

UNIVERSITÀ DEGLI STUDI DI MILANO

selezione pubblica per n. 1 posto/i di Ricercatore a tempo determinato ai sensi dell'art.24, comma 3, lettera b) della Legge 240/2010 per il settore concorsuale 04/A4, settore scientifico-disciplinare GEO/12 presso il Dipartimento di SCIENZE DELLA TERRA "ARDITO DESIO" (avviso bando pubblicato sulla G.U. n. 47 del 23 GIUGNO 2023), Codice concorso 5331

## **STEFANO SERAFIN CURRICULUM VITAE**

(N.B. IL CURRICULUM NON DEVE ECCEDERE LE 30 PAGINE E DEVE CONTENERE GLI ELEMENTI CHE IL CANDIDATO RITIENE UTILI AI FINI DELLA VALUTAZIONE. LE VOCI INSERITE NEL FACSIMILE SONO A TITOLO PURAMENTE ESEMPLIFICATIVO E POSSONO ESSERE SOSTITUITE, MODIFICATE O INTEGRATE)

### **INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)**

COGNOME	SERAFIN
NOME	STEFANO
DATA DI NASCITA	21 DICEMBRE 1977

### **TITOLI**

#### **TITOLO DI STUDIO**

(indicare la Laurea conseguita inserendo titolo, Ateneo, data di conseguimento, ecc.)

Si veda la sezione "QUALIFICATIONS, EDUCATION" nel seguito.

#### **TITOLO DI DOTTORE DI RICERCA O EQUIVALENTI, OVVERO, PER I SETTORI INTERESSATI, DEL DIPLOMA DI SPECIALIZZAZIONE MEDICA O EQUIVALENTE, CONSEGUITO IN ITALIA O ALL'ESTERO**

(inserire titolo, ente, data di conseguimento, ecc.)

Si veda la sezione "QUALIFICATIONS, EDUCATION" nel seguito.

#### **CONTRATTI DI RICERCA, ASSEGNI DI RICERCA O EQUIVALENTI**

(per ciascun contratto stipulato, inserire università/ente, data di inizio e fine, ecc.)

Si veda la sezione "ACADEMIC POSITIONS" nel seguito.

#### **ATTIVITÀ DIDATTICA A LIVELLO UNIVERSITARIO IN ITALIA O ALL'ESTERO**

(inserire periodo [gg/mm/aa inizio e fine], anno accademico, ateneo, corso laurea, numero ore, ecc.)

Si veda sezione "TEACHING" nel seguito.

#### **DOCUMENTATA ATTIVITÀ DI FORMAZIONE O DI RICERCA PRESSO QUALIFICATI ISTITUTI ITALIANI O STRANIERI;**

(inserire anno accademico, ente, corso, periodo, ecc.)

Si veda la sezione "PARTICIPATION TO TRAINING COURSES AND WORKSHOPS" nel seguito.



**REALIZZAZIONE DI ATTIVITÀ PROGETTUALE**

*(indicare, data, progetto, ecc.)*

Si veda la sezione “RESEARCH PROJECTS” nel seguito.

**ORGANIZZAZIONE, DIREZIONE E COORDINAMENTO DI GRUPPI DI RICERCA NAZIONALI E INTERNAZIONALI, O PARTECIPAZIONE AGLI STESSI**

*(per ciascuna voce inserire anno, ruolo, gruppo di ricerca, ecc.)*

Si veda la sezione “OTHER PROFESSIONAL ACTIVITY” nel seguito.

**ATTIVITÀ DI RELATORE A CONGRESSI E CONVEGNI NAZIONALI E INTERNAZIONALI**

*(inserire titolo congresso/convegno, data, ecc.)*

Si vedano le sezioni “PARTICIPATION TO CONFERENCES”, “PUBLICATIONS/International conference contributions” e “PUBLICATIONS/National conference contributions (Italy and Austria)” nel seguito.

**CONSEGUIMENTO DI PREMI E RICONOSCIMENTI NAZIONALI E INTERNAZIONALI PER ATTIVITÀ DI RICERCA**

*(inserire premio, data, ente organizzatore, ecc.)*

Si vedano le sezioni “AWARDS” e “INVITED TALKS” nel seguito.

**PRODUZIONE SCIENTIFICA****PUBBLICAZIONI SCIENTIFICHE**

*(per ciascuna pubblicazione indicare: nomi degli autori, titolo completo, casa editrice, data e luogo di pubblicazione, codice ISBN, ISSN, DOI o altro equivalente)*

Si veda la sezione “PUBLICATIONS” nel seguito

Data

18 LUGLIO 2023

Luogo

VIENNA, AUSTRIA



# STEFANO SERAFIN

University of Vienna • Department of Meteorology and Geophysics

Josef-Holaubek-Platz 2 / UZA2 • A-1090 Vienna (Austria)

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

[stefano.serafin@univie.ac.at](mailto: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:	<a href="https://orcid.org/0000-0002-5838-7514">0000-0002-5838-7514</a>
ISI Web of Science Researcher ID:	<a href="https://orcid.org/D-7660-2015">D-7660-2015</a>
Scopus Author ID:	<a href="https://orcid.org/11939923400">11939923400</a>
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.



## RESEARCH PROJECTS

---

- As principal investigator:

- |             |   |
|-------------|---|
| 2018 – 2022 | FWF (Austrian Science Fund) stand-alone project MICIA (P30808-N32), <i>Multiscale Interactions in Convection Initiation in the Alps</i> , € 345'562,89. |
| 2012 – 2016 | FWF (Austrian Science Fund) stand-alone project STABLEST (P24726-N27), <i>Stable Boundary Layer Separation and Turbulence</i> , € 222'953,09.           |

- Other projects:

- |             |  |
|-------------|--|
| 2016 – 2019 | Austrian Climate and Energy Fund, project ICE CONTROL, <i>Ensemble-Vereisungsprognosen als Basis zur innovativen Betriebsführung von Windkraftanlagen unter Vereisungsbedingungen</i> . English: <i>Ensemble icing forecasts supporting the operation of wind turbines under icing conditions</i> . PI: Dr. Alexander Beck (ZAMG). |
| 2014        | EU-FP7 Research Infrastructure HYDRALAB, project HyIV-CNRS-SECORO, <i>Influence of secondary orography on boundary-layer separation and rotors</i> . PI: Dr. Ivana Stiperski (University of Innsbruck).  |
| 2005 – 2008 | EU-INTERREG IIIB Alpine Space, project FORALPS, <i>Meteo-hydrological forecast and observations for improved water resource management in the Alps</i> . PI: Prof. Dino Zardi (University of Trento).  |
| 2006 – 2007 | EU-INTERREG IIIB CADSES, project HYDROCARE, <i>Hydrological cycle of the CADSES region</i> . PI: Dr. Valerio Lucarini (CINFAI).  |
| 2004 – 2005 | EU-INTERREG IIIB Alpine Space, project METEORISK, <i>Mitigation of natural risks through improved forecasting of extreme meteorological events</i> . 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); 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

---

- *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

---

- 2005: 2<sup>nd</sup>-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 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.eid.net/scopus/eid?eid=2-s2.0-85133132475)  
Web Of Science accession number: [000819329200001](https://www.webofscience.com/webofscience/accessionnumber.aspx?accessionnumber=000819329200001)
- 2 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.eid.net/scopus/eid?eid=2-s2.0-85140143444)
- 3 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.eid.net/scopus/eid?eid=2-s2.0-85131596576)
- 4 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.eid.net/scopus/eid?eid=2-s2.0-85127260411)  
Web Of Science accession number: [000777485900004](https://www.webofscience.com/webofscience/accessionnumber.aspx?accessionnumber=000777485900004)
- 5 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.eid.net/scopus/eid?eid=2-s2.0-85124097084)  
Web Of Science accession number: [000751177700001](https://www.webofscience.com/webofscience/accessionnumber.aspx?accessionnumber=000751177700001)
- 6 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.eid.net/scopus/eid?eid=2-s2.0-85095965662)  
Web Of Science accession number: [000606836900005](https://www.webofscience.com/webofscience/accessionnumber.aspx?accessionnumber=000606836900005)
- 7 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.eid.net/scopus/eid?eid=2-s2.0-85072011387)  
Web Of Science accession number: [000484988100001](https://www.webofscience.com/webofscience/accessionnumber.aspx?accessionnumber=000484988100001)
- 8 **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.eid.net/scopus/eid?eid=2-s2.0-85061057940)  
Web Of Science accession number: [000463971800017](https://www.webofscience.com/webofscience/accessionnumber.aspx?accessionnumber=000463971800017)
- 9 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.eid.net/scopus/eid?eid=2-s2.0-85053396519)  
Web Of Science accession number: [000447567800010](https://www.webofscience.com/webofscience/accessionnumber.aspx?accessionnumber=000447567800010)
- 10 **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.eid.net/scopus/eid?eid=2-s2.0-85044034187)  
Web Of Science accession number: [000428305800024](https://www.webofscience.com/webofscience/accessionnumber.aspx?accessionnumber=000428305800024)



- 11 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.eid.net/scopus/showEid?eid=2-s2.0-85042554645)  
Web Of Science accession number: [000428305800002](https://www.webofscience.com/webofscience/accessionnumber.aspx?accession=000428305800002)
- 12 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.eid.net/scopus/showEid?eid=2-s2.0-85039422816)  
Web Of Science accession number: [000418796900001](https://www.webofscience.com/webofscience/accessionnumber.aspx?accession=000418796900001)
- 13 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.eid.net/scopus/showEid?eid=2-s2.0-85026296179)  
Web Of Science accession number: [000414551000006](https://www.webofscience.com/webofscience/accessionnumber.aspx?accession=000414551000006)
- 14 **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.eid.net/scopus/showEid?eid=2-s2.0-85017500895)  
Web Of Science accession number: [000399680900001](https://www.webofscience.com/webofscience/accessionnumber.aspx?accession=000399680900001)
- 15 Sachsperger, 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/showEid?eid=2-s2.0-85009228779)  
Web Of Science accession number: [000394990800003](https://www.webofscience.com/webofscience/accessionnumber.aspx?accession=000394990800003)
- 16 Stiperski, I., **S. Serafin**, A. Paci, H. Ágústsson, A. Belleudy, R. Calmer, K. Horvath, C. Knigge, J. Sachsperger, 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/showEid?eid=2-s2.0-85011032501)  
Web Of Science accession number: [000396165100012](https://www.webofscience.com/webofscience/accessionnumber.aspx?accession=000396165100012)
- 17 **Serafin, S.**, S.F.J. De Wekker and J.C. Knierel (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/showEid?eid=2-s2.0-84930268467)  
Web Of Science accession number: [000376412400003](https://www.webofscience.com/webofscience/accessionnumber.aspx?accession=000376412400003)
- 18 Sachsperger, 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/showEid?eid=2-s2.0-84977901839)  
Web Of Science accession number: [000375935600001](https://www.webofscience.com/webofscience/accessionnumber.aspx?accession=000375935600001)
- 19 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/showEid?eid=2-s2.0-84962206253)  
Web Of Science accession number: [000372403500003](https://www.webofscience.com/webofscience/accessionnumber.aspx?accession=000372403500003)
- 20 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/showEid?eid=2-s2.0-84952300081)  
Web Of Science accession number: [000366860500023](https://www.webofscience.com/webofscience/accessionnumber.aspx?accession=000366860500023)
- 21 Sachsperger, 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/showEid?eid=2-s2.0-85016403141)  
Web Of Science accession number: [000421619700040](https://www.webofscience.com/webofscience/accessionnumber.aspx?accession=000421619700040)



- 22 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  
Web Of Science accession number: 000366334700001
- 23 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  
Web Of Science accession number: 000366334900001
- 24 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  
Web Of Science accession number: 000360203800037
- 25 **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 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
- 26 **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
- 27 **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
- 28 **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

- 29 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
- 30 **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
- 31 **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



- 32 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 Grey literature

- 33 **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.  
URL: [https://www.uibk.ac.at/iup/buch\\_pdfs/10.1520399106-003-1.pdf](https://www.uibk.ac.at/iup/buch_pdfs/10.1520399106-003-1.pdf)
- 34 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](https://meteo.boku.ac.at/report/BOKU-Met_Report_21_online.pdf)
- 35 **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: <https://iris.unitn.it/handle/11572/50644?mode=full.1>

## 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.
- 14 (T) Weinkämmerer, J., M. Göbel, I. Bastak-Duran, J. Schmidli and S. Serafin (2022): Turbulent slope winds in complex terrain: from heat and moisture transport to the sampling of single plumes. *EMS Annual Meeting*, Bonn (DE), 4.9.–9.9.2022.
- 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.
- 25 (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. Multi-scale Transport and Exchange Processes in the Atmosphere over Mountains - Programme and Experiment. *27th IUGG Assembly 2019*, Montréal (CA), 8.7.–18.7.2019.
- 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.
- 35 (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.
- 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.
- 37 (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, **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.
- 38 (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.
- 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*, Reykjavík (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*, Reykjavík (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*, Reykjavík (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*, Reykjavík (IS), 19.6.–23.6.2017.



- 48 (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.
- 49 (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.
- 50 (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.
- 51 (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.
- 52 (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.
- 53 (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.
- 54 (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.
- 55 (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.
- 56 (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.
- 57 (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.
- 58 (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.
- 59 (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.
- 60 (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.
- 61 (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.
- 62 (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.
- 63 (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.
- 64 (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.
- 65 (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.
- 66 (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.
- 67 (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.
- 68 (P) Sachsperger, 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.
- 69 (T) Sachsperger, 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.



- 70 (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.
- 71 (P) Stiperski, I., H. Ágústsson, P.G. Baines, A. Belleudy, V. Grubišić, K. Horvath, C. Knigge, A. Paci, J. Sachsperger, **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.
- 72 (T) Sachsperger, 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.
- 73 (P) Stiperski, I., H. Ágústsson, P.G. Baines, V. Grubišić, K. Horvath, C. Knigge, A. Paci, J. Sachsperger, **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.
- 74 (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.
- 75 (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.
- 76 (T) Sachsperger, 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.
- 77 (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.
- 78 (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.
- 79 (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.
- 80 (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.
- 81 (P) Sachsperger, 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.
- 82 (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.
- 83 (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.
- 84 (P) Gruber, K., **S. Serafin**, V. Grubišić, M. Dörninger, 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.
- 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.
- 86 (P) Sachsperger, 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.
- 87 (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.
- 88 (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.
- 89 (T) **Serafin, S.**, S.F.J. De Wekker and J. Knievel (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.



- 90 (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.
- 91 (P) **Serafin, S.**, S.F.J. De Wekker and J. Knierel (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.
- 92 (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.
- 93 (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.
- 94 (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.
- 95 (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.
- 96 (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.
- 97 (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.
- 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.
- 99 (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.
- 100 (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.
- 101 (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.
- 102 (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.
- 103 (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.
- 104 (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.
- 105 (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.
- 106 (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.
- 107 (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.
- 108 (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.
- 109 (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.
- 110 (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.
- 111 (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.



- 112 (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.
- 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.
- 114 (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.
- 115 (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.
- 116 (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.
- 117 (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.
- 118 (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.
- 119 (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.
- 120 (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.
- 121 (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.
- 122 (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.
- 123 (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.
- 124 (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.
- 125 (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.
- 126 (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.
- 127 (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 SRNWP-Workshop on Non-Hydrostatic Modelling*, Bad-Orb (D), 27.10.–29.10.2003. Deutscher Wetterdienst Arbeitsergebnisse Nr. 78.
- 128 (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: 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
- 134 (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.
- 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.
- 136 (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.
- 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.
- 140 (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.
- 141 (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.
- 142 (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.
- 143 (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.
- 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	10
2	Kirshbaum et al., ATM, 2018	94	97	129	11
3	Serafin and Zardi, JAS, 2010a	56	57	73	26
4	Pepin et al., RG 2022	49	54	73	4
5	Serafin and Zardi, JAS, 2010b	47	49	58	27
6	Giovannini et al., QJRMS, 2017	40	43	55	13
7	Strauss et al., QJRMS, 2015	38	41	59	20
8	Serafin and Zardi, JAS, 2011	26	29	33	25
9	Schneider et al., EPSL, 2018	24	24	29	9
10	Strauss et al., JAS, 2016	23	29	37	19
11	Sachsperger et al., FES, 2015	20	23	28	21
12	French et al., JAS, 2015	16	18	22	22
13	Grubišić et al., JAS, 2015	14	14	20	23
14	Zardi and Serafin, QJRMS, 2015	14	16	26	24
15	Fuchs et al., SR 2019	13	15	22	7
16	Scheffknecht et al., QJRMS, 2017	13	15	17	12
17	Sachsperger et al., QJRMS, 2016	11	10	15	18
18	Sachsperger et al., QJRMS, 2017	10	13	16	15
19	Serafin et al., JAMC, 2017	9	9	8	14
20	Stiperski et al., ATM, 2017	8	7	9	16
21	Serafin and Ferretti, JAMC, 2007	7	8	12	28
22	Serafin et al., BLM, 2016	6	6	11	17
23	Rotach et al., BAMS 2022	5	5	7	3
24	Strauss et al., JAMC 2020	4	6	8	6
25	Serafin et al., QJRMS, 2019	3	3	3	8
26	Manzato et al., MWR 2022	2	0	0	2
27	Strauss et al., QJRMS 2022	0	3	7	1
28	Göbel et al., GMD 2022	0	1	0	5
29	<i>Grey literature</i>	0	14	21	29–30–31–32–33

### 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.