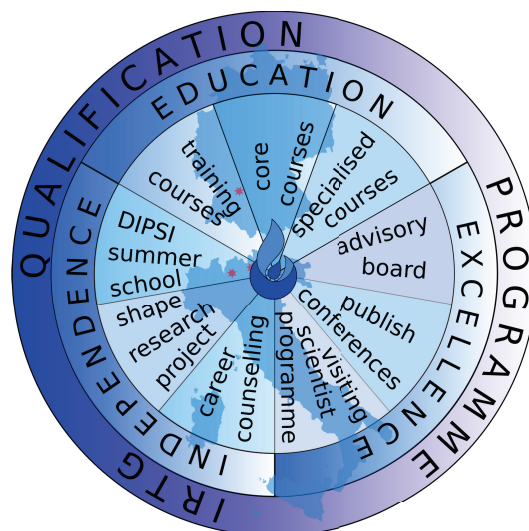


GOALS:

- To offer junior scientists a high-quality **interdisciplinary training**
 - ⇒ Effective communication of results and methods
 - ⇒ Formulation and management of research projects
- To **foster** the development of each doctoral student into an **independent researcher**
- To ensure and develop **standards of excellence** within the universities doctoral research programmes

DROPIT is embedded in the existing well structured doctoral schools

- GRADUS** at the University of Stuttgart
- ISA** at the University of Bergamo
- DICAM** at the University of Trento



Educational Interdisciplinary Programme

Overall time schedule

Year 1	Year 2	Year 3	
Startup phase & core courses	Specialised courses		
	Midterm review		
	Research work		
	Research visits to partner university		
		Completion of the thesis	
			If necessary, extension for doctoral examination
			Postdoctoral researcher, independent advanced research

- Core courses** (part of local universities' general educational programme)
- Specialised courses** (especially designed for this IRTG)
 - Analytical modelling of droplet evaporation
 - Introduction to Discontinuous Galerkin methods
 - Advanced numerical methods for hyperbolic equations and applications
 - Up-scaling of multi-phase flow and transport processes at the interface between porous media and free flow
 - Challenges in micro-CT: multiphase flow and improved reconstruction algorithms
 - PIV and laser based measurement techniques in sprays
 - Modelling of drop heating and evaporation
- Training courses** (key-skill training, e.g. management, communication)

Fostering Independence Path

- Ph.D. students are responsible for the **planning**, budgeting and logistic aspect of the **International Summer School** (once every three years)
- Organisation of an **International Workshop on Droplet Impact Phenomena & Spray Investigations - DIPSI** (annually)
- Opportunity to spend six to nine month **research visits** at the partner university
- Active role in **shaping their own research project** and in the selection of visiting researchers
- Offering one-to-one **mentoring and coaching** to each doctoral student (gender-independent) by a selected reference person
- Sustaining young scientists academic career path from doctoral thesis up to appointment procedure as professor by various **career counselling** offers
- Technology Transfer Initiative (TTI) GmbH of the University of Stuttgart **supports** students creating their own **start-up**
- Encouraging promising young researchers to pursue their scientific careers by offering **start-up grants** for first-time applicants

Ensuring Standards of Excellence

- Invitation of internationally recognized scientists with expertise in topics Ph.D. students are working on (**visiting scientist programme**)
 - ⇒ Promotion of scholarly exchange communication skills
- Attend two **international scientific conferences** and two DIPSI (Droplet Impact Phenomena & Spray Investigations) workshops during their doctoral studies
- Publish** at least one paper in a **peer-reviewed journal** and two conference papers
- Ph.D. students have to present their scientific progress at the joint annual doctoral meeting of the IRTG
- An **advisory board** ensures support and **feedback** on the student's scientific and professional development already at an **early stage** of the doctoral education
- A midterm review is planned to provide a critical assessment of the doctoral research work
- Present and communicate research results at the **graduate school seminar**