On the evolution of PhDs

an empirical study

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- Friday 5 October 2007
- Paris, France
- Co-located with ICSM
- Organised by ERCIM Working Group on Software Evolution

- Papers and tool demonstrations solicited
  - on all aspects of software evolution
  - submission deadline 25 June 2007
  - Publication in Electronic Communications of the EASST
    - peer-reviewed scientific open access ISSN journal

- Website
Planet Evolution

- When will it be launched
  - January 2007

- What is it?
  - A content management system for software evolution research
  - An open means to share information about software evolution
    - Everyone can access and update the information relevant to him or her

- Where is it?
  www.planet-evolution.org
  (currently just an alias of the ERCIM Evolution website)

- Other “planets”
  - www.planet-mde.org
  - A planet on graph transformation research (coming soon)
  - ... and many more planets to come ...
  - All part of an interplanetary system www.megaplanet.org
Research questions

• How do the themes conducted in PhD research evolve over time?

• How is PhD research within a particular domain distributed geographically?

• How does the gender of PhD students evolve over time?
  - Are there geographical differences?

• How does the language used to write dissertations evolve over time?
  - Are there geographical differences?
Collected PhDs per year
Collected PhDs per country

The chart shows the number of PhDs collected per country. The Netherlands leads with significantly more PhDs than other countries, followed by Belgium (Flanders), and the USA. Germany and other countries have much lower numbers. The chart also includes some countries like Ireland, Japan, India, Poland, Romania, and Greece, which have very few or no PhDs collected.
Evolution of PhD topics
PhD topics per country

- SoftwareEvolution
- GraphTransformation
- OOSD
Evolution research per country
## Use of English versus native language

<table>
<thead>
<tr>
<th>Country</th>
<th>English</th>
<th>Native</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Netherlands</td>
<td>97%</td>
<td>3%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>84%</td>
<td>16%</td>
</tr>
<tr>
<td>Sweden</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Spain</td>
<td>10%</td>
<td>90%</td>
</tr>
<tr>
<td>Norway</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Italy</td>
<td>83%</td>
<td>17%</td>
</tr>
<tr>
<td>Germany</td>
<td>34%</td>
<td>66%</td>
</tr>
<tr>
<td>France</td>
<td>10%</td>
<td>90%</td>
</tr>
<tr>
<td>Canada</td>
<td>93%</td>
<td>7%</td>
</tr>
<tr>
<td>Belgium (Wallonie)</td>
<td>78%</td>
<td>22%</td>
</tr>
<tr>
<td>Belgium (Flanders)</td>
<td>94%</td>
<td>6%</td>
</tr>
</tbody>
</table>
Use of English versus native language
The case of Germany
Gender of PhD students per country
Evolution of Gender of PhD students