

informatik  
austria

## RESEARCH EVALUATION PRACTICE IN AUSTRIA

Gerald Steinhardt (Vienna University of Technology)

# Research evaluation

## Types of research evaluation

- Institution - related (institutional level)  
e.g.: university, faculty / department / research group, ...
- Individual - related (individual level)  
e.g.: hiring, promotion (tenure decision, etc.), ...

# Research evaluation

## **Goals** of research evaluation

- **basis for decision making:** hiring, promotion, resource allocation, strategic decisions, ...
  - *focus:* outcomes & achieved objectives & input/output-ratio
  - with regard to institutions/units or individuals:
- **basis for feedback** with the view of changing for the better, of improving processes and of fostering goal attainment (incl. strategic decisions)
  - *focus:* existing strengths (incl. achieved goals) & identifying + remedying weaknesses / problematic aspects & identifying needs for support + resources etc.
  - with regard to institutions/units or individuals
- **mixed forms**

# Research evaluation in Austria

- no general rules & standards
- different practices of institution-related evaluations
- convergence of practices with regard to individual-related evaluations in CS

The following primarily refers to computer science unless the evaluation comprises different disciplines.

# Evaluation of universities

- Ordered by the Ministry of Science & Research
- Goal: Resource allocation
- Level: Universities (15 universities in Austria)
- Instrument: “**performance agreement**” btw Ministry & each university (every 3 yrs; referring to 3 areas of responsibility: teaching, research, infrastructure & strategic development)
- Indicators:
  - Core research indicator:  
Number of scientists employed by the university  
weighting: min 80%
  - Additional “competitive research indicators”  
weighting: together max. 20%
    - ▶ Income from third-party funded research projects (research grants and projects funded by industry)
    - ▶ PhD-students employed by the university

# Evaluation of universities

- Problematic:
  - mainly input-variables
  - do not reflect the research achievements
- (Hidden) agenda:
  - not primarily to support excellent research, but to guarantee, that each university gets nearly the same percentage of the total government funding as a core funding as in the previous years (including a slight strategic incentive)
- Support of excellent (fundamental) research:  
by Austrian National Science Fund (FWF)

# Evaluation of faculties / departments / research groups

- Mainly ordered by university (rarely initiated by the respective units themselves)
- Goal: mainly resource allocation to faculties/departments/research groups; strategic decisions
  - Comparison of different disciplines (faculties/departments)
- **Often quantitative evaluations** -  
Frequently used indicators:
  - Number of journal publications (WoS/Scopus)
  - Income from third-party funded research projects (research grants and projects funded by industry)Of increasing importance:
  - Prestigious research grants
    - ▶ European level: ERC-Grants (ERC)
    - ▶ National level: START-Award & Wittgenstein-Award (Austrian Science Fund)

# Evaluation of faculties / departments / research groups

Sometimes modification of this way of proceeding:

- 2 publication indicators instead of 1:
  - ▶ Number of journal publications (WoS/Scopus) AND
  - ▶ Number of journal publications (WoS/Scopus) plus peer-reviewed conference papers (WoS/Scopus & non-WoS/Scopus)  
→ a kind of double-entry bookkeeping
- 2 indicators instead of 1 with regard to income from third-party funded research projects/grants:
  - ▶ Income from industry funded research projects AND
  - ▶ Income from competitive research grants (peer-reviewed; e.g. FWF = Austrian Science Fund)
- weighting / rank order of journals (e.g. modified legacy Australian listing)

Rankings & benchmarking are of little importance.

# Evaluation of faculties / departments / research groups

- **Rarely qualitative evaluations based on key data:**

- »**Informed peer-review process**«

- especially when evaluation is initiated by the respective units themselves

In this case: goals usually focus on getting feedback with the view of improving one's performance etc.

# Individual-related evaluation

Focus in this presentation:  
solely research evaluation  
(not teaching, leadership skills,  
service to the community, etc.)

Hiring, internal promotion (e.g. tenure decision), ...

Responsible: Rector / Vice-Chancellor in cooperation with the Dean/Head of CS faculty/department

## Mainly »informed peer-review process«:

Qualitative approach, underpinned & supplemented by quantitative data, where it is appropriate & makes sense.

- Comprehensive quality-oriented evaluation
- Renowned international reviewers

Main focus:

- International standing & appreciation by the scientific community
- Quality of research activities

Basis:

Application / file (candidate dossier)  
(often incl. [5] most relevant publications)

# Individual-related evaluation

## Evaluation criteria

- Quality of publications (incl. conference papers)
- Creativity / originality of research activities
- Prestigious research grants & awards (ERC grants, Wittgenstein Award, START Award, ...)
- Research grants (based on competitive processes - peer review: e.g. FWF=NSF)
- International standing / reputation / visibility
- Mentoring (PhD supervisions)
- International research cooperations
- If applicable: academic development potential
- (Funding by industry) - increasing doubts, whether this as a good criterion for evaluating *research quality*
- (Interdisciplinary collaborative research)
- (Artefacts)
- (Impact: societal, economic, ...)

Bibliometric indicators are usually only ancillary tools - and not a central/official criterion.

# Individual-related evaluation - special challenge:

## Comparative evaluation of individuals from different fields of CS

- Why? Announcements of open positions
  - which do not only address one very specific field of CS
  - but address scientists from several fields of CS→ result in a larger number of high quality applications  
→ perfect instrument for hiring excellent people
- *Comparative evaluation of individuals from different fields of CS by »informed peer reviewing« is demanding, but it works (→ positive experiences)*  
Precondition: renowned international reviewers (3-4) from each field (domain), forming domain-specific panels  
Procedure:
  1. Peer reviewing of each “candidate” by 3-4 expert(s) from their field (domain-specific panel)
  2. Consolidation within the domains (by reviewers of the domain-specific panels)
  3. Consolidation across domains (by chairs of domain-specific panels) → shortlist
  4. Final decision: Hearing with the shortlisted candidates; discussion and decision

# Problematic issues:

- (Ongoing) **comparisons between disciplines** on basis of journal publications (WoS/Scopus) by university management
- Income from **funding by industry** (= input variable) as indicator of research quality of faculties/institutes  
→ due to lack of peer reviewing etc.
- **Need for a great number of peers for peer reviewing**  
→ challenging (for the institutions looking for reviewers as well as for the colleagues asked to serve as reviewers)
- Another matter altogether - but not less important:  
**Peer reviewing of research grant proposals:**  
Different approaches to reviewing in different disciplines (i.e.: different & discipline-specific reviewing cultures):  
*in computer science*: often hypercritical reviews even with regard to excellent proposals;  
*whereas in some other disciplines*: reviewers are really enthusiastic about excellent proposals  
→ due to lack of money for funding: Austrian Science Fund frequently rejects proposal submissions even if only 1 review includes minimal criticism

# Research evaluation

Certainly  
important

Important, too -  
should be fostered

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# Research evaluation practice in Austria

*The End*

Gerald.Steinhardt@tuwien.ac.at

Gerald Steinhardt, TU Wien