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SBIR  
XVI National Conference  
Sofia/Bulgaria, 09/06/2006

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# Agenda

- About Elsevier
- Scientometrics – measuring science
- Scientific output and access - comparison  
Middle and Eastern Europe
- The Bulgarian move into the digital  
scientific world – first steps are done

# Elsevier

## History:

- **Original Elsevier Company** – founded 1580, when Louis Elsevier began selling books to university scholars in Leiden (NL) (authors: including Galileo, Erasmus and Descartes)
- **Modern Elsevier Company** – founded in 1880
  - In the 1950s and 60s Elsevier took its first steps toward becoming a global company
  - In the 1980s Elsevier Science become part of **Reed Elsevier Group plc** (35 000 employees), the Anglo-Dutch media company (LexisNexis, Harcourt...)

## Today:

- 2 000 journals
- 2 200 book p.a.
- 7 000 employees at 100 locations worldwide
- Provider of the worldwide largest e-full text (ScienceDirect) and abstract and indexing (Scopus) databases
- several subject e-databases



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# Worldwide Scientific Publishers positioning (Top 10)

	2004 Market share %*
• Elsevier	25.0
• Springer	7.7
• Blackwell	5.3
• Wiley	4.6
• Taylor & Francis	3.0
• Am Chem Soc	3.0
• AIP	2.8
• Wolters Kluwer	2.7
• IEEE	1.9
• Am Phys Soc	1.7

Elsevier published 25% of all the peer reviewed journal papers published in 2004 in all subject areas.

\*Data: Market share analyse May 2005, ISI based, Executive summary



# The 3 'S's



- With >7.2 million full text articles **world's largest full text database**
- Nearby Only Elsevier content (Journals, Books)



- Elsevier's web Search Engine for scientific information on the internet
- Freely available
- Integrated in Scopus



- **World's largest bibliographic database** (no full texts)
- Navigates through 28 million abstracts of 15,000 titles from 4,000 publishers (not only Elsevier)
- New: Scopus Citation Tracker and Author Identifier



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# Key facts

- 1900 Elsevier journals
  - Academic Press
  - Harcourt Health Science
  - Cell Press
  - *New*: 33 Urban & Fischer journals
- 24 Subject areas
- Backfiles for all subjects, going back to Vol.1, issue 1 (Oldest backfile goes back to 1823)
- Total full-text articles on SD >7.2 million



# Where to find journals

Address http://www.sciencedirect.com/

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**Hot Topics**

- Infants not surprised to see adults talking to robots
- "Doctor knows best" in prescription of HRT for menopause

**Subject Areas in ScienceDirect**

- ▶ [Agricultural and Biological Sciences](#)
- ▶ [Arts and Humanities](#)
- ▶ [Biochemistry, Genetics and Molecular Biology](#)
- ▶ [Business, Management and Accounting](#)
- ▶ [Chemical Engineering](#)
- ▶ [Chemistry](#)
- ▶ [Computer Science](#)
- ▶ [Decision Sciences](#)
- ▶ [Earth and Planetary Sciences](#)
- ▶ [Economics, Econometrics and Finance](#)
- ▶ [Energy](#)
- ▶ [Engineering](#)
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- ▶ [Nursing and Health Professions](#)

**1,800 Els. Journals**

- Academic Press
- Harcourt Health
- Cell Press
- *New: Urban Fischer*

# Backfiles Project

- Initiative to digitise all Elsevier owned journals from 1994 back to volume 1 issue 1
- Started in 2001
  - 6 month of sourcing and shipping
  - 3 years of scanning
- Result = tripling of the SD database



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## Tetrahedron

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**Volume 1, Issues 1-2, Pages 1-175 (1957)**

View:

- Foreword • EDITORIAL**  
*Page 1*  
[Abstract](#) | [Abstract + References](#) | [PDF \(66 K\)](#)
- Alicyclic studies—X : The bicyclo-(5:4:0)-2-undecanones • ARTICLE**  
*Pages 3-8*  
David Ginsburg and Walter J. Rosenfelder  
[Abstract](#) | [Abstract + References](#) | [PDF \(455 K\)](#)
- Alicyclic studies—XI : Attempted syntheses of 5:6-benzazulene and benzheptalenes • ARTICLE**  
*Pages 9-18*

# Scopus Author Identifier

- Author searching in A&I Databases is hampered by two serious problems:
  - How to distinguish between an author's articles and those of another authors sharing the same name?
  - How to group an author's articles together when his or her name has been recorded in different ways? (e.g. Stambrook, P and Stambrook, P.J.)
- These problems can result in retrieving incomplete or inaccurate results.



## Solving the Problem

We have approached solving these problems by using the data available in the publication records such as...

- Author Names
  - Affiliation
  - Co-authors
  - Self citations
  - Source title
  - Subject area

...and used this data to group articles that belong to a specific author.



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- Use the Author Search to find an author of interest

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Author Search

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Author Name: Last Name

Stambrook

E.g., Smith

Initials or First Name

P

E.g., J.L.

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Search History

Search

Results

Source

Actions



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An author results list is displayed, showing preferred author name and the name variants

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Last Name:  Initials or First Name:  [Go](#)  
E.g., smith-peterson E.g., j.l.

A link to a details page is only shown for authors with more than one document in Scopus. Documents with insufficient data may not be matched, this can lead to more than one entry in the results list for the same author. [More information...](#)

Select one or more authors and click **show documents** or **citation tracker**.

**Authors: 3** Page 1 of 1

[show documents](#) [citation tracker](#) [feedback](#) Select:  All  Page

	<a href="#">Authors</a>	<a href="#">Documents</a>	Subject Area	Affiliation
1. <input type="checkbox"/>	<b>Stambrook, P.</b>	<a href="#">1</a>	Medicine	Laboratory of Functional Genomics, Division of Molecular Medicine, Rudjer Boskovic Institute, Zagreb, Croatia
2. <input type="checkbox"/>	<b>Stambrook, P. S.</b>	<a href="#">1</a>	Biochemistry, Genetics and Molecular Biology	
3. <input checked="" type="checkbox"/>	<b>Stambrook, Peter J.</b> Stambrook, P. J. Stambrook, P. Stambrook, Peter	<a href="#">152</a> <a href="#">Details</a>	Engineering; Neuroscience; Dentistry; ...	Vontz Center for Molecular Studies, Cincinnati, United States

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# Author Details page

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## Stambrook, Peter J.

Personal	
Name	Stambrook, Peter J.
Other formats	Stambrook, P. J. Stambrook, P. Stambrook, Peter
Author ID	7006102382
Affiliation	Vontz Center for Molecular Studies Cincinnati United States

Research	
Documents	<a href="#">152</a> <input type="button" value="add to list"/>
Cited By	<a href="#">105</a> <input type="button" value="citation tracker"/>
Co-authors	<a href="#">73</a>
Subject Area	Biochemistry, Genetics and Molecular Biology Medicine Environmental Science Multidisciplinary Immunology and Microbiology Pharmacology, Toxicology and Pharmaceutics Agricultural and Biological Sciences Dentistry Neuroscience Engineering

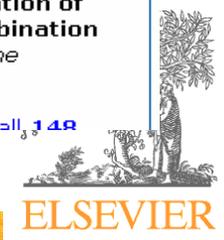
### Documents

This author has published **152** documents in Scopus: (Showing the 2 most recent)

- [Stambrook, P.](#)  
**The comparative mouse genomics centers consortium cell cycle and DNA repair variants.** (2005) *Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis*
- [Shao, C., Deng, L., Chen, Y., Kucherlapati, R., Stambrook, P.J., Tischfield, J.A.](#)  
**Mlh1 mediates tissue-specific regulation of mitotic recombination** (2004) *Oncogene*

[View details of all 152](#)

Click "152" to view this author's documents



# Results of author document search

**Refine Results** close

Source Title	Author Name	Year	Document Type	Subject Area
<input type="checkbox"/> Cancer Research (3) <input type="checkbox"/> Proceedings of the National Academy of Sciences of the United States of America (3) <input type="checkbox"/> Laryngoscope (2) <a href="#">More...</a>	<input type="checkbox"/> Stambrook, P.J. (141) <input type="checkbox"/> Tischfield, J.A. (8) <input type="checkbox"/> Stambrook, P. (11) <a href="#">More...</a>	<input type="checkbox"/> 2005 (1) <input type="checkbox"/> 2004 (2) <input type="checkbox"/> 2000 (2) <a href="#">More...</a>	<input type="checkbox"/> Article (148) <input type="checkbox"/> Review (4)	<input type="checkbox"/> Biochemistry, Genetics and Molecular Biology (18) <input type="checkbox"/> Medicine (9) <input type="checkbox"/> Multidisciplinary (3) <a href="#">More...</a>

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**Results: 152** Search within results  [Go](#)

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 Select:  All  Page 1 to 20 [next](#)

Date	Document (sort by relevance)	Author(s)	Source Title	Cited By
1. <input type="checkbox"/> 2005	<b>The comparative mouse genomics centers consortium cell cycle and DNA repair variants, national institute of environmental health sciences, national institutes of health, department of health and human services, June 1-3, 2004, at the Austin Hilton, Austin Texas</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a>	<a href="#">Stambrook, P.</a>	<i>Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis</i> 570 (2), pp. 289-301	0
2. <input type="checkbox"/> 2004	<b>Mlh1 mediates tissue-specific regulation of mitotic recombination</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a>	<a href="#">Shao, C.</a> , <a href="#">Deng, L.</a> , <a href="#">Chen, Y.</a> , <a href="#">Kucherlapati, R.</a> , <a href="#">Stambrook, P.J.</a> , <a href="#">Tischfield, J.A.</a>	<i>Oncogene</i> 23 (56), pp. 9017-9024	0
3. <input type="checkbox"/> 2004	<b>Major Histocompatibility Gene Therapy: The Importance of Haplotype and <math>\beta</math>2-Microglobulin</b> <a href="#">Abstract + Refs</a>	<a href="#">Salamone, F.N.</a> , <a href="#">Gleich, L.L.</a> , <a href="#">Li, Y.-Q.</a> , <a href="#">Stambrook, P.J.</a>	<i>Laryngoscope</i> 114 (4), pp. X612-615	0
4. <input type="checkbox"/> 2000	<b>Biallelic methylation and silencing of mouse Aprt in normal kidney cells</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a>	<a href="#">Rose, J.A.</a> , <a href="#">Yates, P.A.</a> , <a href="#">Simpson, J.</a> , <a href="#">Tischfield, J.A.</a> , <a href="#">Stambrook, P.J.</a> , <a href="#">Turker, M.S.</a>	<i>Cancer Research</i> 60 (13), pp. 3404-3408	1
5. <input type="checkbox"/> 2000	<b>Chromosome instability contributes to loss of heterozygosity in mice lacking p53</b> <a href="#">Abstract + Refs</a> <a href="#">View at Publisher</a>	<a href="#">Shao, C.</a> , <a href="#">Deng, L.</a> , <a href="#">Henegariu, O.</a> , <a href="#">Liang, L.</a> , <a href="#">Stambrook, P.J.</a>	<i>Proceedings of the National Academy of Sciences of the United States of America</i> 97 (12), pp. 6485-6490	3

# Scientometrics



# Why Sciencometrics

- **Measuring Science**

- Better Use of Research Funds
- Provides Quantitative Data that Controlling Agencies (Ministries, Research Agencies) can easily understand
- Alternative to existing static measurement **at journal level**
- Needs for a real time analysis on **individual author and article level** –Scopus Citation tracker



# Citations in Science – Hirsch Index (h-index)

- The number of papers published by a scientist provides a measure of their productivity, it says nothing about the quality of their work.
- The number of citations received by a scientist is a better indicator of quality, but co-authoring a handful of articles that are cited widely could "inflate" the reputation of a scientist.
- The Hirsch Index provide a balance between the number of publications and citations and is rapidly becoming viewed as an alternative to the impact factor. H-index can be calculate easily using the Citation Tracker
- **h-index**: the highest number of papers a scientist has that have at least that number of citations



## An index to quantify an individual's scientific research output

J. E. Hirsch

*Department of Physics, University of California, San Diego  
La Jolla, CA 92093-0319*

I propose the index  $h$ , defined as the number of papers with citation number higher or equal to  $h$ , as a useful index to characterize the scientific output of a researcher.

PACS numbers:

For the few scientists that earn a Nobel prize, the impact and relevance of their research work is unquestionable. Among the rest of us, how does one quantify the cumulative impact and relevance of an individual's scientific research output? In a world of not unlimited resources such quantification (even if potentially distasteful) is often needed for evaluation and comparison purposes, eg for university faculty recruitment and advancement, award of grants, etc.

The publication record of an individual and the citation record are clearly data that contain useful information. That information includes the number ( $N_p$ ) of papers published over  $n$  years, the number of citations

( $h = 75$ ), D.J. Scalapino ( $h = 75$ ), G. Parisi ( $h = 73$ ), S.G. Louie ( $h = 70$ ), R. Jackiw ( $h = 69$ ), F. Wilczek ( $h = 68$ ), C. Vafa ( $h = 66$ ), M.B. Maple ( $h = 66$ ), D.J. Gross ( $h = 66$ ), M.S. Dresselhaus ( $h = 62$ ), S.W. Hawking ( $h = 62$ ).

I argue that  $h$  is preferable to other single-number criteria commonly used to evaluate scientific output of a researcher, as follows:

(0) Total number of papers ( $N_p$ ): Advantage: measures productivity. Disadvantage: does not measure importance nor impact of papers.

(1) Total number of citations ( $N_{c,tot}$ ): Advantage: measures total impact. Disadvantage: hard to find; may

# Scientometrics

- Users need to compare themselves with peers or their research group with another working in the same field
- ***Scopus Citation Tracker*** is the exclusively service for simultaneously presentation of the number of papers an author has published and citation count per year for each paper and the total for the author in one Citation Overview

# Citation Tracker

## Citation Overview

Author: Stambrook, Peter J  exclude author self citations



Sort documents: year descending  
 Date Range: 2002 to 2005

20 Cited Documents <a href="#">save to list</a>	Total	Citations					subtotal	>2005	total
		<2002	2002	2003	2004	2005			
<input checked="" type="checkbox"/> delete	79	8	10	10	2	30	0	109	
1 <input type="checkbox"/> 2000 Biallelic methylation and silencing...			1			1		1	
2 <input type="checkbox"/> 2000 Chromosome instability contributes ...		1		2		3		3	
3 <input type="checkbox"/> 1999 Insulin-like growth factor family i...			1			1		1	
4 <input type="checkbox"/> 1998 Chronic renal failure in a mouse mo...	1					0		1	
5 <input type="checkbox"/> 1997 Prognostic indicators for squamous ...	4	1				1		5	
6 <input type="checkbox"/> 1997 Altered hematopoiesis, behavior, an...	8		1	1		2		10	
7 <input type="checkbox"/> 1997 High frequency in vivo loss of hete...	8	1	1			2		10	
8 <input type="checkbox"/> 1997 Protease inhibitor TPCK represses H...						0		0	
9 <input type="checkbox"/> 1996 Adenine phosphoribosyltransferase-d...	3		1	1		2		5	
10 <input type="checkbox"/> 1995 Mitotic and post mitotic consequenc...	1	1			1	2		3	
11 <input type="checkbox"/> 1994 The human Ha-ras oncogene induces g...	4	2	1	3	1	7		11	
12 <input type="checkbox"/> 1994 Increased methotrexate resistance a...	1			2		2		3	
13 <input type="checkbox"/> 1994 Reporter genes in transgenic mice			2			2		2	
14 <input type="checkbox"/> 1994 Single-base deletion induced by ben...						0		0	



# Citation Tracker

## Citation Overview

Author: Stambrook, Peter J.  include author self citations



Self Citations of above author is excluded.

Sort documents

Date Range

year descending 2002 to 2005

20 Cited Documents <a href="#">save to list</a>		Citations							total
		<2002	2002	2003	2004	2005	subtotal	>2005	
<input type="checkbox"/>	Total	75	8	10	8	2	28	0	103
<input type="checkbox"/>	1 2000 Biallelic methylation and silencing...			1			1	1	
<input type="checkbox"/>	2 2000 Chromosome instability contributes ...		1		1		2		2
<input type="checkbox"/>	3 1999 Insulin-like growth factor family i...			1			1		1
<input type="checkbox"/>	4 1998 Chronic renal failure in a mouse mo...	1					0		1
<input type="checkbox"/>	5 1997 Prognostic indicators for squamous ...	4	1				1		5
<input type="checkbox"/>	6 1997 Altered hematopoiesis, behavior, an...	8		1	1		2		10
<input type="checkbox"/>	7 1997 High frequency in vivo loss of hete...	7	1	1			2		9
<input type="checkbox"/>	8 1997 Protease inhibitor TPCK represses H...						0		0
<input type="checkbox"/>	9 1996 Adenine phosphoribosyltransferase-d...	1		1			1		2
<input type="checkbox"/>	10 1995 Mitotic and post mitotic consequenc...	1	1			1	2		3
<input type="checkbox"/>	11 1994 The human Ha-ras oncogene induces g...	4	2	1	3	1	7		11
<input type="checkbox"/>	12 1994 Increased methotrexate resistance a...	1			2		2		3
<input type="checkbox"/>	13 1994 Reporter genes in transgenic mice			2			2		2



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# Scientific output - Comparison Middle and Eastern Europe



- **Main EU Presidency Conclusions of the EU-Spring event 23/24 March 2006 are:**

- **3%** (realistic 2.7% according to Research Commissionaire Janez Potcnik) spend for R&D till 2010
- Exploiting new “**centers of excellence**” – out of the lab and into workshop
- Creation of a “**European Institute of Technology**” in Strasbourg a sort of flagship European university with "the best facilities in the world". The EIT would be a European counterpart to the Massachusetts Institute of Technology (MIT) in the US.

The 3 main instruments of this policy are the **i2010 Initiative**, the **7<sup>th</sup> Framework Program** and the **Competitiveness and innovation Program (CIP 2007-2013)**.



## % GDP for R&D – target for 2010

<b>EU Member States</b>	<b>2004*</b>	<b>Target for 2010**</b>
Czech Republic	1.28%	2.06%
Estonia	0.91%	1.90%
Latvia	0.42%	1.50%
Lithuania	0.76%	2.00%
Hungary	0.89%	1.80%
Poland	0.58%	1.65%
Slovenia	1.61%	3.00%
Slovakia	0.53%	1.80%
<b>Total</b>	<b>0.87%</b>	<b>1.96%</b>

\*Source: Eurostat.

\*\*Source: National Reform Programmes, with European Commission estimates



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## % GDP for R&D – target for 2010 cont

	<b>2004*</b>	<b>Target for 2010*</b>
Romania	0.38%	0.65
Bulgaria	0.49%	N/A
Croatia	1.10%	N/A
Serbia and Montenegro	0.70% (only Serbia)	N/A
Macedonia	0.22%	N/A
Bosnia and Herzegovina	N/A	N/A
Albania	N/A	N/A

\*Source: Eurostat and estimations/Nat Stat Inst



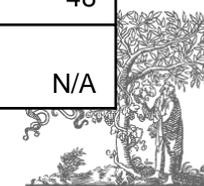
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# Spend on R&D

- The Middle and Central European countries (EU and NON-EU members) spend less than 0.8% some of them less than 0.4% for R&D
- At present, less than 2% of the EU GDP is devoted to research, which compares badly with 2.5% in the USA and more than 3% in Japan.
- The EU - candidate countries try to adopt the same research and innovation policy as in the EU
- However, since the 3% goal was set in 2002 (Lisbon strategy) , progress remained too slow.

# Macroeconomic data and data on Higher education and research

Country	Serbia Montenegro	Croatia	B&H	Macedonia	Albania
Population x Mio	10.83	4.50	4.03	2.05	3.50
GDP x Mio	\$ 26,591	\$ 37,873	\$ 9,497	\$ 4,913	N/A
GDP / capita (ppp)	\$ 5,204	\$ 12,364	\$ 5,827	\$ 7,749	\$ 4,500
GDP real growth rate	4.6%	3.4%	5.4%	3.8%	6%*
Inflation	15.4%	3.0%	1.0%	1.2%	3.0%
<b>R&amp;D spending as a % of GDP</b>	<b>0.8%*(only Serbia)</b>	<b>1.1%</b>	<b>N/A</b>	<b>0.22%</b>	<b>N/A</b>
R&D spending x Mio (ppp)	N/A	\$ 520	N/A	\$ 34	N/A
R&D spending per capita (ppp)	N/A	\$ 116	N/A	\$ 17	N/A
Researchers per mio pop.	1,002	1,905	N/A	N/A	N/A
Researchers	10,855	8,572	N/A	2,865	N/A
R&D spending per researcher (ppp)	N/A	\$ 60,663	N/A	N/A	N/A
Article output	1,480	1,670	43	90	48
Articles per 100 Researchers	13.6	19.5	N/A	N/A	N/A



## Middle and Eastern Europe—Macro Data and data on Higher education and research

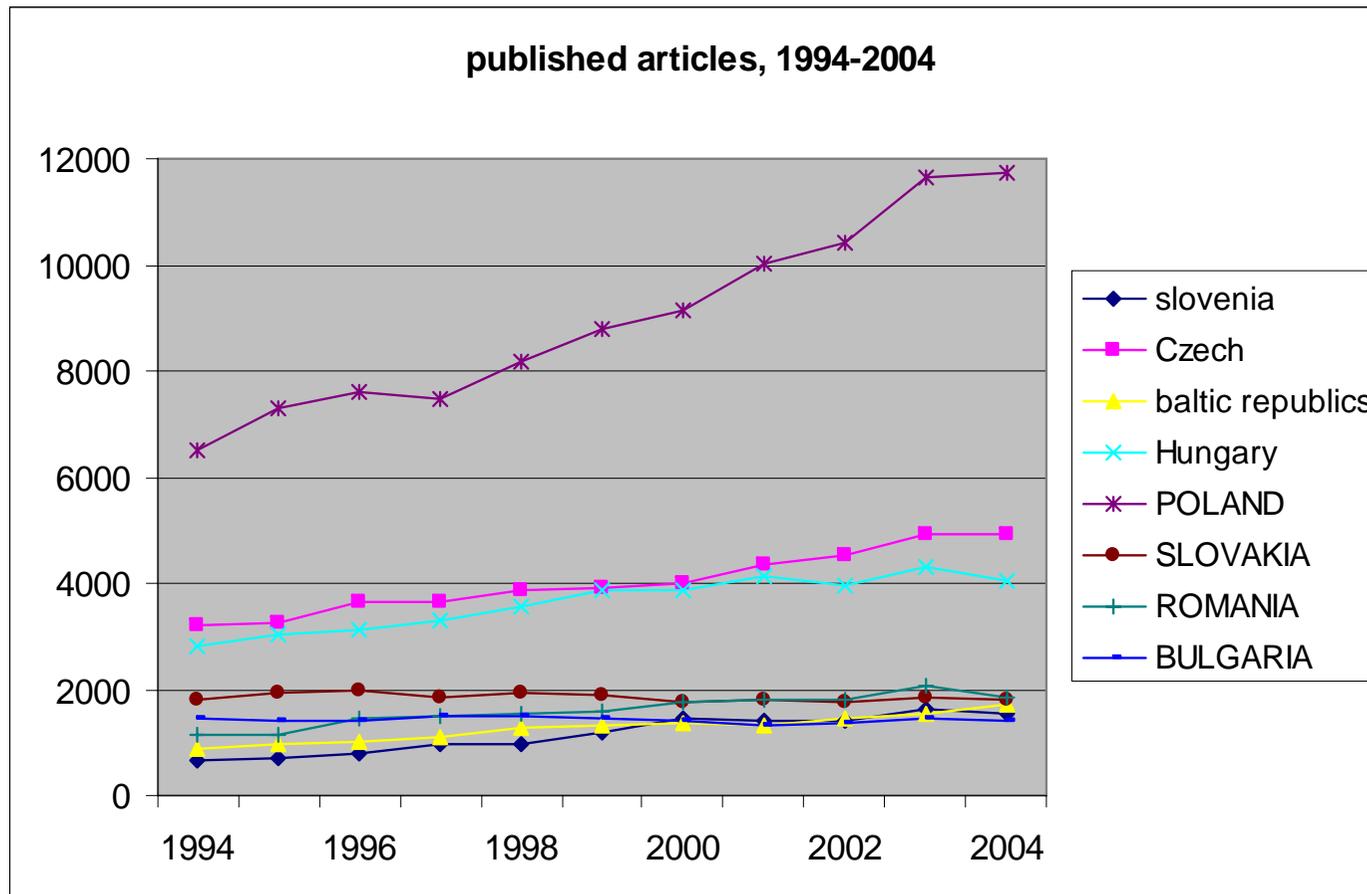
	Slovenia	Czech Rep	Baltic Reps	Hungary	Poland	Slovakia	Romania	Bulgaria
economic/demographic								
population 2004	2,011,473	10,246,178	7,255,869	10,032,375	38,626,349	5,423,567	22,355,551	7,517,973
GDP per capita 2004	\$19,000	\$15,700	\$11,300	\$13,900	\$11,100	\$13,300	\$7,000	\$7,600
GDP growth, 2004	3.5%	3.8%	6.5%	3.8%	5.7%	5.1%	8.0%	5.5%
# of pc's 100 inhabitants 2003	33	18	25	11	14	24	10	5
research and higher education								
% of GDP to ST&M research	1.54%	1.30%	0.65%	1.01%	0.59%	0.59%	0.38%	0.49%
number of researchers (2003)	7,081	31,421	21,546	30,292	94,432	17,033	25,968	10,876
annual growth researchers, 98-03	2%	6%	6%	5%	2%	1%	-3%	-5%
number of Higher Educ. Students	101,000	287,000	348,000	390,000	1,983,000	158,000	644,000	230,000
growth students, 98-03	8%	6%	11%	9%	11%	7%	12%	-2%

Sources: OECD, Eurostat, Sales DB, UNICEF

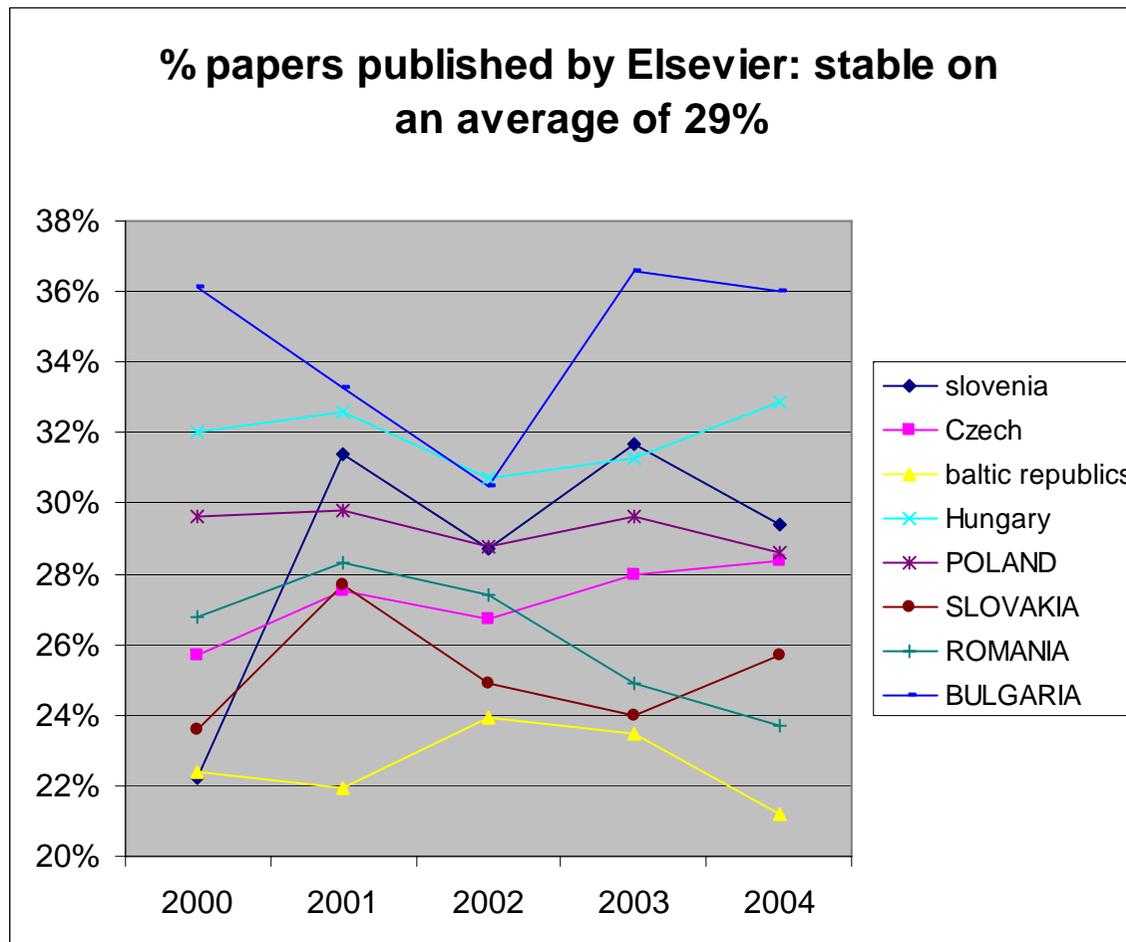


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# Article growth in Eastern Europe is in total 5% p.a., - over world average

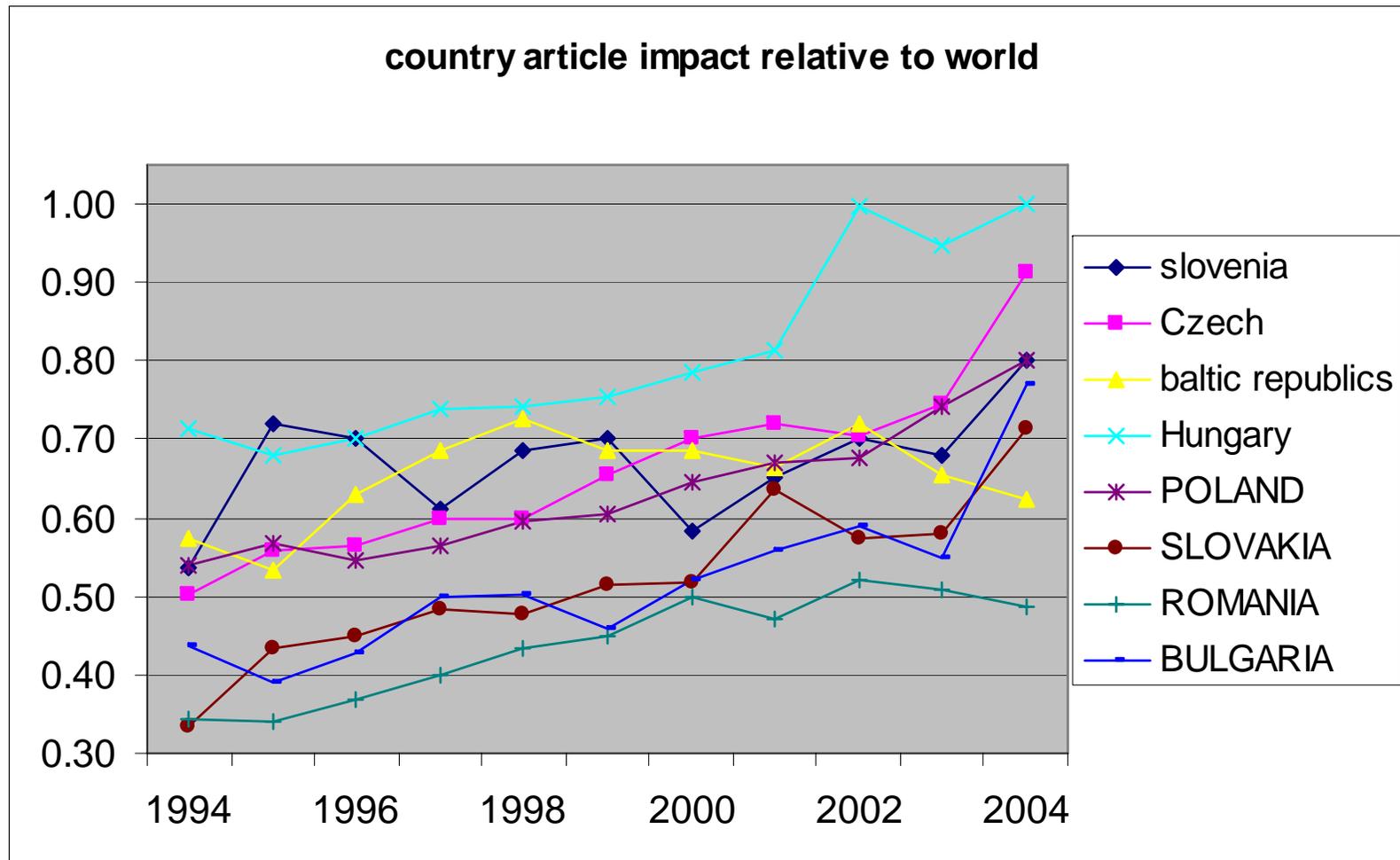


Articles published in Elsevier are stable on 29% and this is already over the world average of 25%.



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# Quality of articles vs the world average (1.00)



# Poland

- Polish Academic Consortium (PAC) - currently about 80 members, has a national wide coverage and is open for all academic and governmental institutions in Poland.
- The Ministry of Education and Science appointed one institute – the Interdisciplinary Centre for Mathematical and Computational Modelling (ICM) of the University of Warsaw with the coordination of all Consortium activities, such as storage and maintenance of E-data (OnSite option, through local server and licensed software), license negotiations with publishers.
- The licenses with the publishers are mostly funded by the Ministry
- E-only model (No-print!)
- Additional funds are allocated project by project
- Poland also search very actively for additional funds available from the Unit Research Infrastructure at the EC/Brussels



# Hungary

- Hungarian National Consortium (about 12 main + 40 small members)
  - Central governmental funding of the e-fees (through the Ministry of Education)
- EIS committee: advisory board to the Minister of Education responsible for the supply with academic information (10 persons)
- The Consortium's members take care for the payment of the print subscription (p/e model)



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# Croatia

- The Ministry of Education Science and Sport authorized CARNet (Croatian Academic Network Organization) to coordinate the Croatian National Consortium (6 members)
- The subscription value was split in the past between the members of the consortium (Universities of Zagreb, Split, Rijeka and Osjek) and the Ministry (p/e model). From 2005 was take over 100% by the Ministry (E-only model – No print!) The members can order print copies if they like on DDP price conditions (in general 75% discounted print subscription)
- [www.carnet.hr](http://www.carnet.hr), [www.online-baze.hr](http://www.online-baze.hr)

# Czech and Slovak/ Slovenia

- Czech and Slovak
  - National wide consortium for ScienceDirect
  - Central financed from different governmental projects
  - Consortium coordinator is the State Technical Library in Prague
- Slovenia
  - Consortium of Slovene Electronic Collections (6 members)
  - State financed institution and Library Association
  - Registered consortium
  - The Central Technical Library at the University of Ljubljana is the coordinator of the consortium



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# Baltic States

- Estonia
  - ELNET consortium: 12 members (4 ScienceDirect members)
  - Central funding
  - The most advanced country in the region. The government invests a lot in information access and infrastructure
- Lithuania
  - LIMBA Consortium (EIFFEL)
  - Central funding
- Latvia
  - No formal consortium, the Ministry of Education and Science directly act as Consortium and sign the License Agreement
  - Ministry of Culture provides also central funding for electronic databases

# Serbia, B&H

- **Serbia**
  - KoBSON Consortium (EIFFEL), Scopus and SD licenses,  
<http://nainfo.nbs.bg.ac.yu/Kobson/page/default.aspx>
  - 3 members (Belgrade, Novi Sad and Nish)
  - E-fees financed by the Ministry of Education
- **Bosnia & Herzegovina**
  - License for Scopus and ScienceDirect with the National and University Library of Bosnia and Herzegovina in Sarajevo

# Romania, Macedonia, Albania

- Romania
  - No National Consortium
  - Individual Scopus Agreements
  - Start of negotiations with the Government
- Macedonia
  - Scopus National Consortium in place (Skopje, Bitola, Tetovo, MASA) – financed by the Ministry
  - Discussions for an ScienceDirect Consortium just started
- Albania
  - No access to current scientific digital content is currently available



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# The Bulgarian move into the digital academic world



# Bulgaria obstacles

- Bulgaria
  - currently the support of access to world class content for an National Academic Consortium is not on the agenda of the Government – EU structural funds
  - As in other countries of Middle and Eastern Europe – low budget of the University and subject research libraries and limited possibility for direct license Agreements with big publishers
  - The librarians do not speak with one voice....
  - No concept and understanding of what should be licensed
  - Currently no discussion about E-only migration in Bulgaria
  - Still fix on print
  - Lack of English language skills....

# Main characteristics of an National Bulgarian Consortium

- The Ministry can sign directly the Licenses with the Publishers or delegate/appoint another institution or the consortium to do this or provide a tender (e.g. the State Agency of Information Technology and Communications)
- Evaluation of funding sources
  - Human recourse development Operational program - (EU Structure fund)
  - **World Bank** funding possibilities open for Bulgaria,
  - i2010, CIP 2007-2013, FP 7 etc...
- Advisory board (librarians, researchers, Ministry) for the strategy development. Main decisions to be taken:
  - e/p or e-only model selection
  - Online access (recommended!) or local hosting of the data
  - Allocation of the available funds
  - Strong and regular connection to the Ministry
- At least one full time employee
  - Collection and maintenance of the subscription wish lists of the members
  - Main contact for the publishers/licensors
  - Access set ups (IP ranges collection etc...)



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....and the next steps are...

Without self initiative of the Bulgarian academic library and research community it would be difficult and very slow to move to the digital age....we are here to support you on this way and to provide our best service for you!



Thank you



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