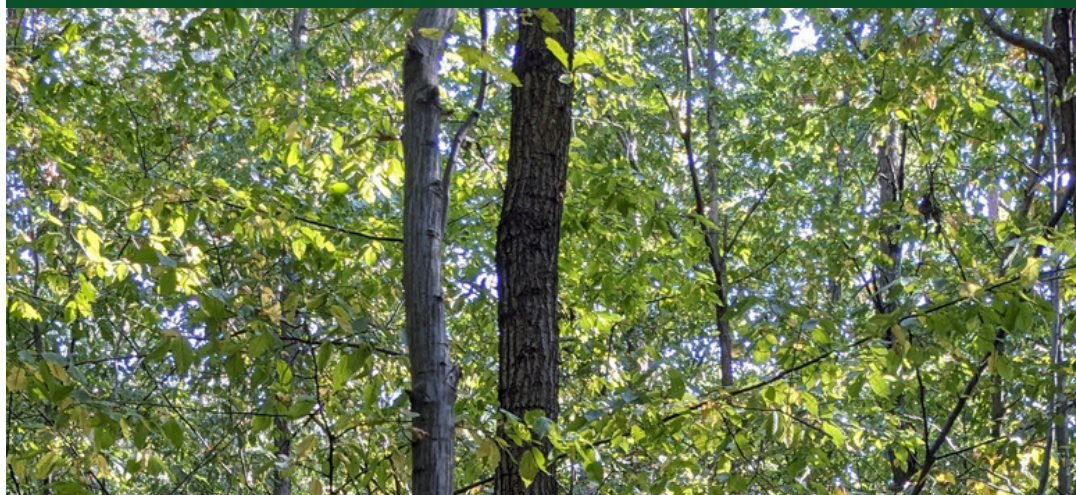




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ERA Chair: Striving for Excellence in the Forest Ecosystem Research

This is the 3rd newsletter of the EXCELLENTIA project, WHERE YOU CAN:

- get information on the highlights of the second half of 2024
- learn more on communication activities and upcoming events
- meet Burenjargal Otgonsuren, Přemysl Mácha and Marian Schöner, new members of Forest Ecology Research group

CHALLENGES IN FOREST ECOLOGY - FFWT SEMINAR SERIES

EXCELLENTIA continued on **CHALLENGES IN FOREST ECOLOGY** – **FFWT Seminar Series** with leading experts presenting and discussing the latest findings in forest ecology. Cindy Prescott (UBC, Canada) gave an interesting lecture on regenerative forestry - managing forests for soil life, Nadia Soudzilovskaia (University of Hasselt, Belgium) shared the results of her research on mycorrhizal impacts on ecosystem functioning, and Michael Scherer - Lorenzen (University of Freiburg, Germany) gave a talk about the role of forest biodiversity for human health benefits and risks

If you missed the lectures see the links to video recordings and the invitation to future lectures below.

SEMINAR SERIES'S VIDEO RECORDINGS

INVITATION TO SUMMER SEMESTER SEMINAR SERIES

NEW FER GROUP MEMBER



Dr Burenjargal Otgonsuren is a plant ecologist with a focus on belowground processes. Her main areas of research are the ecology of boreal forests in Mongolia, and the effects of over-grazing and mining on rangelands of the Gobi Desert and Forest steppe. Her work on ectomycorrhizas has been carried out in forests in Mongolia, but also high elevation forests in Austria. She has published one of the few studies on mycorrhizal fungi carried out in Mongolia. In EXCELLENTIA she works on the ecosystem function of ectomycorrhizas, in particular on their role in abiotic and biotic stress resistance.

NEW FER GROUP MEMBER

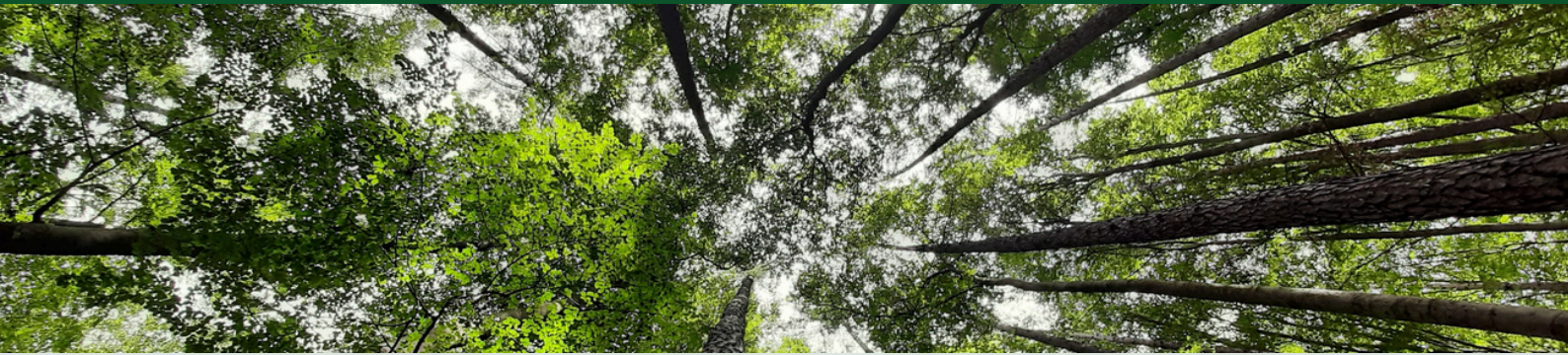


Dr. Přemysl Mácha is a cultural anthropologist with an interest in linguistic anthropology, ethnoecology, and environmental history. He has an extensive field research experience in Mexico, New Mexico and Czechia. He has served as the principal investigator on a range of projects and taught anthropology and cultural geography for over two decades. In addition to anthropology, he also has degrees in forestry and forest engineering. He sees the EXCELLENTIA project as a unique opportunity to bridge the two worlds, investigate the mutual relationships between society and forestry, and contribute to a successful adaptation of forestry to the new environmental and societal conditions of our times.

NEW FER GROUP MEMBER



Dr. Marian Schönauer is a dedicated and results-driven forestry scientist with a strong focus on forest ecology and management. He specializes in utilizing remote sensing products to advance forestry science and promote sustainable forestry practices. With extensive experience in geospatial computations, spatiotemporal modeling, and statistical analysis, Dr. Schönauer has contributed to national and international projects and has published his findings in esteemed scientific journals. While he aims to maintain his geospatial expertise in wet-area mapping, he is eager to apply these skills to new and emerging topics within the EXCELLENTIA project.



KNOWLEDGE TRANSFER

RESEARCHERS' NIGHT (27 September 2024)

An event that, for one evening, brings life to hundreds of science buildings that no ordinary mortal can enter. EXCELLENTIA participated in the Transformation in forests programme:

“Forests are always moving, you just cannot see it. The tree species in a forest change over time, and with them their fungal partners. Sometimes foresters change trees in forests very fast, this is called transformation. What happens to those poor fungi!” Visitors across all generations were entertainingly introduced to the amazing world of mycorrhizal fungi.



SUMMER SCHOOL “THE HIDDEN HALF OF ECOSYSTEMS”

FFWT MENDELU and University Forest Enterprise hosted the first summer school of the EXCELLENTIA on 7 - 11 October 2024

The five-day school provided a comprehensive overview of woody roots and their fungal symbionts. Experts provided theoretical insight into the state of the art in root and mycorrhizal research, and participants practised techniques ranging from field sampling and root imaging to morphotyping ectomycorrhiza and molecular analyses of soil fungal communities.

The free-to-attend summer school was designed for individuals interested in the hidden half of forest ecosystems, whether they are beginners or seeking to enhance their knowledge of root and mycorrhizal traits, belowground ecosystem functioning, and methodology.

[Press release from Summer school](#)

INTERVIEW WITH MARIAN SCHÖNAUER

You joined the forest ecology research group of the EXCELLENTIA project in July 2024. Can you briefly introduce yourself? Where are you from, what are your research interests, and what motivated you to move to Brno?

Marian: That's right. I joined the EXCELLENTIA team in July 2024, coming from a position at the University of Göttingen. I also completed my PhD there in 2022. My thesis and research over the past years have primarily focused on the use of different data sources for soil moisture modeling and related machine learning applications. These remain my main research interests—working with large datasets across vast regions and applying them to model biological or physical processes. This aspect of research is particularly appealing to me, and EXCELLENTIA seemed like a promising environment to further explore these topics, including new areas such as mycorrhizal research. Another key reason for my move was the proximity to my home country, Austria.

Although you started during the summer holidays and vacation period, you had a rather hectic time in the field at the University Forest Enterprise (UFE) after June's windstorm. Can you tell us what happened and what your role was?

Marian: Oh yes, that was unexpected. A huge windthrow occurred in the university's forest. While such events are certainly challenging for forestry, they also present unique opportunities for applied ecological research. In general, knowledge about windthrows is limited because these disturbances are typically dealt with quickly. Thanks to the strong collaboration between academia and the forest enterprise, we were able to act immediately—setting up research plots in the affected areas and establishing specific treatments. Together with Pavlína Pancová Šimková, we selected a series of sites in different locations, permanently marked them, and assigned them to treatments closely aligned with forestry practices.

Indeed, such a calamity is always unfortunate, but it provides new opportunities and challenges for scientists. What experiments and research does the FER group plan for these plots? What research activities will you personally be involved in?

Marian: We aim to monitor a wide range of factors, including the extent and degree of impacts through machine traffic during salvage logging on soil properties, water dynamics, and CO₂ fluxes, as well as changes in vegetation, fungal communities, and microclimate conditions. My main responsibility will be monitoring microclimate. We plan to install dozens of sensors to track soil moisture and temperature dynamics and later correlate this data with other environmental variables. Additionally, we will compare the microclimate conditions across different treatment plots. These are our current plans, but I'm sure that as we continue working on the project, more research ideas will emerge.

How do you evaluate your scientific experience in the Czech Republic after six months?

Marian: It has been very positive. EXCELLENTIA is a great project, and there are plenty of exciting opportunities ahead. I'm looking forward to seeing what the coming months will bring.

Is there anything that pleasantly surprised you in Brno or at your workplace?

Marian: The city is beautiful—much more so than I had expected, to be honest. I also really enjoy the historic university building and the new office space.

And on the flip side, what things would you most like to bring from your home or previous job to the Czech Republic?

Marian: That's an easy one. I miss the shared flat I lived in for several years, and the landscape around Göttingen is fantastic for cycling. The rural roads there have very little car traffic, which makes for great rides.

You are also expected to supervise students' qualification theses. What current topics in your field would you like to attract students to?

Marian: As mentioned earlier, there are many exciting research possibilities at the new survey plots. Potential thesis topics could focus on soil-related aspects, vegetation mapping, the impacts of machine traffic, microclimate, and, of course, soil moisture. The dynamics of microclimate and soil moisture are becoming increasingly important in the context of climate change, and we have a unique opportunity to study how forestry practices influence them. A helping hand in the context of a student thesis would be highly appreciated.

The FER group's scientific results have been published you can find [HERE](#).

Please get in touch with Mrs Alena Šamonilová, alena.samonilova@mendelu.cz if you have questions or would like to suggest a seminar topic / invite a guest speaker on topics related to forest diversity and functioning above and below ground.

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