10 Years Gentner Programme

Before 2007

- very few German Doctoral Students at CERN (~2)
- early ideas how to increase number of Students discussed in various committees
  - DAC Committee (representing Germans @ CERN)
  - KET Committee (representing high energy physics community in Germany)

Conclusion

- need a German Doctoral Student Programme similar to Austrian Doctoral Student Programme
  - Austrian Programme was introduced 1993/94
  - very successful, about ¼ of former Austrian Students stayed at CERN
  - fraction of staff = budget contribution (2.2%)
Early 2007

- working groups formed at CERN and in Germany
- BMBF becomes interested

February 2007

- CERN visit of BMBF
  State Secretary Meyer-Krahmer
- important topic
  - make better use of CERN by German Universities and Research Centres
- “Nutzungsinitiative” established (now the ball started rolling…)
  - decision to create a German Doctoral Student Programme funded by BMBF (among other measures)
Preparation phase

- how to organize
  - meetings, discussions, documents…
- find a proper name
  - Wolfgang Gentner Programme

First Gentner Agreement signed September 2007

- 3 parties involved: BMBF – CERN – DESY
  - Programme Coordination by DESY (Manfred Fleischer)
    - reporting to BMBF, administration, funding requests etc.
  - Local Coordination at CERN (MH)
    - interacting with CERN-HR + with Students, website, statistics etc.

First Gentner Student started 1 November 2007
Wolfgang Gentner (1906 – 1980)

- German nuclear scientist
  - major research: nuclear photo effect, gamma rays, biophysics, archaeometry
- connected to CERN from the early days
  - participating in negotiations leading to the foundation of CERN (together with Werner Heisenberg)
  - director of the CERN synchrocyclotron and first CERN Research Director 1954 – 1959
  - chair of CERN Scientific Policy Committee 1969 – 1971
- President of CERN Council 1972 – 1974
- appointed 1959 as first director of the new Max-Planck-Institute for Nuclear Physics in Heidelberg
First Gentner Day: 18 November 2009

→ after ramp-up to ~25 Students
→ annual Gentner Days until 2014
→ since 2015 semi-annual

First ‘Gentner-Doktor’ made his PhD 22 June 2011

→ Marcel Schuh
→ now at Karlsruhe Institute of Technology (KIT)

Second Gentner Agreement signed September 2011

→ valid from 2012 – 2017
→ new: also EU nationals are eligible to become Gentner Students

12th Gentner Day – 25 October 2017
10 Years Gentner Programme

2012/13

- brochures + new website (German/English)

January 2015

- drastic change of CHF – EUR exchange rate (-15%)
  - consequence: less funding available, some reduction in number of Students

100th Gentner Student started 1 July 2016

- Christian Zimmer (Heidelberg)

Prolongation signed on 31 March 2017

- New agreement valid until 2023 (3 + 3x1 years)
- Funding increased to 1.95 M€/year
  - sufficient for (on average) 39 Students as foreseen in initial Programme
Main Programme points

- special German Doctoral Student Programme
  - in addition to the existing CERN Doctoral Student Programme
  - (almost) identical conditions except funding (subsistence) by BMBF
  - extra funds for Students’ travel to Germany and for Supervisors’ travel to CERN
  - open to EU nationals from CERN Members (Member States + Associate Member States)

- mid- and long term goals
  - better usage of CERN resources by Germany
  - better connection between German Universities and CERN
  - long-term: more German staff at CERN
    - presently only ~6.7% German staff (175/2600), but 20.4% contribution of DE to CERN budget
    - IT: 11.7% (10.6% contribution), GB: 8.1% (15.1% contribution), ES: 6.4% (7.2% contribution)
Presently 34 active Gentner Students (7 female = 21%)

- + 9 Germans in regular CERN Programme

Expect to raise up to 39 Students in Dec 2017 / Jan 2018
Doctoral Student Applications

Typically ~21 applicants/year from Germany (~stable since 2008)

- 19 applications from DE in first selection round 2017 → new overall high

Only one selection board in 2017 so far

~21
CERN Doctoral Students

Nationalities of all Doctoral Students at CERN

- Italians (40 Students) + Germans (39 Students) are leading
**CERN Doctoral Students**

- Institute Country of all Doctoral Students

  ➞ 49/201 Students enrolled at German Universities (24.4%)
Gentner Students

- coming from 31 different Universities in DE
  - also from university groups without or with little CERN contacts beforehand

- 43% of Gentner Students from Technical Universities (stable since many years)

12/16 German States

- NRW and BW are leading
- only a few small(er) States are missing
Thesis Topics of Gentner Students
(active + former)

 Majority of topics in Instrumentation (35%), Accelerator Technology (26%), Computing (17%), all others = 23%
56 PhDs so far (12 female = 21%), 7 Students have cancelled their PhD

- average age at PhD (defense): 30.5 years (median)
- average duration of PhD: 42.2 months (median) = 5.8 months after end of CERN 3-years contract

Physics PhDs in Germany (2016)
- 22% female PhDs students
- 30.7 years (median) at PhD
- 50.4 months (median) duration of PhD
Whereabouts of Gentner Students

- first employment of >60% of the Gentner Students: CERN Fellow(!)

Present Employment

- 76 former Doctoral Students
- 7 CERN Staff Members, 1 with indefinite contract (since 1 April 2016)
- 2 Staff now are supervising Gentner students

First Employment

- 7 CERN Staff Members
- CERN Fellow: 47 (62%)
- Staff (University): 1 (1%)
- Staff (Research Centre): 1 (1%)
- Post-Doc (Research Centre): 2 (3%)
- Post-Doc (University): 8 (11%)
- Industry: 11 (14%)
- Teacher: 1 (1%)
- other: 4 (5%)
significant increase of DE Fellows by former Gentner Students

about 40% of German Applied Fellows are former Gentner Students
300 German Doctoral Students, Fellows and Staff right now

- 30 active + 25 former (German) Gentner Students at CERN (=18%)
Gentner LinkedIn Group

**Gentner Group @ LinkedIn** (active + former Students)

- 54 of 120 active + former Students are at [LinkedIn](https://www.linkedin.com) professional network

  - presently 40 Students in Gentner Group
  - important to follow whereabouts of former Students (feedback to BMBF!)
  - + good way to stay connected

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**German Doctoral Student Programme at CERN (Wolfgang Gentner Scholarships)**

41 members

**ABOUT THIS GROUP**

The German Federal Ministry of Education and Research (BMBF) is supporting technical Doctoral Students from Germany at CERN (Wolfgang Gentner Scholarships). Active and former students are encouraged to join this group to keep contact to each other, also after the end of their scholarship.

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**10 years Gentner Programme at next Gentner Day on 25 October 2017**

The next semiannual meeting (Gentner Day) of students and supervisors of the Gentner German Doctoral Student Programme will be held on Wednesday, 25 October 2017 at CERN. [https://indico.cern.ch/event/Gentner10](https://indico.cern.ch/event/Gentner10)

This time, it will be a special Gentner Day, dedicated to the 10 years anniversary of the Gentner Programme!

The Programme was actually set-up in 2007 and on 1 November 2007, the first student started at CERN. On this occasion, Marcel Schuh, the first "Gentner Doktor", now working at KIT - Karlsruhe Institute of Technology, has kindly agreed to talk on his experience as one of the first Gentner Doctoral Students and on his further career. Marcel was Gentner Student from April 2008 - March 2011 and made his PhD at Heidelberg University with "Study of Higher Order Modes in Fermionic and Bosonic Superconducting Resonators."

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Michael Hauschild - CERN, page 18
General News and Remarks

Travel

- travel to home university constantly used (stable over years)

- trend since 2015:
  - ~25% less travel to DPG Physical Society Spring Meetings + other national society meetings
  - please make use of these opportunities, funding available and should be used!

Very important!!!

- when finishing ➔ please keep me informed on your further whereabouts + upload your thesis to CDS

- key figures needed for BMBF indicating the Programme success!
Prolongation of Gentner Programme signed in April 2017 by BMBF, CERN, DESY

New agreement valid 3 years + 3x1 years → end of 2023

Identical conditions (e.g. students to be enrolled in DE, EU citizenship)

Funding increased to 1.95 M€/year (+13.4%) → sufficient for (on average) 39 Students as foreseen in initial Programme

Next Gentner Day: 25 April 2018 (tbc)