

Welcome at D-ITET!

Welcome Event for new doctoral students

30 November 2021

Welcome



Prof. Sebastian Kozerke

- Head of the Cardiovascular Magnetic Resonance Group at the Institute for Biomedical Engineering
- Director of Studies at D-ITET

Welcome



Sean Weaver

- Doctoral student at the Laboratory of Biosensors and Bioelectronics
- President of VMITET



Reto Kreuzer

- Coordinator of studies and student advisor D-ITET
- Head of student administration D-ITET



Maja Bügler

Head of Human Resources (HR) for D-ITET

Programme

- 1. ETH and D-ITET
- 2. Introduction VMITET
- 3. Doctoral studies, research and teaching
- 4. Some employment information
- 5. Further information & contact persons
- 6. Code of Conduct
- 7. Case studies



Top university in Europe



 THE World University Ranking, Times Higher Education (2021):

Nr. 15 worldwide

Nr. 9 in Electrical & Electronic Engineering

Academic Ranking of World Universities (2021):
 Nr. 21 worldwide
 Nr. 16 in Electrical & Electronic Engineering

 QS World University Ranking of Quacquarelli Symonds Ltd (2021):

Nr. 8 worldwide

Nr. 7 in Electrical & Electronic Engineering

Mission





Faculty – Electronics and Photonics









Prof. Qiuting Huang





Prof. Klaas P. Prüssmann

Prof. Gabriela Hug



Prof. Florian Dörfler

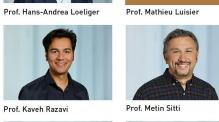


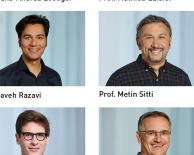


Prof. Christian M. Franck



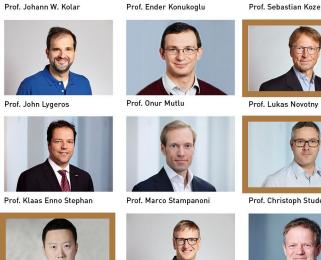
Prof. Benjamin Grewe





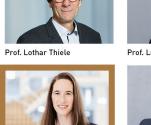






Prof. Roger P. Wattenhofer













Prof. Hua Wang

Welcome Event 01.12.2021

Faculty - Energy











Prof. Helmut Bölcskei

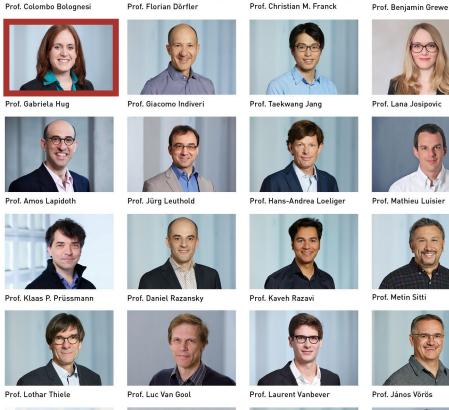
















Prof. Ender Konukoglu



Prof. Sebastian Kozerke





























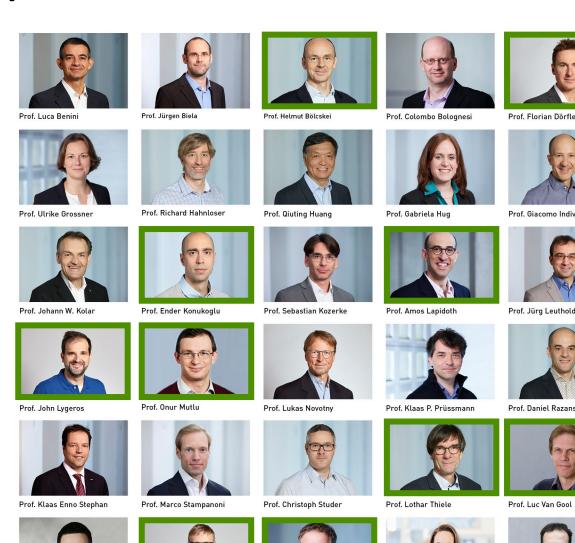








Faculty – Information and Communication



Prof. Armin Wittneben

Prof. Roger P. Wattenhofer



Welcome Event

Prof. Vanessa C. Wood

Prof. Benjamin Grewe

Prof. János Vörös

Prof. Fisher Yu

Prof. Maksym Yarema

Faculty – Biomedical Engineering and Neuroinformatics





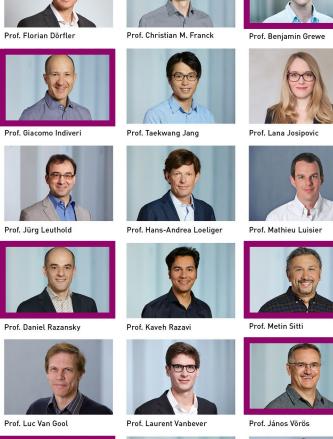


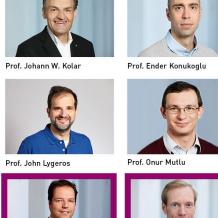


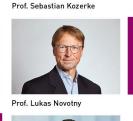
















































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Welcome Event 01.12.2021

Department Management



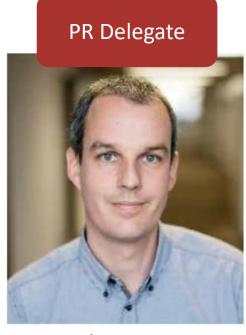
Klaas Enno Stephan



Florian Doerfler



Sebastian Kozerke



Mathieu Luisier

Statistics

	2005	2010	2015	2020
Students	1262	1254	1624	2163
Bachelor students	605	509	672	834
Master students	306	375	507	815
Guest students, Post-graduate students	33	27	42	55
Doctoral students	318	343	403	459
Professors (FTE)	23	26.7	32.7	36
Full Professors	18	21.7	28.7	29.6
Assistant professors (incl tenure track)	5	5	4	6.4
Personnel (FTE)	442	452.8	529.1	643
Scientific staff	365	377.7	455.3	571.8
Technical, IT and administrative staff (including apprentices)	77	75.1	73.8	71.2



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Introduction VMITET

Sean Weaver, **Vmitet**President



Contact Details

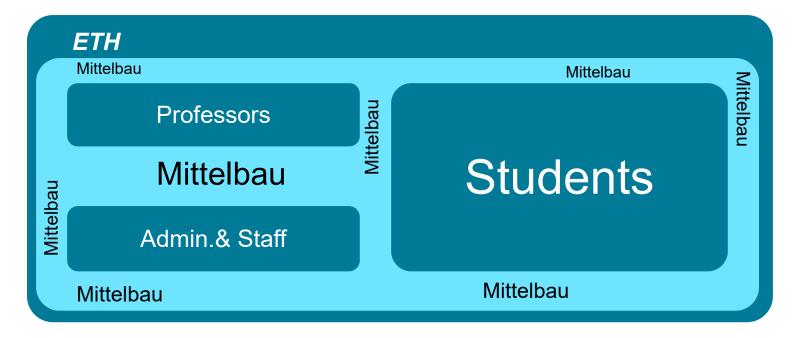
https://www.vmitet.ethz.ch
vmitet@ee.ethz.ch
weaver@biomed.ee.ethz.ch



vmitet is the association of the *Mittelbau* at ITET

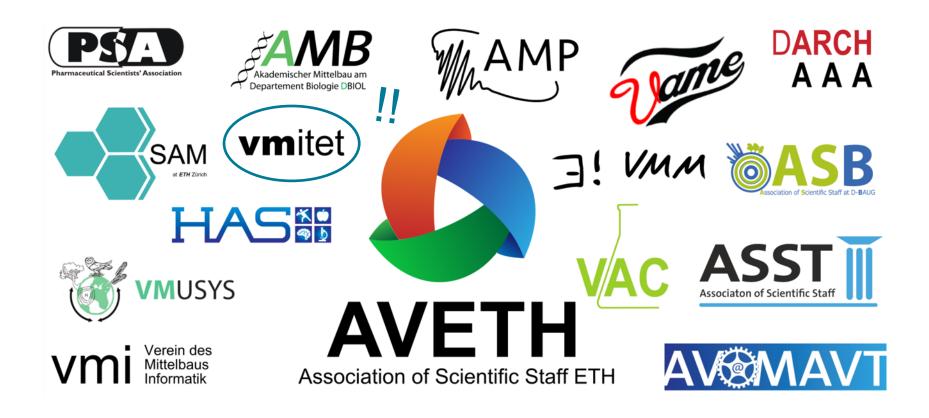
- #1 What is **vm**itet?
- #1.1 What is the Mittelbau?

Doctoral StudentsPost-DocsSenior Scientists





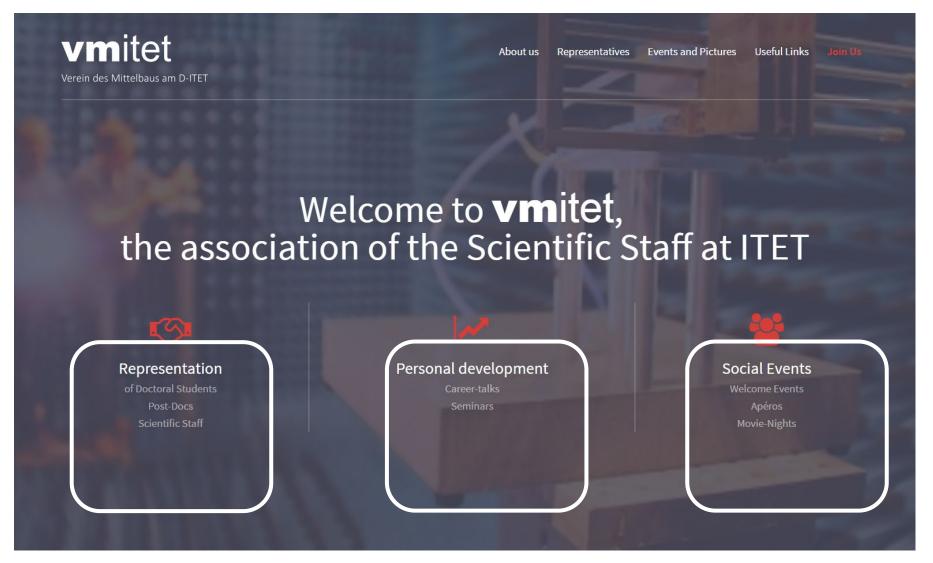
vmitet is the association of the *Mittelbau* at ITET





Welcome Event

#2 What do we do?





#2 What do we do? Representation in ITET Commissions





#2 What do we do? Personal development events

Career Talks

 Alumni come by to tell you about their careers









VMITET Career Talk Christof Zwyssig

19.10.2016

www.celeroton.com

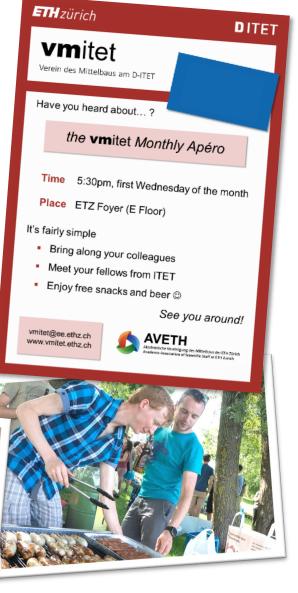
#2 What do we do? Social Events

"Ours"

- vmitet Monthly Apéro
- Welcome event for doctoral students and PostDocs

→ This event!







#3 What *else* can we do? Personal development events

BYOI Bring Your Own Ideas

We take care of the beers ©

Workshops

- Open Access Research
- Sustainable data storage
- Leadership
- ...

Seminars

vmitet meets TIK / IfA / 'your lab name'

Postdoc/PhD career day

Diversity and Inclusion at ITET





Nako Nakatsuka:

Senior Scientist at the Laboratory of Biosensors and Bioelectronics.
 Member of D+ITET Diversity Team and AVETH Diversity Team at ETH Zurich.



Leonard Deuschle:

PhD Student at the Computational Nanoelectronics group.
 Member of D+ITET Diversity Team.

Diversity and Inclusion at D-ITET



Mission Statement

- Create an open discussion culture+enable building of empathy about difficult topics regarding discrimination.
- Transform institutional culture so that the potential of people with diverse backgrounds, personalities and working styles and can be leveraged.







Zeta Avarikioti

Alexander Dietmüller

Andreas Messner







Maria Apostolaki

Leonard Deuschle

Nako Nakatsuka



Dominik Bauer

ETH zürich

Welcome Event

Past D+ITET Events





Overcoming Bias in Academia



How to Leverage Diversity?



Food Bazaar



Role of Diversity in Innovation



Diversity and Inclusion at D-ITET



Contact us A diversity@ee.ethz.ch



https://www.vmitet.ethz.ch/diversity.php



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What is "Research"?



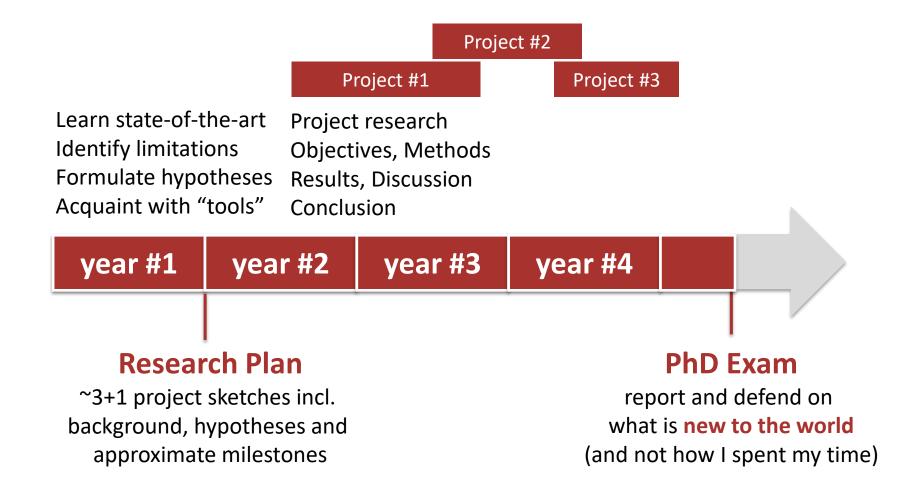
What is new to me versus what is new to the world

School Undergraduate studies

Graduate studies Research degree (PhD)

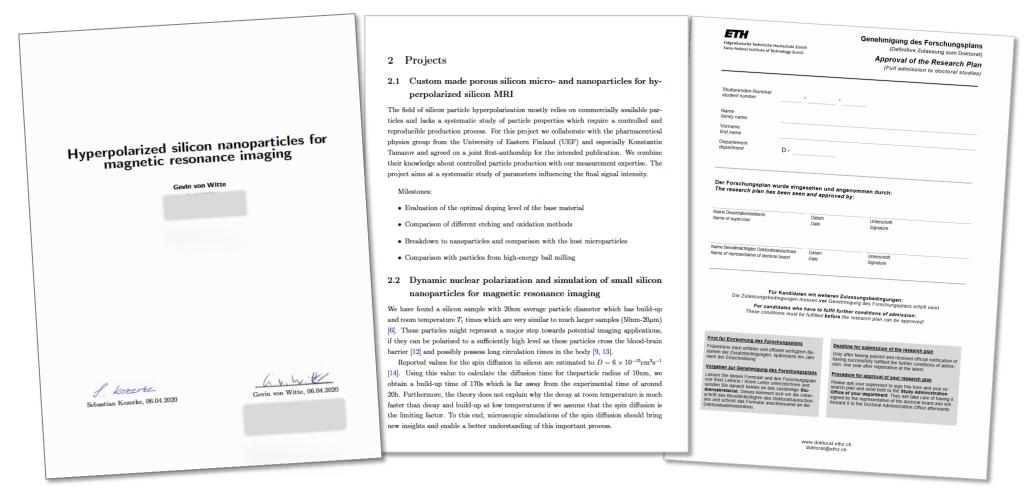


How is "Research" structured?





What is a "research" (or doctoral) plan?

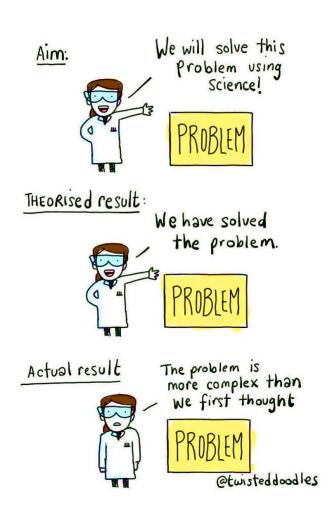




Welcome Event

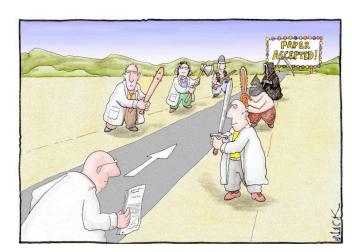
Any "Research" advice?

- Be pilot and driver of your projects
- Take ownership and communicate
- Seek feedback and advice from your advisors
- Arrange for regular personal meetings
- Keep work-life balance (despite bumpy roads)



Why "Research" papers?

- A research project is never finished a paper forces you to report, discuss and conclude your current results and relate them to overall progress in the field
- You learn to defend your work objectively and critically during review process
- Papers document your progress relative to your peers and hence allow you to gauge your performance
- Papers make your data & results accessible to outside world (PhD theses hardly do)



Co-advisor

Transition to New Doctoral Ordinance

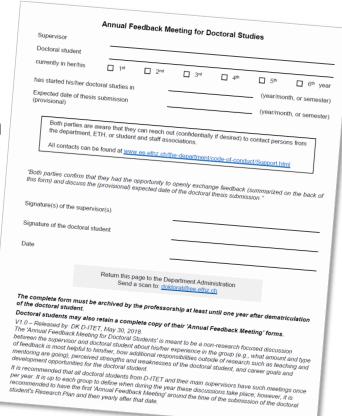
- All doctoral students, currently enrolled included, must agree on a co-advisor by June 30, 2022 – contact your (first/main) supervisor
- Co-advisor provides additional academic mentoring and support to doctoral student.
- Co-advisor must hold a PhD



Yearly updates

What is the "annual feedback meeting"?

- Discussion between doctoral student and supervisor on the progress of the research project, doctoral studies, work situation in research group, as well as development opportunities.
- Mandatory for all doctoral students once per year
- First Annual Feedback Meeting around time of submission of research plan ("doctoral plan")
- www.ee.ethz.ch/studies/forms-and-documents.html



Doctoral Studies - Credit points

Important

During your doctoral studies, you must acquire a total of at least 12 credits (cp) ECTS form courses.

- Students enrolled before 31.12.21: At least one third must be acquired outside the field of research
- Students enrolled after 31.12.21: Must acquire credits in three areas, that
 - Deepen knowledge in the area of research field and extend knowledge outside of it
 - Enable cross-disciplinary competences
 - Integrate into the scientific community.

For more information and details see: www.ee.ethz.ch/doctoral-studies - currently only track (1) above

Preparing the exam – co-examiners and date

3 years after start of your doctorate

The department's **doctoral committee** must have approved to of **at least one co-examiner** (if they are not professors of ETH Zurich)

6 to 3 months before the (planned) exam date

Look for an approx. examination date, define any further co-examiners and the exact thesis topic

NOTE: The **doctoral committee** only meets once a month (see <u>upcoming dates</u>), act accordingly

Preparing the exam – final steps

- At the latest 6 weeks before the doctoral exam
 - Agree on an exact examination date with the examiner and the co-examiner(s)
 - Submit thesis to co-examiner(s) for review
 - Notify the department's doctoral administration of the desired examination date
- At least 15 working days before the doctoral exam the complete registration form with all necessary confirmations must be submitted to the ETH doctoral administration



Education at ETH: BSc/MSc study programmes

- A large offer: currently over 20 BSc and close to 50 MSc programmes
- Compact study programmes:
 - Bachelor's Degree Programme: 6 semester (3 years),
 teaching language mainly German in 1st + 2nd year and largely
 English in 3rd year
 - Master's Degree Programme: 4 semester (2 years), teaching language English
- A research university: Teaching at ETH is a combination of sound scientific foundations and practical application in industry and research.







Bachelor's and Master's Curriculum at D-ITET

Semester 10: Master's Thesis (6 months)

Main ("consecutive") Master's Degree Programme

Semester 7-9: courses and semester projects

Interdisciplinary Master's Programmes Master (2 years) 800 students



Admission of external candidates upon application (ca. 40-60% of cohort at D-ITET, depending on MSc)

Areas of specialization

Semester 5 and 6 (courses, labs and bachelor's thesis)

- Communications
- Computers and Networks
- Electronics and Photonics
- Energy and Power Electronics
- Systems and Control
- Biomedical Engineering

Compulsory Basic Courses

Semester 1 to 4 (2 years)

Bachelor (3 years)

800 students



The Master's Degree Programmes at D-ITET

Programmes offered

- MSc Electrical Engineering and Information Technology (consecutive)
- MSc Biomedical Engineering (interdisciplinary)
- MSc Energy Science and Technology (interdisciplinary)
- MSc Quantum Engineering (interdisciplinary)

Common to all D-ITET master's degree programmes

- Tutor-based programmes: a professor helps students select courses
- 1-2 academic projects (14 weeks, part-time during the semester): Training for master thesis.
- A master's thesis (6 months, full-time) is the culmination of the programme

Your interaction with undergraduate (BSc/MSc) students

Semester	Course type	Specifics
All	Lectures	Ex-cathedra, usually held by a professor (graded exams)
All	Exercises	Solving exercises, usually in smaller groups, supervised by teaching assistants – doctoral students or senior undergraduate students (teaching assistants)
All	Exams	Various types (written, oral) and schedules (end-of-semester, session), corrected mostly by doctoral students
1 to 6	Lab courses	1 compulsory lab per semester (1^{st} / 2^{nd} year), afterwards free choice of lab courses, most labs offered by doctoral students .
3 to 6	Projects & Seminars	Various type of small projects or seminars ranging form a few meetings to all-semester offers, various groups, usually supervised by doctoral students or self-supervised by student TA.
5 and 6	Group Projects	Small third year BSc projects in groups, usually supervised by doctoral students .
7 to 9	Semester Projects	Compulsory at the MSc level, <u>alongside courses</u> , 14 weeks, ca. 25h per week, routine, day-to-day supervision by doctoral students . Official supervision and grading by professor, projects finish with a written report and presentation
10	Master's Theses	Final project, sometimes at very advanced academic level. Supervision, grading and presentation as in semester projects (doctoral students + professors)

ETH zürich

Welcome Event

01.12.2021

In a nutshell

- Teaching at ETH is interdisciplinary, courses offered in various programmes / students with different backgrounds – keep in mind when addressing students' questions
- Admission of students without an ETH-Bachelor's degree further diversifies student body
- Students' workload in first two years of Bachelor programme is very high but varies largely in third year and higher
- Final exams play a very important role at ETH (few midterms), particular care in grading exams is important
- Semester projects and master's theses are the culmination of each programme, different students need different levels of supervision
- If you encounter problems don't hesitate to ask!

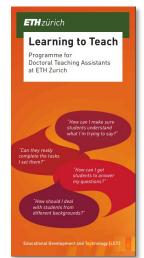
Contact: info@ee.ethz.ch



Teaching Responsibilities ... and Opportunities!

- Teaching is a steppingstone in any academic career consider it an opportunity!
- There are **many levels of teaching**, starting at rather informal lab courses (P&S), managing exercises, supervision of projects/theses and regular teaching in ex-cathedra classes
- For teaching in classes, you should get a <u>teaching assignment</u> and appear in the course catalogue as lecturer

Do you want to get better at teaching?
 Check out the offers of the group for educational development, e.g., didactic courses, teaching labs, refresh teaching, etc.



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Directives for doctoral students with employment at ETH

Duration of employment contracts

- Subsequent contracts 12 months each, final phase before doctoral examination 3 months possible
- For students entering the program after 01.01.2022, first employment contract is 18 months.

Employment level

100%, part-time employment only in special cases

End of employment for doctoral students

- Successful defense of doctoral thesis or non-admission
- Matriculation until at least the end of the doctoral examination, up to 6 years

Extension rules

- Application for extension by Budget Officer must be done at least 2 months before expiry.
 Doctoral student must be informed of extension at least 3 months before expiry.
- If the contract is not to be extended, the doctoral candidate must be informed (in writing) 6-4 months in advance.

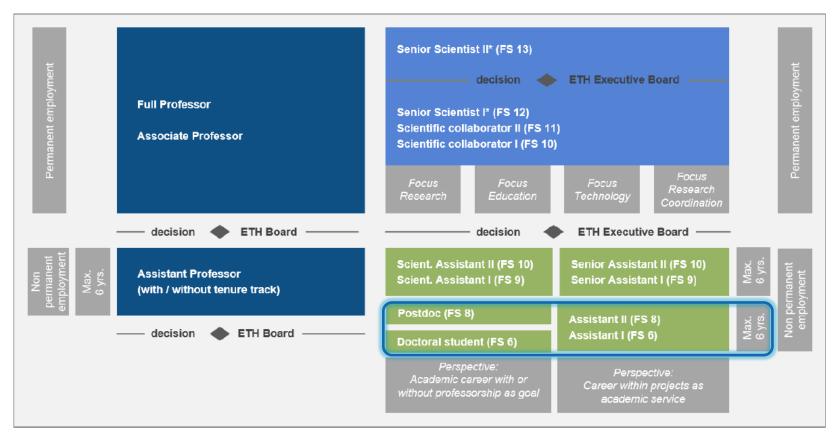


Salary

- Fixed rates for Doctoral students / Postdocs / Assistants, set by Executive Board of ETH / ETH
 Council / Swiss Federal Council to be aligned with SNF
- Payment is in 12 monthly instalments
- Automatic increase every year until 3rd-year-rate
- Policy D-ITET
 - each Institute or Professorship can select a fixed rate
 - this must be applied consistently for all group members
- Obligation to top up the salary to at least the standard rate (SNF) for doctoral students with a scholarship or, where possible, to the usual rate for the Institute / Professorship
- Employees with children of minor age or children in education receive a family allowance



Development opportunities in science and time constraints



Scientific Functions at ETH Zurich

- > 6 years max. as Doctoral Student and Postdoc
- 6 years max. as Senior Assistant or Senior Collaborator

(Defined in: Ordinance governing scientific employees of the Swiss Federal Institute of Technology Zurich)



Vacation and Absences Regulation

- Duty to register absences in **ETHIS** obligation for scientific personnel: negative time management only (vacation and absences)
- 5 weeks of vacations / year
- Vacation days must be taken in the year the entitlement arises, at least once 2 weeks in a row
- You supervisor is allowed to decide **when vacations can be taken** plan your vacations early and get the OK in advance!
- Vacations are for regeneration, supervisors are not allowed to reduce vacation days of their employees
- Accidents must be reported by the injured person via the Human Resources webpage
- A doctor's certificate or accident certificate is required from the fourth day of absence at the latest.

Regulations for the recording of working time and absences Personnel Law ETH domain



Programme

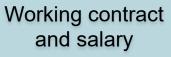
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ETH Welcome Center

More information on: www.welcomecenter.ethz.ch







Language



Arrival in Switzerland



Insurance and Pension Fund



Job search
Job applications



Living/Housing



Taxes



Departure



Family



Living in Zurich



Services und Downloads





Doctoral administration



Reto Kreuzer (ETZ H 83)
Head of student administration D-ITET reto.kreuzer@ee.ethz.ch
044 632 0815 (upon appointment)

Ask your supervisor and the administration/secretary of your lab for inside knowledge!

Contact person for: Student counselling, curricula questions and regulations



Yasemin Tomaschett (ETZ H 85)
Doctoral administration D-ITET
doktorat@ee.ethz.ch
044 632 3336 (Monday, Wednesday, Thursday)

Contact person for:

All administrative steps regarding doctoral programme from official application to doctoral exam



Human Resources



Maja Bügler (ETZ H 86)
personnel manager D-ITET
maja.buegler@hr.ethz.ch
044 633 94 98 (Tuesday – Friday)

Contact person for: provides support in operational personnel management, labour law issues, retention and development, conflicts, consulting



Denise Siegrist (OCT F 19)
personnel administration D-ITET
denise.siegrist@hr.ethz.ch
044 632 09 48 (Monday – Thursday)

Contact person for: residence and work permits, family allowance, social insurance, accident and sickness

Contact and Advice Services



- Support contacts at D-ITET: First point of contact: you can always turn to our designated D-ITET contact person (Director of Studies, Mr. R. Kreuzer for Teaching-related issues, Ms. M. Bügler for HR issues or finally the Head of Department etc.)
- <u>External</u> / <u>internal ETH</u> advice and conciliation service respect:
 Provides all members of ETH with advice and support regarding bullying, harassment and discrimination
- Ombudsperson and confidants: General contact point for conflicts and issues concerning integrity and scientific misconduct
- <u>Psychological Counseling Service</u>: Free of charge service open to all students and doctoral students at the UZH and ETH Zurich
- <u>Safety, Security, Health and Environment (SSHE):</u> Responsible for safety and security as well as the health of the ETH members.

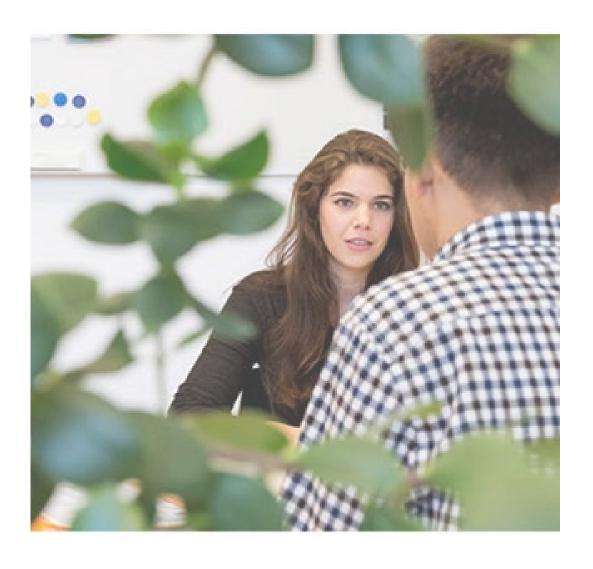


https://respekt.ethz.ch/en/contact-and-advice-services.html



Welcome Event 01.12.2021

More contacts for advice



- Counselling & Coaching
- Studies and Health
- Studying as a parent
- Studies and top-level sports
- Problems / legal advice

Other offices

- Equal opportunities
- Nightline Zurich



More information:

https://www.ethz.ch/students/en/advice.html



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Code of conduct

- Our principles, what is "inappropriate behavior" etc.
- How to react to inappropriate behavior
- Support, contact people

"At D-ITET, we maintain an inclusive, open and friendly environment, where our students, employees and faculty can thrive and achieve their highest potential, based on mutual respect.

To preserve this cordial environment, we do not tolerate misbehavior of any kind, including threats, violence, bullying, sexual harassment, discrimination, or dishonesty in study and in research."

