

WSL Distinguished Lectures

Tuesday, 24 September 24 | 10.30–11.30 | Bi



Valérie Trouet

Belgium Climate Center, Brussels, Belgium

Tree rings and climate: a long history

Dendrochronology – the study of the rings in trees – allows us to study climate history over the past ca. 2,000 years and to put current climate change in a long-term context. Dendrochronology sits at the nexus of climatology, ecology, and archeology and thus helps us to link climate history to forest history and human history. In this talk, I will introduce the science of dendrochronology and I will guide the audience through its main applications in climatology, ecology, and archeology, with a wide variety of examples. I will recount some of the many stories the rings in trees can tell us.

Tuesday, 15 April 2025 | 10.30–11.30 | Bi



Michelle Cleary

Swedish University of Agricultural Sciences, Lomma, Sweden

European ash regeneration and restoration: challenges and solutions

For several decades, the invasive fungus *Hymenoscyphus fraxineus* has caused a serious population decline of common ash across Europe. This is concerning not only because of its importance in forestry but also because of its implications for biodiversity. Some progress has been made via Sweden's national project "Save The Ash" whereby elite genotypes have been selected for better tolerance. However, the next project phase towards restoration presents several new challenges that will be addressed in this talk.

Dienstag, 19. November 24 | 10.30–11.30 | Bi



Severin Dressen

Zoo Zürich, Schweiz

Naturschutzzentrum Zoo Zürich – Aufgaben eines modernen Zoos

Zoodirektor Severin Dressen spricht in seinem Referat über die Geschichte und Entwicklung des Zoo Zürich sowie über die generelle Rolle der Zoologischen Gärten in der Gesellschaft. Er informiert über die vier Hauptaufgaben eines modernen Zoos – Artenschutz, Naturschutz, Forschung und Bildung – und zeigt dabei auf, wie Zoos zum Erhalt der Natur und der Artenvielfalt beitragen und bei ihren Gästen das Verständnis für die Natur und den Naturschutz fördern.

Tuesday, 29 April 2025 | 10.30–11.30 | Bi



Karen O'Brien

Department of Sociology and Human Geography, University of Oslo, Norway

Sustainability Transformations: Connecting Theory and Practice

There is a growing consensus that business-as-usual approaches to sustainability are inadequate to address urgent problems such as climate change and biodiversity loss. Yet how do we transform at the rate, scale, speed, and depth that is called for by researchers, decision makers, and activists? In this talk, I will present an integrative approach to sustainability and discuss the relationship between the practical, political, and personal spheres of transformation. Drawing on findings from the IPBES transformative change assessment and insights on the social and human dimensions of climate change, the talk will highlight the importance of linking theory and practice. I will conclude with a practical approach to scaling sustainability solutions – and suggest that when it comes to sustainability transformations, you matter more than you think.

Tuesday, 21 January 2025 | 10.30–11.30 | Bi



Cornelius Senf

Earth Observation for Ecosystem Management, Technical University of Munich, Germany

Understanding Europe's changing forests through Earth observation

Europe's forests are under increasing pressure from climate extremes, requiring better monitoring of changing forest dynamics. In my talk I will summarize recent developments in Earth observation based forest monitoring, with a particular focus on characterizing forest disturbances and recovery from landscape to continental scales. I will show how long-term satellite archives enable a seamless monitoring of tree cover and biomass change due to disturbances and human management. I will embed recent changes in forest disturbance and recovery into past variability and discuss whether the recent episode of extended disturbances in Central Europe was unprecedented.

Tuesday, 6 May 2025 | 10.30–11.30 | Bi



David Kaufmann

Institute Spatial and Landscape Development, ETH Zurich, Switzerland

Towards a socio-ecological densification

Many cities worldwide have introduced densification strategies. Yet, the current implementation of densification brings many challenges for a just and socio-ecological urban development, particularly regarding the displacement of lower-income residents, high CO2-emissions stemming from building activities, and the rather low democratic acceptance of densification. In this talk, I will exemplify these challenges and outline potential strategies towards a fair and sustainable densification.

Tuesday, 4 March 25 | 10.30–11.30 | Bi



James Kirchner

Environmental Systems Science, ETH Zurich, and Mountain Hydrology and Mass Movements, WSL Birmensdorf, Switzerland

Learning from surprises in the hydrology of landscapes

Landscapes receive water from rain and snow, and then release it as "blue water" that flows downward to streams and "green water" that flows upward to vegetation. How they do this shapes floods, droughts, biogeochemical cycles, and the health of terrestrial and aquatic ecosystems. This talk will outline key surprises that have changed our understanding of how landscapes transport, store, and release water, with implications for both trees and streams.

Tuesday, 3 June 2025 | 10.30–11.30 | Da



Andreas Käab

Department of Geosciences, University of Oslo, Norway

Satellite remote sensing of mass movements in high mountains

In recent years, the availability of Earth observation data from satellites has increased dramatically, allowing for systematic and global monitoring of Earth's surface processes at an unprecedented scale. These advancements hold significant relevance even for countries with highly developed terrestrial and airborne monitoring systems as they enhance our understanding of, for instance, various types of mass movements in high mountains. I will demonstrate these new opportunities by discussing examples such as glacier surges, large-volume ice-rock avalanches, and the forthcoming European Space Agency mission Harmony.

Tuesday, 1 April 2025 | 10.30–11.30 | Da



Margreth Keiler

Department of Geography, University of Innsbruck and Institute for Interdisciplinary Mountain Research, Austrian Academy of Science

Mountain regions in transition – the challenges of mountain hazards, risk and resilience management

Despite increasing scientific knowledge and the implementation of hazard and risk management strategies, mountain societies continue to be affected by high loss events (e.g. Grison, Valais, Ticino in the summer 2024). Natural hazard processes and society are subject to constant and interactive change, influencing the dynamics of risks and resilience. The lecture focuses on challenges of risk management under climate change, extremes and cascading events. New insights are integrated in a coupled human-landscape model towards a better understanding of risk and resilience evolution in mountain communities for adaptive risk management.

Vortragsorte

WSL Birmensdorf (Bi), Englersaal, oder SLF Davos (Da), Hörsaal, bzw. Zoom-Webinar



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