

STEFANO SERAFIN

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PERSONAL

Date and place of birth: 21.12.1977 in Como (Italy)
Gender: male
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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)
Publons ID: [a/1197597](https://orcid.org/a/1197597)
Languages: Italian (mother tongue), English (fluent, C2), German (intermediate, B1)

QUALIFICATIONS

- Abilitazione Scientifica Nazionale (Italian national scientific qualification)
04/A4 (Geophysics), associate professor level 28.8.2018 – 28.8.2027
02/C1 (Astronomy, astrophysics, earth and planetary physics), associate professor level 11.7.2018 – 11.7.2027
- 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.

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 and since 2020–2021.

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|----------------------------------|---|
| Lecture and exercise courses on: | Fundamentals of Atmospheric Modelling Mesoscale Dynamics Mountain Meteorology Micrometeorology 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>

- Co-lead of the doctoral seminar of the Department of Meteorology and Geophysics, University of Vienna, 2021-present.
- Member of the working group for the 2022 revision of the B.Sc. and M.Sc. programmes in Meteorology at the University of Vienna ("Curriculare Arbeitsgruppe").
- Chairman of the Meteorological-Geophysikalisches Kolloquium, a seminar cycle jointly organized by the Department of Meteorology and Geophysics, University of Vienna, and the Austrian weather service ZAMG, 2020-2021.
- Guest lecturer (Erasmus teaching staff mobility) at the University of Trento (Doctoral School of Environmental Engineering), Academic Years 2012–2013, 2013–2014 and 2014–2015.

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| Lecture course on: | Geophysical Fluid Dynamics |
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- 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.

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| Courses on: | Atmospheric Physics Meteorology |
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- Supervisor or co-supervisor of 7 bachelor theses, supervisor of 11 master theses and 2 doctoral dissertations at the Faculty of Earth Sciences, Geography and Astronomy, University of Vienna. Co-supervisor of 2 doctoral dissertations 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 (17), *Journal of the Atmospheric Sciences* (11), *Quarterly Journal of the Royal Meteorological Society* (11), *Journal of Applied Meteorology and Climatology* (10), *Boundary-Layer Meteorology* (10), *Atmospheric Chemistry and Physics* (6), *Journal of Geophysical Research: Atmospheres* (5), *Meteorologische Zeitschrift* (4), *Bulletin of Atmospheric Science and Technology* (3), *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://publons.com/a/1197597/>.
- 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); 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 *Mountain Boundary Layer Working Group* (2020 – present). Programme coordinator (2018-2019). Member of the Scientific Organizing Committee and of the Local Organizing Committee of the *First TEAMx workshop* (2019).
2021 Co-organizer of the topical session on *Real-case large-eddy simulation over complex orography: Motivations, experiences, challenges* at the *ICAM online event 2021*.
2019 Chairman of the Programme Committee of the *35th International Conference on Alpine Meteorology*.
- 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

- 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

- 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

- 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

- 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

- 1 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.*, in press.
DOI: [10.1175/BAMS-D-21-0232.1](https://doi.org/10.1175/BAMS-D-21-0232.1)
- 2 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)
- 3 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)
- 4 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
Web Of Science accession number: 000606836900005
- 5 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
Web Of Science accession number: 000484988100001
- 6 **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
Web Of Science accession number: 000463971800017
- 7 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
Web Of Science accession number: 000447567800010
- 8 **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
- 9 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
- 10 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

- 11 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=2-s2.0-85026296179)
Web Of Science accession number: [000414551000006](https://www.webofscience.com/olap/doi/000414551000006)
- 12 **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=2-s2.0-85017500895)
Web Of Science accession number: [000399680900001](https://www.webofscience.com/olap/doi/000399680900001)
- 13 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.com/record/display?id=2-s2.0-85009228779)
Web Of Science accession number: [000394990800003](https://www.webofscience.com/olap/doi/000394990800003)
- 14 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.com/record/display?id=2-s2.0-85011032501)
Web Of Science accession number: [000396165100012](https://www.webofscience.com/olap/doi/000396165100012)
- 15 **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.com/record/display?id=2-s2.0-84930268467)
Web Of Science accession number: [000376412400003](https://www.webofscience.com/olap/doi/000376412400003)
- 16 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.com/record/display?id=2-s2.0-84977901839)
Web Of Science accession number: [000375935600001](https://www.webofscience.com/olap/doi/000375935600001)
- 17 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.com/record/display?id=2-s2.0-84962206253)
Web Of Science accession number: [000372403500003](https://www.webofscience.com/olap/doi/000372403500003)
- 18 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.com/record/display?id=2-s2.0-84952300081)
Web Of Science accession number: [000366860500023](https://www.webofscience.com/olap/doi/000366860500023)
- 19 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)
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- 33 **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: **52**–Second best student poster presentation award to Lukas Strauss. **55**–Best student oral presentation award to Johannes Sachsperger; **65**–Best student poster presentation award to Lukas Strauss; **73**–Outstanding student poster award to Lukas Strauss; **79**–Best student poster presentation award to Johannes Sachsperger; **85**–Best student poster award to Valerie-Marie Kumer; **111**–Second best student poster presentation award to Stefano Serafin.

- 1 (P) 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.
- 2 (P) **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.
- 3 (P) 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.
- 4 (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.
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- 8 (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.
- 9 (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.
- 10 (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 detectRe: AW: your participation to ECMWF training (info for current PhD students at IMGW)ed 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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- 30 (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.
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- 33 (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.

- 34 (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.
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- 39 (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*Re: AW: your participation to ECMWF training (info for current PhD students at IMGW), Burlington (USA), 27.6.–1.7.2016.
- 40 (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.
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- 42 (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.
- 43 (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.
- 44 (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.
- 45 (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.
- 46 (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.
- 47 (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.
- 48 (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.
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- 50 (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.
- 51 (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.
- 52 (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.
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- 57 (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.
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- 117 (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
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F Citation report

| | Total number of citations | WoS 494 | Scopus 536 | Scholar 691 | # in list |
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| 1 | Serafin et al., ATM, 2018 | 87 | 91 | 105 | 8 |
| 2 | Kirshbaum et al., ATM, 2018 | 64 | 66 | 88 | 9 |
| 3 | Serafin and Zardi, JAS, 2010a | 51 | 53 | 72 | 24 |
| 4 | Serafin and Zardi, JAS, 2010b | 43 | 43 | 52 | 25 |
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| 14 | Sachsperger et al., QJRMS, 2016 | 11 | 10 | 14 | 16 |
| 15 | Scheffknecht et al., QJRMS, 2017 | 9 | 10 | 13 | 10 |
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| 17 | Fuchs et al., SR 2019 | 8 | 11 | 14 | 5 |
| 18 | Serafin et al., JAMC, 2017 | 8 | 8 | 7 | 12 |
| 19 | Stiperski et al., ATM, 2017 | 7 | 6 | 8 | 14 |
| 20 | Serafin and Ferretti, JAMC, 2007 | 7 | 8 | 12 | 26 |
| 21 | Serafin et al., BLM, 2016 | 5 | 5 | 9 | 15 |
| 22 | <i>Grey literature</i> | 2 | 12 | 18 | 27-28-29-30-31 |
| 23 | Strauss et al., JAMC 2020 | 1 | 2 | 4 | 4 |
| 24 | Serafin et al., QJRMS, 2019 | 1 | 1 | 1 | 6 |
| 25 | Rotach et al., BAMS 2022 | 0 | 0 | 0 | 1 |
| 26 | Pepin et al., RG 2022 | 0 | 1 | 2 | 2 |
| 27 | Göbel et al., GMD 2022 | 0 | 0 | 0 | 3 |

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.

Last updated: April 27, 2022