

A photograph showing several hands of different skin tones holding a globe of the Earth. The globe is the central focus, with hands visible from the top, bottom, and sides. The background is a soft, out-of-focus light color.

The Bamberg CS30 Strategy

Encouraging female students since 2005

Prof. Dr. Ute Schmid, Prof. Dr. Daniela Nicklas

Our background

- Prof. Dr. Ute Schmid
 - Cognitive Systems
 - Dean of Faculty (since 2017)
 - Faculty Women Representative 2004-2017 (now Vice)
- Prof. Dr. Daniela Nicklas
 - Mobile Systems (since 2014)
 - Dean of Studies (since 2017)
 - Vice Women Representative since 2014



Why CS30?

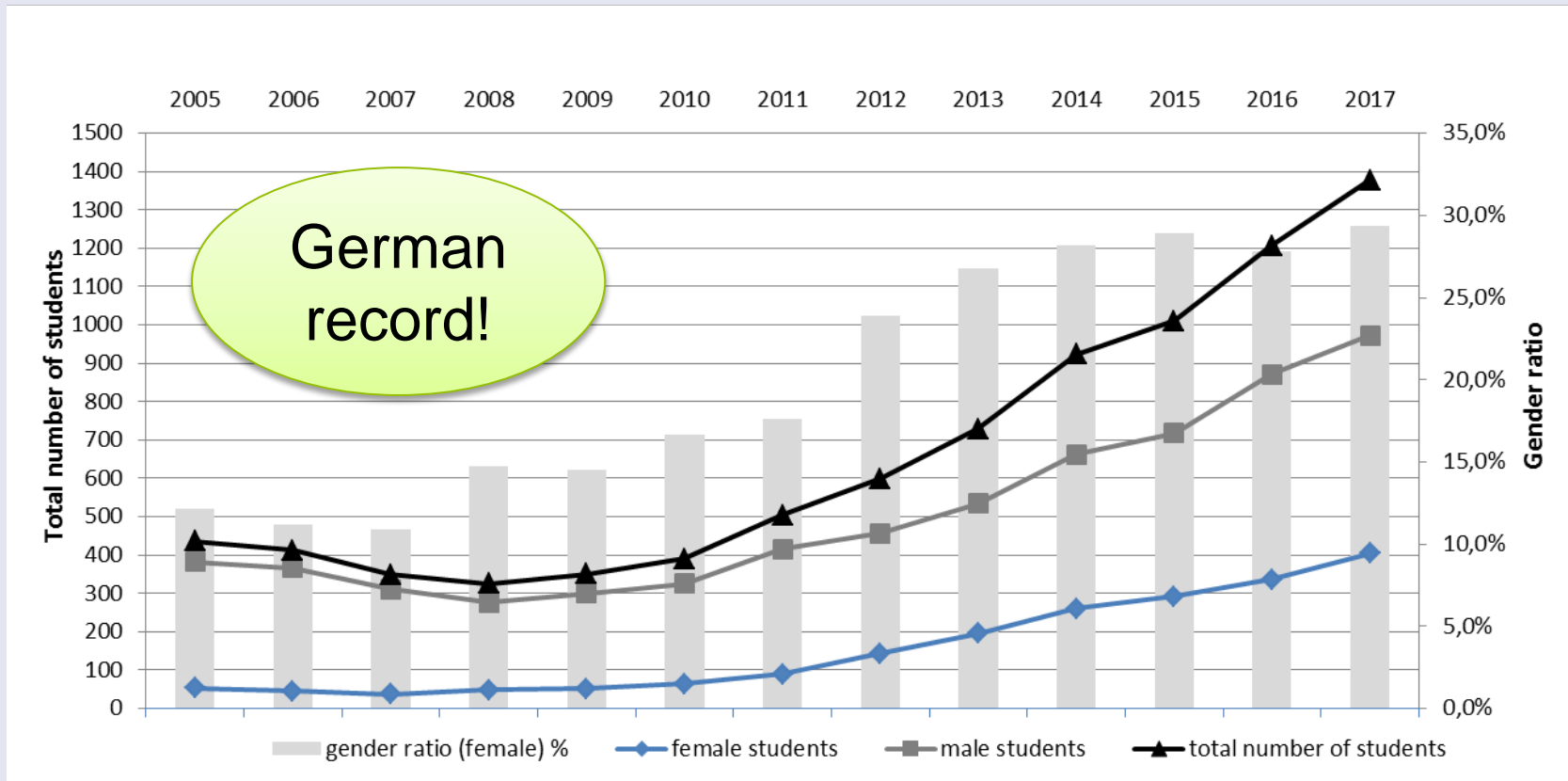
„The object of our activities is to reach a female/male ratio of at least 30% across all computer science programs so that women studying computer science are not perceived as a minority.”



Reached for first year students in 2014

... but not for all courses yet!

Gender ratio and total number of students at the WIAI Bamberg



Encourage: Actions starting at age 5



Continuous evaluation of strategy actions



CS for age 5 to 10





Holiday workshops for age 10 – 15





Mentoring for high school students



Retain: Actions for female students

- Female tutors as role models
- Mentoring and Networking
- Seminar Course Gender Aspects of Computer Science
- CoachNet: Individual coaching for career development
(Project funded by Adecco and Rainer Markgraf Foundation)



The Bamberg CS30 Strategy



Effects of actions?

Which actions are effective?

**Continuous evaluation
of strategy action:
Empirical research**

Research actions: Alumnae tracking



- ESF project, 01.10.2012 - 31.03.2015
- Evaluation of female and male careers of computer science students in Bamberg
- Covering students and graduates since 2003
- Interviews with HRs of over 30 companies
- Main results concerning female students:
 - Significantly better high school math grades than males
 - Mis-match of self image and study success

Related Publications

- [1] U. Schmid, K. Weitz, and A. Gärtig-Daug, "Informatik in der Grundschule," *Informatik Spektrum*, vol. 41, no. 3, pp. 200–207, Jun. 2018.
- [2] S. Förtsch and U. Schmid, "Frauen in der Informatik: Können sie mehr als sie denken? Eine Analyse geschlechtsspezifischer Erfolgserwartungen unter Informatikstudierenden," *GENDER – Zeitschrift für Geschlecht, Kultur und Gesellschaft*, vol. 10, no. 1, Mar. 2018.
- [3] S. Förtsch, "Find the Right Role: Specialist vs. Management Career - Individual Career Coaching for IT Specialists," in *Proceedings of the 4th Conference on Gender & IT*, New York, NY, USA, 2018, pp. 135–137.
- [4] M. Wolking and U. Schmid, "Mental Models, Career Aspirations, and the Acquirement of Basic Concepts of Computer Science in Elementary Education: Empirical Evaluation of the Computer Science Experimenter's Kit," in *Proceedings of the 12th Workshop on Primary and Secondary Computing Education*, New York, NY, USA, 2017, pp. 119–120.
- [5] K. Weitz, A. Gärtig-Daug, D. Knauf, and U. Schmid, "Computer Science in Early Childhood Education: Pedagogical Beliefs and Perceived Self-Confidence in Preschool Teachers," in *Proceedings of the 12th Workshop on Primary and Secondary Computing Education*, New York, NY, USA, 2017, pp. 117–118.
- [6] A. Gärtig-Daug, K. Weitz, and U. Schmid, *Kindliche Modelle der digitalen Welt*. Lecture Notes in Informatics (LNI), Gesellschaft für Informatik, 2017.
- [7] A. Gärtig-Daug, K. Weitz, M. Wolking, and U. Schmid, "Computer Science Experimenter's Kit for Use in Preschool and Primary School," in *Proceedings of the 11th Workshop in Primary and Secondary Computing Education*, New York, NY, USA, 2016, pp. 66–71.
- [8] U. Schmid, A. Gärtig-Daug, and S. Förtsch, "Neigung entdecken, Informatik studieren, als Informatikerin arbeiten–Vernetzung von Ma's snahmen und Begleitforschung an einem Standort," *Frauen machen Informatik. Magazin der GI-Fachgruppe Frauen in der Informatik*, vol. 39, pp. 21–25, 2015.
- [9] U. Schmid, A. Gärtig-Daug, and S. Förtsch, "Introvertierte Studenten, fleißige Studentinnen? – Geschlechtsspezifische Unterschiede in Motivation, Zufriedenheit und Wahrnehmungsmustern bei Informatikstudierenden," *Informatik Spektrum*, vol. 38, no. 5, pp. 379–395, Oct. 2015.
- [10] A. Gärtig-Daug, S. Förtsch, and U. Schmid, "'Alumnae Tracking' - Frauenkarrieren in der Informatik," vol. 3, 2014.

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