Dr. Tom **de Geus**

Profile

Dedicated and innovative **researcher** with a passion for tackling **complex problems** through creative solutions. Disposing of extensive experience in **mechanics**, **physics**, **materials**, and **mathematics & programming**. Excelling at identifying the core of problems, enabling fundamental solutions. Project management: budget & prioritization, resulting in efficient & on-time progress. Supervisor: fostering a productive and collaborative environment, through confidence, patience, and respect.

Contact details

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CH-1004 Lausanne

Personal information

Year of birth: **1985**

Citizenship: **The Netherlands**

Residency: **Switzerland** (from 2016)

Civil status: **Married**

Languages:

Dutch (native), **English** (fluent), **French** (fluent), **German** (good)

Skills

- Problem evaluation & solving
- Project management
- Leadership
- Communication
- Coaching & teaching
- Python, C++, git, LaTeX, …
- Big data, statistics, FEM

Experience

- **Senior researcher Physics** **2019–pres.**
  EPFL (Switzerland) – FNSF Ambizione
  Acquired and managed funding (567 kCHF), independently designed and executed research resulting in top journal publications and conference presentations, independently supervised bachelor and master students, co-supervised PhD student, designed and applied high-performance computations, reviewed for top journals, datachampion.
  Subjects: tribology, fracture, earthquakes, glasses, complex systems.
- **Postdoctoral researcher Physics** **2016–2019**
  EPFL (Switzerland) – NWO Rubicon
  Acquired funding (160 k€), published in top journals, participated in education and student supervision, designed and applied computations.
- **Postdoctoral researcher Valorization** **2016**
  M2i & TATA Steel (The Netherlands)
  Acquired funding (10 k€), developped numerical tool for industrial usage.
- **Research internship** **2010**
  Harvard University (United States)
  Designed and analyzed 3D meta-material, developed numerical tools.

Education

- **PhD Mechanical Engineering (cum laude)** **2012–2016**
  Eindhoven University of Technology (The Netherlands)
  Specialisation: materials (mechanics & fracture) and numerical solvers.
  Martinus van Marum award for best PhD thesis (12.5 k€), various awards.
- **MSc Mechanical Engineering (great appreciation)** **2009–2012**
  Eindhoven University of Technology (The Netherlands)
  Specialisation: mechanics of materials.
- **BSc Mechanical Engineering (great appreciation)** **2004–2009**
  Eindhoven University of Technology (The Netherlands)
  Minor in entrepreneurship, winner entrepreneurship award (1 k€).

Problem solving experience

- **Analytical thinking**: big data from high-performance computing.
- **Critical thinking**: proposed new theory friction.
- **Creativity**: proposed novel simple models by abstraction.
- **Adaptability**: changed scientific fields, driver heavy equipment.

Project management experience

- **Prioritize**: finds balance ad-hoc and permanent solutions.
- **Budget**: managed research project and sport club budgets.
- **Achieving Results**: accomplished goals Ambizione grant.
- **Accountability**: group leader mountaineering & rowing outings.
- **Persistence & Resilience**: 27 publications, Swiss rowing champion.

Leadership experience

- **Inspire**: challenging student projects, world's longest rowing race.
- **Motivate**: co-supervisor PhD-student, team member.
- **Communicate**: TV interview RTS, open-source programmer.
- **Guide**: 30 bachelor and master projects, tutor high school.
- **Inclusion**: buddy autistic student, trainer diverse rowers.
- **Delegate**: shift leader catering team football stadium PSV.