W. James Steenburgh
Statement for LFUI Guest Professor 2025/26

I am excited to submit this application to serve as an LFUI Guest Professor during the 2025/2026 Academic Year. I have been a Professor of Atmospheric Sciences at the University of Utah for almost 30 years. My primary research interests are in mountain weather and climate; orographic and lake-effect precipitation; weather analysis and forecasting; and numerical weather prediction. As an educator I have developed and taught innovative courses in synoptic–dynamic meteorology, weather analysis and forecasting, and mountain meteorology at all levels from general education to graduate. In 2024, I received the University of Utah’s Distinguished Teaching Award.

In 2019 I served as a Fulbright Visiting Professor of Natural Sciences at the University of Innsbruck, teaching classes and conducting research in the Department of Atmospheric and Cryosphere Sciences. It was a transformative experience, leading to ongoing collaborations and friendships with department faculty and students. Since then, I have returned to Innsbruck three times, meeting with faculty and students, presenting seminars, and discussing possible research collaborations.

Obtaining a LFUI professorship will allow me to fully integrate with the department once again, as well as the broader Faculty of Geo- and Atmospheric Sciences, teaching a new generation of students and embarking on new collaborative research projects. My expertise in wintertime precipitation systems, especially in mountainous regions, is highly complementary to the boundary layer, mountain meteorology, and cryospheric expertise in the department and the Alpiner Raum (Alpine Region) research area. I plan to offer a 3 ECTS course for graduate students entitled *Advanced Topics in Atmospheric Dynamics: Cool Season Precipitation Processes and Prediction*. This will be the first time such a course has been offered by the department since my visit in 2019. I also plan to co-teach *Advanced Topics in Atmospheric Dynamics: Warm Season Weather Briefing*, likely with Georg Mayr, and provide guest lectures for other courses. For research, I plan to collaborate with Dr. Alexander Gohm and others to investigate winter storms in western Austria, focusing on the penetration of heavy snowfall across the Inn Valley to the Inner Alps. This research builds upon similar work that I have done in western Japan and North America and will contribute to improvements in weather forecasting and climate prediction for western Austria.

The LFUI Guest Professorship supports a stay of two months. If possible, I would like to visit for the full semester to fully integrate into the department and broader University. I recognize that the extra months would be without support, but that is acceptable as it will allow for a deeper teaching and research experience, as well as time to enjoy the mountain culture of Tyrol.

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Suggested Topics for a Public Lecture

I am the author of a general audience science book, *Secrets of the Greatest Snow on Earth*, which is a meteorological guide to mountain weather, snow, and climate change for skiers and snowboarders. I give several public talks each winter based on this book (e.g., <https://youtu.be/p5nVxaJv_EU?si=_hAhScwsrSEEYMY8>) and could adapt the material for a lecture on snow, skiing, weather, and climate change for an Innsbruck audience. I could also provide a lecture exploring climate change and its impacts on mountainous regions, especially snow, winter tourism, and the Olympic Winter Games. In the case of the former, I contributed to weather support efforts for the 2002 Olympic Winter Games in Salt Lake City and have experience with weather and climate impacts on logistics and competitions. There is considerable expertise in science communications and climate change in mountainous regions at the University of Innsbruck and I would be honored to work with other faculty, centers and research groups on your campus to plan and implement either of these talks (or some combination of the two topics).