

Forest Growth and Yield Science



The Chair Forest Growth and Yield Science is headed by Hans Pretzsch. He also holds the long-term forest experiments for the Bavarian State Ministry of Nutrition, Agriculture, and Forestry



Focus is on the individual tree growth, structure and growth of forest stands, modelling of forest ecosystems as a whole, and up-scaling on estate and landscape level. We maintain experiments in forests,

with some under survey since about 150 years. We disseminate system knowledge by teaching, development of models, provision of decision support tools, and training of professionals.

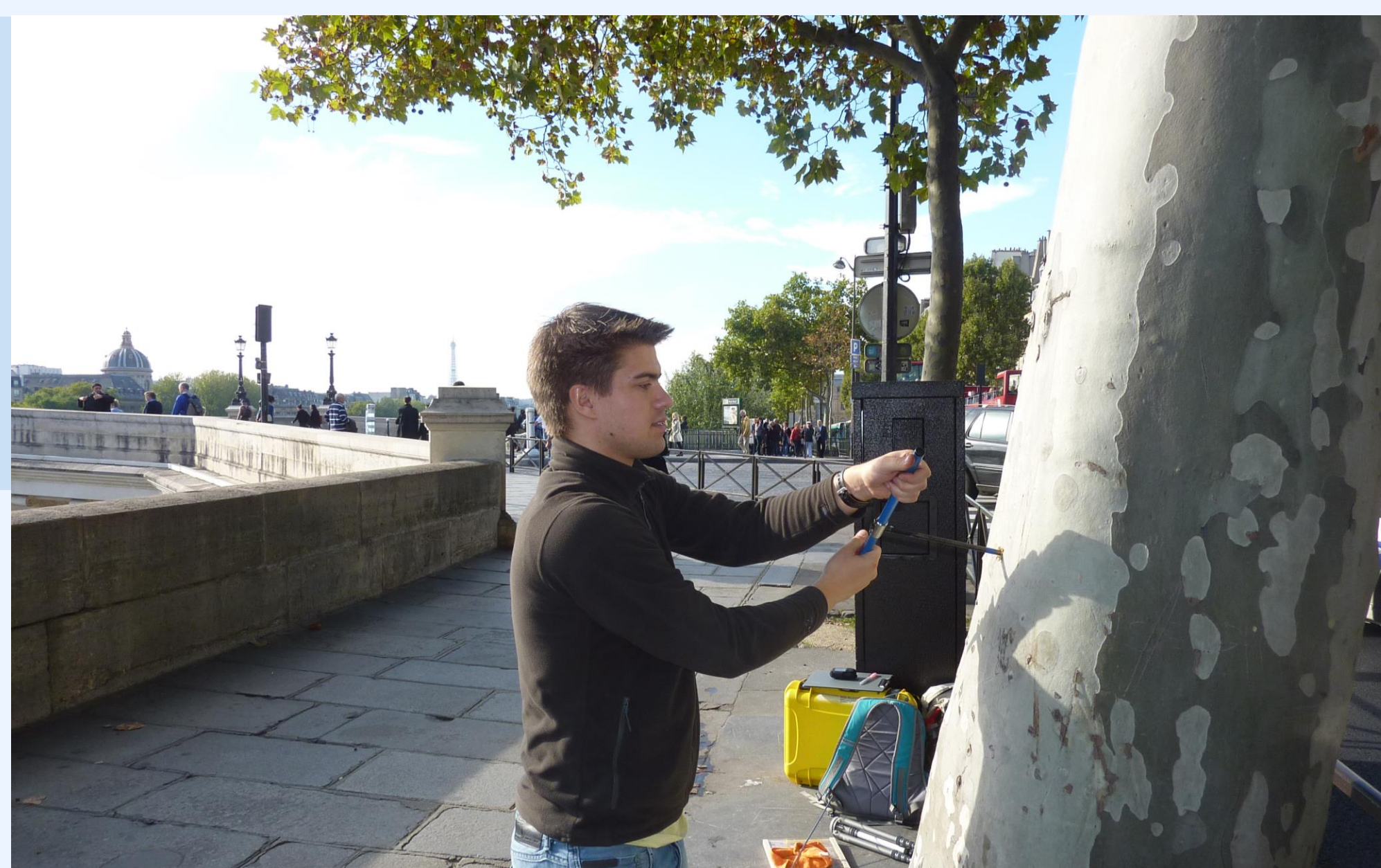
General principles of tree and stand dynamics

- Morphological variability and allometry of trees
- Growth partitioning between trees in a stand
- Competition, facilitation, and individual tree and stand growth
- Yield of mixed-species versus pure forest stands



Forest growth and yield in a changing environment

- Weather extremes and growth reactions: Water retention experiments and studies along ecological gradients
- Climate change and growth trends: Forest stand growth dynamics in Europe have accelerated since 1870



Tree growth in urban environment

- Functions and services of urban trees: Shading, cooling, air moistening, filtering of fine particulates, and biodiversity
- Growth trends of urban versus forest trees: Event and trend analyses based on a network of 10 metropolises on 6 continents



Knowledge transfer

- Decision support tools: SILVA and BALANCE routinely used by forest practice
- Consultancy of decision makers and training of practitioners: State and community forest, private owners