

An assessment of systems and software engineering scholars and institutions (2000–2004)

T.H. Tse ^{a,*}, T.Y. Chen ^b, Robert L. Glass ^c

^a Department of Computer Science, The University of Hong Kong, Pokfulam, Hong Kong

^b Faculty of Information and Communication Technologies, Swinburne University of Technology, John Street, Melbourne 3122, Australia

^c Computing Trends, 18 View St., Brisbane, QLD 4064, Australia

Received 29 July 2005; received in revised form 2 August 2005; accepted 13 August 2005

Available online 30 September 2005

Abstract

This paper presents the findings of a five-year study of the top scholars and institutions in the Systems and Software Engineering field, as measured by the quantity of papers published in the journals of the field in 2000–2004. The top scholar is Hai Zhuge of the Chinese Academy of Sciences, and the top institution is Korea Advanced Institute of Science and Technology. This paper is part of an ongoing study, conducted annually, that identifies the top 15 scholars and institutions in the most recent five-year period.

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Keywords: Top scholars; Top institutions; Research publications; Systems and software engineering

1. Introduction

Who are the most published scholars in the field of systems and software engineering (SSE)? Which are the most published institutions?

This paper is the 12th in an annual series whose goal is to answer these questions. The first such paper was Glass (1994); subsequently such studies have been published each year. The last report can be found in Glass and Chen (2005).

This is the eighth survey that includes five years' worth of data. (In the earliest studies, 1, 2, 3, and 4 years were covered.) In future surveys, we shall continue to cover the most recent five-year period. This paper reports on the top scholars and institutions for the five-year period 2000–2004.

It is important to note two things at the outset:

- (a) The study findings are based on frequency of publication in the leading journals in the SSE field.

- (b) The study focuses on the field of SSE, and not, for example, on computer science or information systems.

The following six are the leading journals used:

- *Information and Software Technology (IST)*, Elsevier Science.
- *Journal of Systems and Software (JSS)*, Elsevier Science.
- *Software Practice and Experience (SPE)*, John Wiley & Sons, UK.
- *Software (SW)*, IEEE.
- *Transactions on Software Engineering and Methodologies (TOSEM)*, ACM.
- *Transactions on Software Engineering (TSE)*, IEEE.

These journals were chosen on the basis of a survey of the editorial board of the *Journal of Systems and Software* conducted in 1991, and there has been no change in the list of journals since that time in order to keep the findings relatively stable.

Here are the findings.

* Corresponding author. Tel.: +852 2859 2183; fax: +852 2559 8447.
E-mail address: thtse@cs.hku.hk (T.H. Tse).

2. Leading scholars

The leading scholars in the field are shown in Table 1. These scholars have achieved a score of 4.7 or more during the years covered by this study. The table lists the top 15 scholars with scores ranging from 4.7 to 7.9.

Geographically, seven are from the Americas, five are from Asia–Pacific, and three are from Europe.

Topping the list in the latest survey is Hai Zhuge of the Chinese Academy of Sciences with a score of 7.9 (he ranked 13th last time). A close runner up is Khaled El Emam of the University of Ottawa, Canada, with a score of 7.8 (he ranked first in the last two surveys). In third place is Magne Jorgensen of Simula Research Laboratory, Norway, with a score of 6.8. Fourth is Barbara Kitchenham of Keele University, UK, who scores 6.7 (she ranked second in the last survey). Fifth is Lionel C. Briand of Carleton University, Canada, who scores 6.0 (he had exactly the same rank last time).

Sixth is T.Y. Chen of Swinburne University of Technology, Australia, with a score of 5.7 (he ranked 12th last time). Seventh is Myoung-Ho Kim of Korea Advanced Institute of Science and Technology, with a score of 5.4 (he ranked 10th last time). Tied for eighth place are Hyoung-Joo Kim of Seoul National University, Korea

(who was third last time) and James Miller of University of Alberta, Canada.

Both of them score 5.2. Tenth is Robert L. Glass of Computing Trends, USA, who scores 5.1 (he was fourth last time).

Eleventh is Jeff Tian of Southern Methodist University, USA, with a score of 4.9. Twelfth is Per Runeson of Lund University, Sweden, who scores 4.8 (he ranked number 13 last time). Finally, there is a three-way tie for 13th place, with a score of 4.7, among Shih-Chien Chou of National Dong Hwa University, Taiwan, J. H. Poore of The University of Tennessee, USA, and James A. Whittaker of Florida Institute of Technology, USA (Whittaker also ranked number 13 last time).

Table 1 also shows the respective number of publications of the top scholars in the six selected journals.

We have asked the top scholars to indicate the key words that best describe their research focus. The results are shown in Table 2.

3. Leading institutions

The leading 15 institutions in the field are shown in Table 3. These institutions have achieved a score that ranges from 10.50 to 34.20 in the five years covered by the study.

Table 1
Top scholars in the field of systems and software engineering

Rank	Scholar	Journals in which published						Total score	Previous rank
		<i>IST</i>	<i>JSS</i>	<i>SPE</i>	<i>SW</i>	<i>TOSEM</i>	<i>TSE</i>		
1	Hai Zhuge, Chinese Academy of Sciences	1	6.9					7.9	13
2	Khaled El Emam, University of Ottawa		3.7		0.5		3.6	7.8	1
3	Magne Jorgensen, Simula Research Laboratory	2.4	2				2.4	6.8	–
4	Barbara Kitchenham, Keele University	1.7	1.7		1.2		2.1	6.7	2
5	Lionel C. Briand, Carleton University		1.5	0.5			4	6	5
6	T. Y. Chen, Swinburne University of Technology	2.1	2.6			0.5	0.5	5.7	12
7	Myoung-Ho Kim, Adv. Inst. Sci. & Tech.	2	3.4					5.4	10
8	Hyoun-Joo Kim, Seoul National University	2.4	2.8					5.2	3
8	James Miller, University of Alberta	0.5	4				0.7	5.2	–
10	Robert L. Glass, Computing Trends	0.5	3.6		1			5.1	4
11	Jeff Tian, Southern Methodist University		1		1.7		2.2	4.9	–
12	Per Runeson, Lund University	1.3	1.8		0.5		1.2	4.8	13
13	Shih-Chien Chou, National Dong Hwa University	2	2	0.7				4.7	–
13	J. H. Poore, The University of Tennessee	2.6	0.7	0.7			0.7	4.7	–
13	James A. Whittaker, Florida Inst. of Tech.	1.5			3.2			4.7	13

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