Explorative Analysis and Visualization of Large Information Spaces

Scope and Function of our Graduiertenkolleg

Presentation at 1. Summerschool
St. Vigil, 14-Sept-2004
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Motivation for this presentation

- PhD students of our PhD program are more or less familiar with the concept of our Graduiertenkolleg
- Bring everyone up to the same level of knowledge about the GK
- Discuss details, procedures, open questions
- Introduce the program of the summerschool
Outline

- Definitions
- Other comparable GKS
- Who is who in our GK
- Funding of the GK
- Teaching and learning activities of the GK
- Requirements
- Presentation of the GK
- Scientific program of summerschool
- Nonscientific complement

Two definitions

- **Definition 1**: The words *Graduiertenkolleg, GK, PhD Program,* and *research training group* are synonyms for simplicity.

- **Definition 2**: The **DFG** is the *Deutsche Forschungsgemeinschaft*, i.e., the German Science Foundation, located in Bonn, and funding our PhD Program. See [http://www.dfg.de](http://www.dfg.de).
The mission of the DFG

- serves as the central public funding organisation responsible for promoting research in Germany,
- fosters scientific excellence through competition,
- advises parliaments and public authorities on questions relating to science and research,
- encourages international collaboration in science and the humanities, and
- supports the advancement and education of young researchers.

Research Training Groups: Definitions

- Research training groups ...
  - are university training programmes established for a specific time period to support young researchers in their pursuit of a doctorate
  - serve as the main funding instrument which provides these doctoral students with the opportunity to work within a coordinated research programme run by a number of university teachers
  - give specially qualified doctoral candidates the opportunity to write their doctoral thesis in a collaborative research environment
  - are open to all disciplines; an interdisciplinary focus of the research and study programme is desired.
Research Training Groups: Definitions

- A research training group
  - centres on a thematically defined research programme at an excellent level that has been designed by the university teachers involved in the group.
  - aims to complement and extend the individual specialisations of the doctoral students
  - serves the purpose of promoting communication within the group as a whole as well as contacts with other research teams in Germany and abroad.
- Activities of a research training group include
  - transparent und innovative supervisory structures
  - opportunities for mobility and networking within the international research community

Research Training Groups: Goals

- to enable doctoral students to gain early independence in research
- to shorten the amount of time it takes to receive a doctorate
- to lower the age at which students are conferred their doctorate
- to increase the overall appeal of the doctorate
- to promote international cooperation in the field of doctoral support, and, in particular, raise the attractiveness of German universities for international students pursuing a doctorate by
  - encouraging international collaboration at all Research Training Groups
  - funding travel and stays abroad for doctoral students
  - offering a programme for visiting professors
  - accepting international students into the doctoral programme
  - promoting International Research Training Groups
Research Training Groups: Figures

- Number of stipends (female/male) in humanities, biology/medicin, natural sciences, engineering (2002/03):

![Pie chart showing distribution of stipends]

- Funding for GKs (76.5 mEUR) versus total funds (1274 mEUR) in 2003
- Funding of our GK: 413 kEUR/yr

Research Training Groups: Examples

- GK 244 3D Image Analysis and Synthesis, Erlangen, 1996
- GK 446 Knowledge Representation, Leipzig, 1998
- GK 635 Bioinformatics, Bielefeld, 2000
- GK 1042 Explorative Analysis and Visualization of Large Information Spaces, 2004
Our GK

- 11 doctorate students (with stipend, 3 yrs max)
- 1 post doctorate researcher (with stipend, 2 yrs max)
- $X \leq 18$ associated members (with other support)
- 3 research master students
- 1-3 student administrative assistants
- 9 advisors (proposers of the GK)

- duration Jul 2004 - Dec 2008 (4.5 yrs)
- DFG evaluation in 2007/08, if successful:
- second period of 4.5 yrs support until Jun 2013
GK (post) doctorate students

- Doctorate students (→ 1. advisor)
  - Alexandros Altis (→ D. Saupe)
  - Joachim Böttger (→ O. Deussen)
  - Thorsten Büring (→ H. Reiterer)
  - Nicolas Cebron (→ M. Berthold, 1.4.05)
  - Martin Hoefer (→ U. Brandes)
  - Florian Mansmann (→ D. Keim)
  - Evghenia Stegantova (→ S. Leue)
  - Rui Xi (→ M. Scholl)

- Post Doc
  - Guiseppe Di Fatta

GK associated students

- Associated doctorate students (→ 1. advisor)
  - Michael Balzer (→ O. Deussen)
  - Thomas Gabriel (→ M. Berthold)
  - Thomas Luft (→ O. Deussen)
  - Tilo Ochotta (→ D. Saupe)
  - Martin Röder (→ D. Saupe)
  - Christian Pich (→ U. Brandes)
  - Mauro Ruggeri (→ D. Saupe)
  - Svetlana Vinnik (→ M. Scholl)
  - Bernd Wiswedel (M. Berthold)
Research and administrative students

- Research master students
  - Aliaksei Holubeu (→ O. Deussen)
  - Werner König (→ H. Reiterer)
  - Daniela Oelke (→ D. Keim)
  - Jan Rittinger (→ M. Scholl)

- Administrative student assistants
  - Martin Mader (→ D. Saupe)
  - Jens Schulze (→ D. Saupe)
  - Nicolas Cebron (until 31.3.05, → D. Saupe)

Advisors - Proposers of the GK

- Prof. Michael Berthold
- Prof. Ulrik Brandes
- Prof. Oliver Deussen
- PD Raouf Hamzaoui
- Prof. Daniel Keim (Wed)
- Prof. Stefan Leue
- Prof. Harald Reiterer
- Prof. Dietmar Saupe
- Prof. Marc Scholl (Wed)
Yearly funding categories

- Visiting researchers
- Consumables
- Travel
- Workshops/Summerschools
- Books/articles/software
- Small devices
- Page charges
- Advertisement

- Funds transferable between categories (except page charges)
- Funds not transferable to following year

Objective for spending funds

- Allocate and spend funds in order to maximize the performance of the educational and scientific performance of the GK

  In particular
  - Plan for visiting researchers well in advance and host them
  - Plan for a visit of yours abroad for an international collaboration in the second or third year (several weeks/months)
  - Organize special workshops / events / summerschools
  - Suggest books required for studying and research
  - Submit papers to conferences and actively participate with them
Activities of the GK: Research and teaching

- 2-3 graduate courses with or without problem sessions per semester (in English)
- Seminar / colloquium series of the GK
  - Invited speakers (e.g., visiting researchers)
  - Advisors present research areas
  - PhD students report once per semester
    - 30 minutes each
    - Oral presentation plus a 2 page written report at end of semester
- Dates, time, location still pending
- Summerschools, workshops
  - In cooperation with other GKS
  - Open internationally
- Weekly research group meetings

Requirements/goals for doctorate students

- Participate regularly in research meetings, the GK seminar, some of the courses (total of 3 in first year)
- Work and learn hard to get the most out of the program
- Actively search for discussion with advisors, students, visitors, and scientists elsewhere
- Submit results to conferences in collaboration with advisors
- Finish thesis within 36 months
- ... plan for your success!
Presentation of the GK

- The webpages are the main window for the outside world to look at the GK
  - We need your support to create and maintain optimal webpages
- Strategy
  - Centrally maintain uniform pages (M. Mader)
  - Pages contain key data and milestones for each PhD project
  - Pages should be primary source for reporting to the DFG
  - Additional data in personal web pages at the research group
- Maintain a 2-page summary of research work (PDF)
  - Update at the end of each semester and after each milestone (e.g., a paper)
- Maintain a up-to-date demo that can be shown anytime to visitors, DFG reviewers, etc

„Corporate identity“ of the GK

- We need
  - Logos for our web pages and for PPT presentations
  - Template for beamer presentations
  - Template for 2-page summaries
- Any more suggestions?
So much to do, and on top of that ...

- The members of the PhD program should strive to build strong interactions between themselves at three levels: Scientific, learning, personal
- The university of Konstanz offers one of the best extracurricular sports program
  - Suggestion: Uni-Hütte in Montafon (to be rented for up to 9 people)