

**On-site participation only**

# Novel approaches in tree-ring research

**When?**

**October 4-6, 2023**

**Where?**

**Technical University of Munich, Freising**

**Who can apply?**

**Undergraduates, PhD students and postdocs**

**Lecturers**

**Prof. Dr. Marieke van der Maaten-Theunissen, Giulia Resente, Dr. Jan Tumajer, Dr. Allan Buras, Dr. Jernej Jevšenak**



## Free participation

**You will learn:**

- Different methods for the analysis of pointer years
- The analysis of climate signals in tree-rings with daily climate data
- Deriving seasonal radial growth with machine learning
- The assessment of non-stationarity in tree-climate responses
- VS-Lite simulations of annual growth of conifers
- Automated detection of tree-rings and wood anatomical elements

**REGISTER BY MAY 31**

[Registration form](#) (click to open)  
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ASSOCIATION FOR TREE-RING RESEARCH

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## Preliminary program

### Wednesday, October 4

- **09:00 – 11:00: Analyses of climate signal in tree-rings with daily climate data and the dendroTools R package (Jernej Jevšenak)**
- **11:00 – 12:00: Deriving seasonal tree growth with the rTG R package (Jernej Jevšenak)**
- **12:00 – 13:00: Lunch break**
- **13:00 – 16:00: Artificial intelligence for quantitative wood anatomy with CARROT (Cell And Ring RecOgnition Tool) (Giulia Resente)**

### Thursday, October 5

- **09:00 – 10:30: Detection of pointer years with BSGC (bias-adjusted standardized growth change) (Allan Buras)**
- **10:30 – 12:00: Bootstrapped transfer function stability test (BTFS) for assessing climate-growth non-stationarity (Allan Buras)**
- **12:00 – 13:00: Lunch break**
- **13:00 – 16:00: Radial growth simulations of conifers with the VS-Lite model in Octave (Jan Tumajer)**
- **18:00: Bavarian social dinner in the Bräustüberl**

### Friday, October 6

- **09:00 – 12:00: Detection of pointer years and the calculation of resilience indices with the pointRes R package (Marieke van der Maaten-Theunissen)**

## Additional Information

At the workshop we want to present new tools for tree-ring research. All interested tree-ring researchers should register by May 31 and will be notified by the end of June if they have been selected to participate. Preference will be given to young scientists. Each participant should have a basic knowledge of the R programming language. All participants will receive instructions on how to prepare for the workshop. They should bring their laptops to follow the exercises. We also plan to have a social dinner at the Bräustüberl Weihenstephan. The workshop is free of charge, the costs of travel, accommodation, meals and social dinner must be covered by the participants themselves. The Association for Tree-Ring Research (ATR) provides a limited number of travel grants for participants who are members of ATR and have no funding available. Please find more information about the requirements and how to apply [here](#) (click to open). The final decision on support will be made by the ATR Board.

The workshop will be organised as an on-site event only, with no online participation. We hope to see many of you in Freising!

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