Make an Impact! Assessing Scholarly Research and Output while Connecting to your Faculty

Anne E. Rauh, Syracuse University
Linda M. Galloway, Syracuse University

Available at: https://works.bepress.com/anne_rauh/4/
Make an Impact!
Assessing scholarly research and output while connecting to your faculty

Anne Rauh and Linda Galloway
Syracuse University Library
How do we measure scholarly research and output?

• Quantity
  – Publications

• Quality
  – Citations

• Funding
  – Research funds

• Technology transfer
  – Patents, start-ups, etc.
Why do we offer this service?

• Build relationships with faculty
• Learn about faculty research interests
• Assist in evaluation of departments, programs, and faculty
• Accreditation efforts
• Marketing for academic programs
Examples of Connections
What do you want to assess?

- Institutions
- Departments
- Centers or Groups
- Individuals

What type of data do you need?

- Qualitative
- Quantitative
  - Publications
  - Citations to pubs
  - Publication influence
  - “Other”
    - Social media buzz

Our focus will be on individual, quantitative data.
What tools will we discuss?

- Scopus
- Web of Science
- Google Scholar
- Journal Citation Reports & Journal Analyzer
- altmetrics
Conventional Tools
Consider Before Beginning:

• Cost of subscription databases
• Ease of use
• Time frames
  – Citations to past year’s work (2011),
  – Citations to author’s work in past 5 years (07-11)
  – Citations to author’s work in past 10 years (02-11)
• Skewed towards STM fields
• Don’t compare across databases!
## Scopus or Web of Science?

### Scopus

SciVerse Scopus is the world’s largest abstract and citation database of peer-reviewed literature.

- Contains 46 million records, 70% with abstracts
- Nearly **19,500** titles from 5,000 publishers worldwide
- Includes over 4.6 million conference papers
- Provides 100% Medline coverage

**Subscription includes:**

- 23 million records with references back to 1996 (of which 78% include references).
- 21 million records pre-1996 which go back as far as 1823.

### Web of Science

*Web of Science* consists of nine databases containing information gathered from thousands of scholarly journals, books, book series, reports, conferences, and more.

- It fully covers over **12,000** major journals.
- Create a visual representation of citation relationships with Citation Mapping
- Capture citation activity and trends graphically with Citation Report
- Use the Analyze Tool to identify trends and patterns

**Our subscription:**

- Science Citation Index Expanded (1899-present)
- Social Sciences Citation Index (1898-present)
- Arts & Humanities Citation Index (1975-present)
Citation Metrics for Individual Faculty Members

Assess scholarly impact by looking at:

- Works published
- Citations to works published
- Publication influence (Journal Citation Reports)

Susan Parks
Assistant Professor of Biology, Syracuse University
Bioacoustics
Verified email at syr.edu
Homepage
Cited Reference Search in Scopus

Make Author Selection

Author Last Name: dibble
  E.g., smith
Affiliation: E.g., university of toronto

Initials or First Name: T.S.

Tips:
- Create an account to save your work
- Check within each author group for publications
- Merge author profiles, if necessary

Author results: 2

Authors | Documents | Subject Area | Affiliation |
---------|-----------|--------------|-------------|
Dibble, Theodore S. | 50 | Chemistry; Physics and Astronomy; Environmental Science; ... | State University of New York Upstate Medical University |
Dibble, Theodore S. | 10 | Chemistry; Physics and Astronomy; Chemical Engineering; ... | State University of New York Upstate Medical University |

### Overview options

- **Exclude from citation overview:**
  - [ ] Self citations of selected authors
  - [ ] Self citations of all authors

- **Sort documents**
  - Year descending

- **Date range**
  - 2007 to 2012

- **Update overview**

### Citations

<table>
<thead>
<tr>
<th>Document</th>
<th>Year</th>
<th>Citations</th>
<th>Total</th>
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<tr>
<td>1</td>
<td>2011 Impact of tunneling on hydrogen...</td>
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<td>2011 Effects of olefin group and its...</td>
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<td>2011 Understanding OH yields in elect...</td>
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<td>4</td>
<td>2010 Potential energy profiles for th...</td>
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<td>2009 Optical diagnostics of a low pow...</td>
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<td>2009 A study of OH radicals in an atm...</td>
<td>1</td>
<td>2</td>
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</table>

**Total:**
- 399 (2007)
- 38 (2008)
- 38 (2009)
- 34 (2010)
- 49 (2011)
- 63 (2012)
- 19 (Subtotal)
- 241 (>2012)
- 0 (Total: 640)
Cited Reference Search in Web of Science

Tips:

- Create an account to save your work
- If you have a very prolific author, ask her to assist with article identification
- By default, citation counts are for All Years – you must modify for your chosen parameters
- Read the ‘Cited Reference Search’ how-to and follow the directions closely
Must always ‘Finish Search!’
Results: Cited Author = (dibble, ts)

Results: 182
Page 1 of 19
Go

1. Title: Theoretical study on HO2-initiated atmospheric oxidation of halogenated carbonyls
   Author(s): Long Bo; Long Zhang-Wen; Wang Yi Bo; et al.
   Source: INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY Volume: 112 Issue: 8 Special Issue: SI Pages: 1926-1935 DOI: 10.1002/qua.23189 Published: APR 15 2012
   Times Cited: 0 (from Web of Science)

2. Title: Role of O-2 + QOOH in Low-Temperature Ignition of Propane. 1. Temperature and Pressure Dependent Rate Coefficients
   Author(s): Goldsmith C. Franklin; Green William H.; Klippenstein Stephen J.
   Source: JOURNAL OF PHYSICAL CHEMISTRY A Volume: 116 Issue: 13 Pages: 3325-3346 DOI: 10.1021/jp210722w Published: APR 5 2012
   Times Cited: 0 (from Web of Science)

3. Title: Vibrationally Resolved LIF Spectrum of Tertiary Methylcyclohexoxy Radical
   Author(s): Wu Qin; Lang Gaiping; Zu Lily; et al.
   Source: JOURNAL OF PHYSICAL CHEMISTRY A Volume: 116 Issue: 12 Pages: 3156-3162 DOI: 10.1021/jp218888c Published: MAR 29 2012
   Times Cited: 0 (from Web of Science)

4. Title: Quantum Mechanical Study of Sulfuric Acid Hydration: Atmospheric Implications

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Refine Results
Search within results for
Web of Science Categories
- CHEMISTRY PHYSICAL (66)
- PHYSICS ATOMIC MOLECULAR CHEMICAL (76)
- CHEMISTRY MULTIDISCIPLINARY (20)
- METEOROLOGY ATMOSPHERIC SCIENCES (20)
- ENVIRONMENTAL SCIENCES (9)

Document Types
- ARTICLE (185)
- REVIEW (15)
- PROCEEDINGS PAPER (4)
- BOOK CHAPTER (2)
- CORRECTION (1)

Subject Areas

Authors
Citation Mapping in Web of Science

Visually Demonstrate Author/Article Influence
Google Scholar Citations

Tips:
- Public profiles are available in Google
- Can search for an author from within your own profile page
Cited Reference Search in Google Scholar Citations

• Author needs to set up their profile (using their Google account); Google Scholar will harvest related data.

• Authors can add articles, groups of articles, edit entries, etc.

• Profiles are private unless author elects to make public

• Quality control: “To be eligible for inclusion in Google Scholar search results, your profile needs to be public and needs to have a verified email address at your university”
### Theodore S. Dibble

Professor of Chemistry, SUNY-Environmental Science and Forestry  
Atmospheric Chemistry - Combustion - Physical Chemistry  
Verified email at esf.edu  
Homepage

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**Citation indices**

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<tr>
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<tr>
<td>i10-index</td>
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<td>8</td>
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**Citations to my articles**

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<tr>
<td>Electron diffraction studies of the kinetics of phase changes in molecular clusters: freezing of carbon tetrachloride in supersonic flow</td>
<td>43</td>
<td>1991</td>
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| LS Bartell, TS Dibble  
The Journal of Physical Chemistry 95 (3), 1159-1167 |           |      |
| Isomerization of OH-isoprene adducts and hydroxyalkoxy isoprene radicals        | 43        | 2002 |
| TS Dibble  
The Journal of Physical Chemistry A 106 (28), 6643-6650 |           |      |
| Reactions of the alkoxy radicals formed following OH-addition to α-pinene and β-pinene. CC bond scission reactions | 34        | 2001 |
| TS Dibble  
Journal of the American Chemical Society 123 (18), 4228-4234 |           |      |
| Electron diffraction studies of the kinetics of phase changes in molecular clusters. 3. Solid-state phase transitions in selenium hexafluoride and tert-butyl chloride | 32        | 1992 |
| TS Dibble, LS Bartell |           |      |
## Comparison

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<tr>
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**Times cited** = number of documents published from 2007-2012 that have cited this author's work

**H index** = Number of author's articles that have been cited at least this many times (during time span indicated)

Searches performed 30 May 2012
Journal Assessment

*Where to publish??*

Metrics can help identify the most influential (i.e. most cited) journals in a field. This does not mean each article has the same influence...

- Journal Citation Reports (Thomson-Reuters)
- Journal Analyzer (Scopus)
### Impact Factor

The journal Impact Factor is the average number of times articles from the journal published in the past two years have been cited in the JCR year.

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</table>
SJR: “SCImago Journal Rank is weighted by the prestige of a journal. Subject field, quality and reputation of the journal have a direct effect on the value of a citation.”
Author Disambiguation

- **Scopus** – Scopus Author Identifier (53 author sets for M.J. Mitchell)

- **Web of Science** – Distinct Author Identification System (494 author sets for MJ Mitchell)

- Google Scholar Profiles

- Institutional ID
ORCID

• Not for profit
• Create registry of unique identifiers for individual researchers
• Open and transparent linking between ORCID and other ID schemes
• Many vendors, institutions are members
Alternative Tools
altmetrics is the creation and study of new metrics based on the Social Web for analyzing, and informing scholarship
total Impact

Sample Collection

Permalink: http://total-impact.org/collection/IMqAnvl

10.1093/molbev/msk025

10.1371/journal.pbio.0050082

10.1016/j.tig.2009.07.005

10.1371/journal.pone.0007595
Reader Meter

DUNCAN J WATTS

Hₚ-Index: 35
Gₚ-Index: 57
Most read publication: 173
Total number of publications: 139
Total bookmarks: 3681

Top 10 publications by readership (?

2. Watts (2002) 149
6. Salganik et al. (2006) 131
7. Watts et al. (2002) 120
8. Watts and Dodds (2007) 110

Duncan J Watts's coauthors

- Luis A N Amaral
- Albert-László Barabási
- Albert-László BARABÁSI
- Albert-László BARABASI
- Duncan S Callaway
- Munnun De Choudhury
- Frédéric Dalsace
- Frederic DALSACE
- Coralee Damay
- Munnun DE CHOU DHURY
- In Defense
- Arjun Deuker
- Peter Sheridan Dodds
- Peter S Dodds
- Peter Dodds
- David Dobos
- Robert G Eccles
- Karen Fraser
- Michael Frumin
- Rashi Glazer
- Sharad Goel
- Daniel G Goldstein
- Steve Hasker
- Eric Von Hippel
- Jake Hofman
- Yoshito Hori
- Harry Hutzon
- Yoko Ishikura
- Jon Kleinberg
- Klaus Kleinfeld
- G Kossinets
- Georgi Kossinets
- Marina Krapkovsky
- Sébastien Laharie
- The LEADER
- Phillip Longman
- Brand Magic
- R Dean Malgren
- Michael C Mankins
- Winter A Mason
- Winter MASON
- Daniel C Medina
- Christopher Meyer
- Charles R Morris
- Robby Muhamad
- Mark Newman
- Mark E J Newman
- Mark E J Newman
- M E J Newman
- David M Pennock
- Jonah Peretti
- Barbara Perry
- Harry Potter

Permalinks

HTML: http://readermeter.org/Watts_Duncan_J
JSON: http://readermeter.org/Watts_Duncan_J/json

Powered by Mendeley
Key Issue <br>Collective Action for the Open Reseacher & Contributor ID (ORCID)

7 months ago http://dx.doi.org/10.1629/24277
Share on Mendeley - Share on CiteULike

★ Martin Fenner liked this
This paper discusses a potential rollout strategy for ORCID. - Martin Fenner

Shares How often this work has been shared by others

Citations How often this work has been cited by others
Limitation to altmetrics

• New
• Time frame – some new tools cannot search old mentions, tweets, etc.
• Rely on user generate metadata
• Should social media mentions be given the same weight as scholarly article citations?
• Can these tools be easily manipulated to raise significance of an article?
Scholarly Metrics in Context
Assessing Output Using these Metrics

**Strengths**

- Quantitative information about output
- When used together, tools give a broad picture of the impact of journal publishing activity
- Widely used within academic departments to inform decisions of promotion and tenure

**Weaknesses**

- Two most popular tools only measure the work that they index
- Traditional tools don’t capture grey literature and other informal scholarly communication
- Coverage does not always include lifespan of author’s work due to date coverage of tools
- Developed to measure scientific scholarly publishing activity but now being applied to other disciplines where measures may not fit
Framing Discussions with Faculty

• Tools don’t replace disciplinary knowledge
• Faculty need to check their publications and citations (citing errors, incorrect institutional affiliations, etc.)
• These tools can help you own your online presence
Criticism and Complaints

• Read and understand documentation and metrics provided by databases
• Define scope and limitations of your output before beginning
• Keep track of your methodology and pay attention to time frames
• Defend your work – you are the expert!
More Information

http://researchguides.library.syr.edu/citationmetrics
Questions?

Anne Rauh  aerauh@syr.edu
Linda Galloway  galloway@syr.edu