Bachelor/Master/POCS/PUK Projects in the Research Group “Molecular Plant Physiology and Phenomics”

Thomas Roitsch

**Aims:**
- Understanding the interactions between plants and their multifactorial environment within climate change
- Improve growth and abiotic & biotic stress resilience
- Contribute to climate smart breeding
- Contribute to 2\textsuperscript{nd} green revolution

**Focus:**
- Resource allocation & key yield related processes
- Plant growth and development
- Physiological responses to abiotic and biotic stress
- Hormone signaling
- Beneficial and pathogenic microbial interactions

**Methods:**
- Biochemistry
- Physiology
- Molecular biology
- Tissue culture
- High-throughput sensor phenotyping
Project area 3:
Plant Resource allocation – Carbohydrate metabolism

Possible project topics:
- Physiological determinants for growth & development
- Source-sink relations and yield
- Metabolic engineering
- Metabolic control by carbohydrates
- Phenotypic plasticity
- Adaptation to extreme environments

Fruit yield & quality
Adaptation to extreme climates
Engineering senescence delay
Engineering drought tolerance
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For more information and discussion of specific projects, under consideration your special thematic and methodological interests, please kindly contact:

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- Publications: https://scholar.google.com/citations?user=GmbPsSIAAAAJ&hl=en

You are also cordial invited to join the lab to get insight into the methods and topic prior deciding on a BSc or MSc project in a “Project outside course scope (POCS)”. This combines research based training with earning ECTS (7,5/15).