbulent Zone". *16th Conference on Mountain Meteorology*, San Diego (USA), 18.8.–22.8.2014.
- 48 (P) Strauss, L., **S. Serafin** and V. Grubišić (2014): Mountain-induced Turbulence: New Insights from Airborne In Situ and Doppler Radar Measurements. *16th Conference on Mountain Meteorology*, San Diego (USA), 18.8.–22.8.2014.
- 49 (P) Sachspurger, J., **S. Serafin** and V. Grubišić (2014): Dependence of boundary layer separation on surface friction and different mountain flow regimes: An analysis based on large-eddy simulations. *21st Symposium on Boundary Layers and Turbulence*, Leeds (UK), 9.6.–13.6.2014.
- 50 (P) Strauss, L., **S. Serafin** and V. Grubišić (2014): Quantitative estimation of turbulence intensity in mountain flows from airborne Doppler radar measurements. *21st Symposium on Boundary Layers and Turbulence*, Leeds (UK), 9.6.–13.6.2014.
- 51 (P) **Serafin, S.** and S.F.J. De Wekker (2014): Understanding the effects of multi-scale flow interactions on convective boundary layer depth. *21st Symposium on Boundary Layers and Turbulence*, Leeds (UK), 9.6.–13.6.2014.
- 52 (P) Gruber, K., **S. Serafin**, V. Grubišić, M. Dorninger, R. Zauner and M. Fink (2014): Wind resource assessment in complex terrain with a high-resolution numerical weather prediction model. *EGU General Assembly 2014*, Vienna (A), 27.4.–2.5.2014.
- 53 (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.
- 54 (P) Sachspurger, J., **S. Serafin** and V. Grubišić (2014): The impact of surface friction on boundary layer separation for different mountain flow regimes: An analysis based on large-eddy simulations. *EGU General Assembly 2014*, Vienna (A), 27.4.–2.5.2014.
- 55 (P) Strauss, L., **S. Serafin** and V. Grubišić (2014): Mountain wave-induced turbulence: Lower turbulent zones revisited. *EGU General Assembly 2014*, Vienna (A), 27.4.–2.5.2014.

- 56 (P) Grubišić, V., **S. Serafin** and L. Strauss (2014): Climatology of Westerly Wind Events in the Lee of the Sierra Nevada. *EGU General Assembly 2014*, Vienna (A), 27.4.–2.5.2014.
- 57 (T) **Serafin, S.**, S.F.J. De Wekker and J. Knierl (2013): Boundary-layer phenomena in the vicinity of an isolated mountain: A climatology based on an operational high-resolution forecast system. *AGU Fall Meeting 2013*, San Francisco (USA), 9.12.–13.12.2013.
- 58 (P) Sachsperger, J., **S. Serafin**, and V. Grubišić (2013): Dependence of boundary-layer separation regimes on stability, wind speed and surface friction: An analysis based on large-eddy-simulations. *AGU Fall Meeting 2013*, San Francisco (USA), 9.12.–13.12.2013.
- 59 (P) **Serafin, S.**, S.F.J. De Wekker and J. Knierl (2013): Boundary-layer phenomena in the vicinity of an isolated mountain: A climatology based on an operational high-resolution forecast system. *32nd International Conference on Alpine Meteorology*, Kranjska Gora (SI), 3.6.–7.6.2013.
- 60 (P) Goger, B., **S. Serafin**, I. Stiperski and V. Grubišić (2013): Large eddy simulations of lee-wave interference over double mountain ridges. *32nd International Conference on Alpine Meteorology*, Kranjska Gora (SI), 3.6.–7.6.2013.
- 61 (P) Sachsperger, J., **S. Serafin** and V. Grubišić (2013): Dependence of boundary-layer separation regimes on stability, wind speed and surface friction: An analysis based on large-eddy-simulations. *32nd International Conference on Alpine Meteorology*, Kranjska Gora (SI), 3.6.–7.6.2013.
- 62 (T) Strauss, L., **S. Serafin** and V. Grubišić (2013): Terrain-induced Turbulence: Insights Gained from Airborne In Situ and Remotely Sensed Data. *32nd International Conference on Alpine Meteorology*, Kranjska Gora (SI), 3.6.–7.6.2013.
- 63 (T) Gruber, K., **S. Serafin**, M. Dorninger, V. Grubišić and R. Zauner (2013): Wind resource assessment in complex terrain with a high-resolution numerical weather prediction model. *32nd International Conference on Alpine Meteorology*, Kranjska Gora (SI), 3.6.–7.6.2013.
- 64 (P) Scheffknecht, P., **S. Serafin** and V. Grubišić (2013): The Interaction of Convective Storms with Complex Terrain: A Case Study of an Alpine Supercell. *32nd International Conference on Alpine Meteorology*, Kranjska Gora (SI), 3.6.–7.6.2013.
- 65 (P) Zardi, D., and **S. Serafin** (2013): An analytic solution for periodic thermally-driven flows over an infinite slope. *EGU General Assembly 2013*, Vienna (A), 7.4.–12.4.2013.
- 66 (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.
- 67 (P) Kumer V.-M., V. Grubišić, M. Dorninger, **S. Serafin**, L. Strauss and R. Zauner (2013): Turbulence analysis of lidar wind measurements at a windpark in Lower Austria. *EWEA Annual Event 2013*, Vienna (A), February 4-February 7 2013.
- 68 (P) **Serafin, S.**, and D. Zardi (2012): An evaluation of the volume-effect theory by means of large-eddy simulations. *15th Conference on Mountain Meteorology*, Steamboat Springs (USA), 20.8.–24.8.2012.
- 69 (P) Strauss, L., **S. Serafin** and V. Grubišić (2012): Measuring turbulence from airborne *in situ* and radar data recorded during an event of wave-induced boundary-layer separation. *15th Conference on Mountain Meteorology*, Steamboat Springs (USA), 20.8.–24.8.2012.
- 70 (P) **Serafin, S.**, L. Strauss and V. Grubišić (2012): Idealized simulations of wave-induced boundary-layer separation in the lee of mesoscale topography. *15th Conference on Mountain Meteorology*, Steamboat Springs (USA), 20.8.–24.8.2012.
- 71 (T) **Serafin, S.**, L. Strauss and V. Grubišić (2012): A modelling study of a nonstationary boundary-layer separation and rotor event. *15th Conference on Mountain Meteorology*, Steamboat Springs (USA), 20.8.–24.8.2012.
- 72 (T) **Serafin, S.**, L. Strauss and V. Grubišić (2012): Mesoscale and Large-Eddy Simulations of Wave-Induced Boundary-Layer Separation. *EGU General Assembly 2012*, Vienna (A), 23.4.–27.4.2012.
- 73 (T) Strauss, L., **S. Serafin**, and V. Grubišić (2012): Wave-induced boundary-layer separation: A case study comparing airborne observations and results from a mesoscale model. *EGU General Assembly 2012*, Vienna (A), 23.4.–27.4.2012.
- 74 (T) Grubišić, V., **S. Serafin** and L. Strauss (2012): Observations and Large-Eddy Simulations of Wave-Induced Boundary-Layer Separation. *92nd American Meteorological Society Annual Meeting*, New Orleans (USA), 22.1.–26.1.2012.
- 75 (T) Grubišić, V., **S. Serafin** and L. Strauss (2011): Wave-induced boundary-layer separation and turbulence. *31st International Conference on Alpine Meteorology*, Aviemore (UK), 23.5.–27.5.2011.

- 76 (P) Giovannini, L., D. Zardi, E. Bee, M. de Franceschi, M. Santin and **S. Serafin** (2011): Characterization of daily-periodic valley winds in the Adige Valley. *31st International Conference on Alpine Meteorology*, Aviemore (UK), 23.5.–27.5.2011.
- 77 (P) **Serafin, S.**, and D. Zardi (2011): Daytime heat transfer processes related to slope flows and turbulent convection in an idealised mountain valley. *31st International Conference on Alpine Meteorology*, Aviemore (UK), 23.5.–27.5.2011.
- 78 (T) **Serafin, S.**, and D. Zardi (2011): Daytime development of the boundary layer over a plain and in a valley under fair weather conditions: A comparison by means of idealised numerical simulations. *31st International Conference on Alpine Meteorology*, Aviemore (UK), 23.5.–27.5.2011.
- 79 (T) Zardi, D., and **S. Serafin** (2011): An analytic solution for periodic thermally driven flows on an infinite slope—Defant (1949) revisited. *31st International Conference on Alpine Meteorology*, Aviemore (UK), 23.5.–27.5.2011.
- 80 (T) Grubišić, V., **S. Serafin**, L. Strauss (2011): Wave-induced boundary-layer separation and turbulence. *EGU General Assembly 2011*, Vienna (A), 3.4.–8.4.2011.
- 81 (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.
- 82 (P) **Serafin, S.** and D. Zardi (2010): Structure of the atmospheric boundary layer in the vicinity of a developing upslope flow system: A numerical model study. *14th Conference on Mountain Meteorology*, Lake Tahoe (USA), 30.8.–3.9.2010.
- 83 (T) **Serafin, S.** and D. Zardi (2010): Daytime heat transfer processes related to slope flows and turbulent convection in an idealized mountain valley. *14th Conference on Mountain Meteorology*, Lake Tahoe (USA), 30.8.–3.9.2010.
- 84 (T) Zardi, D., and **S. Serafin** (2010): An analytic solution for periodic thermally driven flows on an infinite slope—Defant (1949) revisited. *14th Conference on Mountain Meteorology*, Lake Tahoe (USA), 30.8.–3.9.2010.
- 85 (P) **Serafin, S.** and D. Zardi (2010): Structure of the atmospheric boundary layer in the vicinity of a developing upslope flow system: A numerical model study. *EGU General Assembly 2010*, Vienna (A), 2.5.–7.5.2010.
- 86 (T) **Serafin, S.**, D. Caresia, F. Panelatti and D. Zardi (2009): A numerical investigation of the potential temperature and turbulent kinetic energy budgets in thermally driven winds in alpine valleys. *30th International Conference on Alpine Meteorology*, Rastatt (D), 11.5.–15.5.2009.
- 87 (P) Pasetto, A., **S. Serafin** and D. Zardi (2007): The project FORALPS: Contributions for a wise management of water resources from meteorology and climatology. *29th International Conference on Alpine Meteorology*, Chambéry (F), 4.6.–8.6.2007.
- 88 (P) Bozzo, A., **S. Serafin** and D. Zardi (2007): Coupling meteorological and hydrological models for river discharge forecasting. Part I: A methodological approach. *29th International Conference on Alpine Meteorology*, Chambéry (F), 4.6.–8.6.2007.
- 89 (T) Bozzo, A., **S. Serafin**, A. Pasetto and D. Zardi (2007): Coupling meteorological and hydrological models for river discharge forecasting. Part II: A case study about hydropower generation management. *29th International Conference on Alpine Meteorology*, Chambéry (F), 4.6.–8.6.2007.
- 90 (T) Bozzo, A., **S. Serafin** and D. Zardi (2007): Coupling meteorological and hydrological models for river discharge forecasting. Part I: A methodological approach. *EGU General Assembly 2007*, Vienna (A), 16.4.–20.4.2007.
- 91 (P) Bozzo, A., **S. Serafin**, A. Pasetto and D. Zardi (2007): Coupling meteorological and hydrological models for river discharge forecasting. Part II: A case study about hydropower generation management. *EGU General Assembly 2007*, Vienna (A), 16.4.–20.4.2007.
- 92 (P) **Serafin, S.**, and D. Zardi (2005): Critical evaluation and proposed refinement of the Troen and Mahrt (1986) boundary layer model. *28th International Conference on Alpine Meteorology and MAP Meeting*, Zadar (HR), 23.5.–27.5.2005.
- 93 (P) **Serafin, S.**, A. Bertò, and D. Zardi (2005): Application of cluster analysis techniques to the verification of quantitative precipitation forecasts. *28th International Conference on Alpine Meteorology and MAP Meeting*, Zadar (HR), 23.5.–27.5.2005.
- 94 (P) **Serafin, S.**, A. Bertò, A. Buzzi, R. Ferretti and D. Zardi (2004): Application of cluster analysis techniques to the verification of quantitative precipitation forecasts. *14th International Conference on Clouds and Precipitation*, Bologna (I), 18.7.–23.7.2004. Proceedings, P2.14:15.

- 95 (P) **Serafin, S.**, A. Bertò, M. de Franceschi, R. Ferretti and D. Zardi (2003): Application of a mesoscale model to the analysis of late frost events and comparison with observations. *5th International SRNWF-Workshop on Non-Hydrostatic Modelling*, Bad-Orb (D), 27.10.–29.10.2003. Deutscher Wetterdienst Arbeitsergebnisse Nr. 78.
- 96 (T) Richard E., N. Asencio, R. Benoit, A. Buzzi, R. Ferretti, P. Malguzzi, **S. Serafin**, G. Zängl and J.F. Georgis (2002): Intercomparison of the simulated precipitation fields of the MAP/IOP2b with different high-resolution models. *10th Conference on Mountain Meteorology and MAP Meeting*, Park City (USA), 17.6.–21.6.2002.

E National conference contributions (Italy and Austria)

Awarded conference contributions: 99–Best poster award, ex aequo, to Lukas Strauss; 100–Best poster award, ex aequo, to Andrea Bergner.

- 97 (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
- 98 (T) Strauss, L., **S. Serafin** and V. Grubišić (2015): Turbulenzerscheinungen in einem Tal durch Rotorbildung und Wechselwirkung zwischen Föhnsturm und Talwind. *6. Österreichischer MeteorologInnentag*, Wien (A), 5.11.–6.11.2015.
- 99 (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.
- 100 (P) Strauss, L., **S. Serafin** and V. Grubišić (2015): Verwendung von Google Earth zur Visualisierung von meteorologischen Daten im komplexen Gelände. *6. Österreichischer MeteorologInnentag*, Wien (A), 5.11.–6.11.2015.
- 101 (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.
- 102 (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.
- 103 (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.
- 104 (T) Strauss, L., V. Grubišić and **S. Serafin** (2011): Leewellen-induzierte Grenzschichtablösung: Beobachtungen und hochauflösende numerische Modellierung. *4. Österreichischer MeteorologInnentag*, Klagenfurt (A), 3.11.–4.11.2011.
- 105 (P) Kumer V.-M., V. Grubišić, M. Dorninger, **S. Serafin** and R. Zauner (2011): Analyse von Lidar Winddaten eines Windparks in Bruck an der Leitha. *4. Österreichischer MeteorologInnentag*, Klagenfurt (A), 3.11.–4.11.2011.
- 106 (P) **Serafin, S.**, D. Caresia, F. Panelatti and D. Zardi (2009): Valutazione numerica dei bilanci di temperatura potenziale ed energia cinetica turbolenta nelle correnti forzate termicamente in valli alpine. *Convegno "Environment Including Global Change"*, Palermo (I), 5.10.–9.10.2009.
- 107 (P) Pasetto, A., **S. Serafin** and D. Zardi (2007): Un contributo dalla meteorologia e dalla climatologia alla gestione della risorsa idrica: il progetto Interreg FORALPS. *Convegno Nazionale di Fisica della Terra Fluida e Problematiche Affini*, Ischia (I), 11.6.–15.6.2007.
- 108 (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.
- 109 (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.
- 110 (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.
- 111 (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.
- 112 (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 156	Scopus 185	Scholar 225	# in list
1	Serafin and Zardi, JAS, 2010a	34	38	47	17
2	Serafin and Zardi, JAS, 2010b	34	37	43	18
3	Serafin and Zardi, JAS, 2011	20	23	26	16
4	Strauss et al., QJRMS, 2015	12	13	15	11
5	French et al., JAS, 2015	11	11	11	13
6	Sachsperger et al., FES, 2015	8	10	11	12
7	Grubišić et al., JAS, 2015	8	7	8	14
8	Sachsperger et al., QJRMS, 2016	6	5	5	9
9	Serafin and Ferretti, JAMC, 2007	6	7	10	19
10	Strauss et al., JAS, 2016	5	8	7	10
11	Zardi and Serafin, QJRMS, 2015	5	7	10	15
12	Serafin et al., JAMC, 2017	3	2	2	5
13	Serafin et al., BLM, 2016	2	1	7	8
14	<i>Richard et al., 2002</i>	2	0	0	23
15	Serafin et al., ATM, 2018	0	1	0	1
16	Kirshbaum et al., ATM, 2018	0	1	0	2
17	Scheffknecht et al., QJRMS, 2017	0	2	2	3
18	Giovannini et al., QJRMS, 2017	0	3	5	4
19	Sachsperger et al., QJRMS, 2017	0	2	2	6
20	Stiperski et al., ATM, 2017	0	0	1	7
21	<i>Arnold et al., 2012</i>	0	6	13	20
22	<i>Serafin and Zardi, 2005</i>	0	1	0	21
23	<i>Serafin et al., 2005</i>	0	0	0	22

Key:

- QJRMS: *Quarterly Journal of the Royal Meteorological Society*, JIF = 3.444 (Q1) and SJR = 2.449 (Q1).
- JAS: *Journal of the Atmospheric Sciences*, JIF = 3.207 (Q2) and SJR = 2.803 (Q1).
- JAMC: *Journal of Applied Meteorology and Climatology*, JIF = 2.365 (Q2) and SJR = 1.796 (Q1).
- BLM: *Boundary-Layer Meteorology*, JIF = 2.573 (Q2) and SJR = 1.517 (Q1).
- ATM: *Atmosphere*, JIF = 1.487 (Q3) and SJR = 0.636 (Q3).
- FES: *Frontiers in Earth Science*, SJR = 0.162 (Q3 in "Earth and Planetary Sciences").

Values of the Clarivate Journal Impact Factor (JIF) and of the Scimago Journal Rank (SJR) refer to year 2016. 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.

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