

# Measuring the Impact of Scholarship

Discussion with Scientists  
Rudjer Boskovic Institute  
Zagreb, Croatia  
27 May 2005

Richard E. Stern, MLS, Ph.D.

Seton Hall University  
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**Formal review of scholarship**

Friday, May 27th  
11 do 12.30 a.m  
3rd wing

**FORMAL REVIEW OF SCHOLARSHIP: INTERNATIONAL PERSPECTIVE**

**Richard E. Stern**  
Seton Hall University  
South Orange, New Jersey, USA

Please confirm your attendance by register at:  
<http://nippur.irb.hr/hrv/stern-kol-sci.php>

The development of scholarship is a fundamental part of the mission of many universities in the United

**In This Newspaper**

Formal review of scholarship  
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**NEWS & EVENTS**

**Governor Makes Surprise Visit**  
At the Stillman School of Business, acting Governor Richard J. Codey today made a surprise announcement that state revenues for the current fiscal year will be \$500 million higher than originally projected.

**Class of 2005 Embarks on Journey to the Future**  
Alive with ambition, members of the Seton Hall University Class of 2005 Monday, May 9, inaugurated a new chapter in their lives at the University's 148th Commencement Exercises.

**Death of Peter W. Rodino Jr., Professor of Law**

**Order a 2005 Commencement Video**

[More News & Events...](#)

**WHAT'S HAPPENING AT SHU?**



**Teammate, Classmate, Athlete**  
Armed with a good memory that she says helps her both on and off the softball field, left-handed pitcher Megan Meyer '05 credits her athletic and academic accomplishments to her work ethic and unyielding drive to succeed. [more](#)

# University of Notre Dame Mission

- Notre Dame also has a responsibility to advance knowledge in a search for truth through original inquiry and publication.

-Undated

# RBI

## Mission & Vision

- **Mission**

The mission of Rudjer Boskovic Institute (RBI) is to provide the science expertise indispensable for the development, prosperity and well being of Croatia.

- **Vision**

The vision of RBI is a high level scientific excellence in physical, chemical, biological, biomedical, environmental and information sciences delivering great benefits and value to the industry, government and higher education.

# RBI

## Research Standards

- **Excellence in Research**

Success of all activities of RBI ultimately depends on uncompromising standards of scientific excellence, acquired and proven in significant contributions to fundamental research. RBI is a home to national and European centres of excellence in selected fields of science. The interdisciplinary aspect of the RBI organisation is particularly suited to the problem-oriented research environment of the 21st century.

# *RBI publications listed in Web of Science*

- *Language=All languages*
- *Database=SCI-EXPANDED*
  - *2003: 371 publications including 341 articles*
  - *2004: 403 publications including 358 articles*

# Review of Scholarship for Promotion & Tenure

Need for handbook of measures:

- In many institutions a majority of internal reviewers are not conversant with scholarship of candidate's discipline.
- Faculty candidates know their fields but are unaware of how to measure and present their scholarship.
- The development of digital forms of scholarship leads to the creation of new measures.
- Scholarship of teaching movement adds complexity to measurement.

# Categories in Measuring Scholarship for Promotion & Tenure Review

- Inputs
- Outputs
- Impacts
- Reviews / Awards

# Measures Inputs

Inputs refer to the effort invested & obstacles overcome to achieve an output.

- Example: Checklist to ascertain contributions of multiple authors

# Measures Outputs

An output is a work that is in its readied form for presentation and distribution to the intended audiences

- Examples: Patent; Publication (journal article), E-publication (wiki, blog, e-book)

# Refereed Journal Definition

“A peer-reviewed journal is one that has a portion of submitted manuscripts evaluated by someone other than the editor of the journal.”

Weller, Editorial Peer Review, 2001.

# Journal Rank Within a Discipline

## Criteria:

- Impact factor
- Circulation
- Index status
- Journal rejection rate
- Surveys of readers
- Open availability on the Web

# Journal Rank by Impact Factor

Journal Citation Reports (JCR):

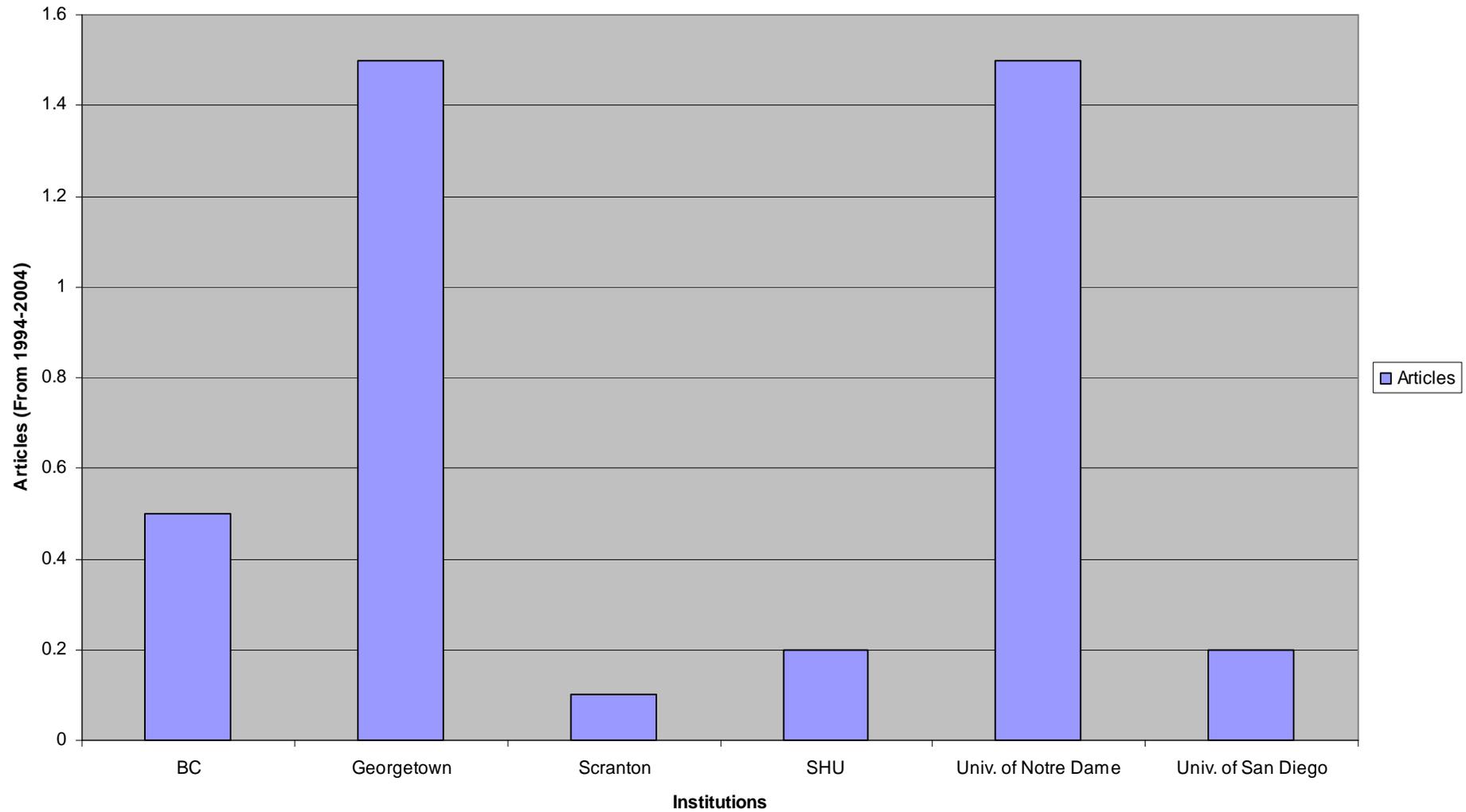
- Ranks journals according to “impact factor”.
- Impact factor is a ratio of the number of cites received by a journal in a year divided by the number of publications in the journal two years earlier.
- In science it includes about 6,100 journals including ejournals.

# Outputs

## Quantity of Publication

Types and rates of publications vary between disciplines.

# Average Annual No. of Articles Indexed in Web of Science per Full-Time Faculty Member



# Measures Impacts

Impacts are unobtrusive measures that indicate the attention, reception, or effect of a work.

- Examples: Citation; Sales; Ownership by academic libraries

# Measures

## Reviews / Awards

- Reviews / Awards are informed judgments by impartial individuals or groups regarding a work that has been presented or is in some sense complete.
  - Examples: External review; Review journal article; Best paper in conference; Research grant

# Impacts: Consumption

- Evidence that someone accessed, retrieved, browsed, purchased, borrowed or read a publication, viewed a presentation, looked at an artifact, etc..

# Measures – Impacts - Consumption

## The Most Frequently Downloaded Chapters in Annual Review of Genetics

### **#1. THE GENETICS OF RNA SILENCING,**

*Marcel Tijsterman, René F. Ketting, Ronald H. A. Plasterk, Annual Review of Genetics  
December 2002, Vol. 36: Page 489 - 519 .*

(PDF downloaded 9253 times)

# Impact--Citation in Web of Science

- R.B.I. Authored-Article:
  - **Title:** Net accumulation and flux of dissolved organic carbon and dissolved organic nitrogen in marine plankton communities
  - **Author(s):** [Sondergaard M](#), [Williams P J L](#), [Cauwet G](#), [Riemann B](#), [Robinson C](#), [Terzic S](#), [Woodward EMS](#), [Worm J](#)
  - **Source:** LIMNOLOGY AND OCEANOGRAPHY 45 (5): 1097-1111 JUL 2000
  - **Document Type:** (Article )
  - **Cited References: 59**      **Times Cited: 34**

# Citations to **SONDERGAARD #1**

- Canfield DE, Kristensen E, Thamdrup B  
[Preface](#)  
ADVANCES IN MARINE BIOLOGY 48: XI+ 2005  
**Times Cited: 0**
- 2. Hopkinson CS, Vallino JJ  
[Efficient export of carbon to the deep ocean through dissolved organic matter](#)  
NATURE 433 (7022): 142-145 JAN 13 2005  
**Times Cited: 0**
- 3. Bode A, Varela MM, Teira E, et al.  
[Planktonic carbon and nitrogen cycling off northwest Spain: variations in production of particulate and dissolved organic pools](#)  
AQUATIC MICROBIAL ECOLOGY 37 (1): 95-107 NOV 2 2004  
**Times Cited: 0**

# Citations to **SONDERGAARD #2**

- Hessen DO, Agren GI, Anderson TR, et al.  
[Carbon, sequestration in ecosystems: The role of stoichiometry](#)  
ECOLOGY 85 (5): 1179-1192 MAY 2004  
**Times Cited: [5](#)**

# Citation to Hessen

- Frost PC, Evans-White MA, Finkel ZV, et al.

[Are you what you eat? Physiological constraints on organismal stoichiometry in an elementally imbalanced world](#)

OIKOS 109 (1): 18-28 APR 2005

**Times Cited: 2**

# Book listed in Google Scholar

[Ragusa Intelligence and Security \(1301-1806\) : A Model for the ...](#)

**... Markovich, V.** (in Croat), **Rudjer Boskovich**, Vol. I, Zagreb, 1952. **Mitich, I.** (in Croat), ``Consuls and the Consul Service of the Old ...

# Markovich, V. cited by Dedijsr in Google Scholar

- [Ragusa Intelligence and Security \(1301^ 1806\):  
A Model for the Twenty-First Century?](#)  
S DEDIJER - [Cited by 1](#) - [Web Search](#)  
Page 1. STEVAN DEDIJER Ragusa Intelligence  
and Security (1301^1806): A  
Model for the Twenty-First Century? In 1972,  
with an Exxon ...  
International Journal of Intelligence and ..., 2002  
- [taylorandfrancis.metapress.com](http://taylorandfrancis.metapress.com) - [ingenta.com](http://ingenta.com)

# My Questions to the Audience

- Do you publish journal articles primarily?
- Do RBI faculty go through a promotion and tenure review process?
- Are there reviews of faculty scholarship? If so, by whom, when, using what criteria?
- How do you measure scholarship at RBI and at other institutions of higher education in Croatia?
- Have you submitted manuscripts for electronic publication?
- How does electronic publication affect your selection of where to submit your work for publication?
- Do you prefer to read articles in print or electronic format?
- Are any of the measures that I described in use in Croatia?
- Do you have reaction to any of the other measures I discussed?

