Competitiveness Report: Assistant-Level Faculty Hiring in Selective Computer Science Programs in Hong Kong, Singapore, Korea, Taiwan, and the U.S. (2006-2009)

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This is a competitiveness report on the assistant-level faculty hiring among our competing computer science programs in Asia and the top U.S. computer science programs. As an academic institution, we are whom we hire. Assistant-level faculty is a key future indicator to whether an academic institute is becoming more or less competitive relative to other academic institutions. This competitiveness report collects extensive data on over 130 recent assistant-level faculty hires (2006-2009) at 10 computer science programs in Hong Kong, Singapore, Korea, and Taiwan, as well as at the top 10 U.S. computer science programs (ranked by U.S. News and World Report). By analyzing this dataset, we give our findings and suggestions.

DISCLAIMERS

Limited coverage of publications. Tables 2-5 contain the collected dataset. The list of selected top conferences, shown in Table 5 *(it is a subset of the NUS rank-1 conference list: http://www.comp.nus.edu.sg/~harishk/mysoc_confs.htm. Since this list does not cover HCI conferences, they are added to our list.)*, is incomplete and does not cover all computer science fields or their interdisciplinary fields. The specific areas lacking coverage include bioinformatics, robotics, hardware, information visualization, multi-disciplinary research outside computer science areas, and possibly other fields and subfields of computer science with which we are unfamiliar at top quality conferences. The best effort was made to cover a significant number of reputable (mostly ACM) conferences. These conferences typically have acceptance rates in the range of 10~20%, counting only full papers. Note that full coverage of all quality computer science conferences is not the point here. Rather, the purpose is to have sufficient coverage that an adequate dataset can be collected and analyzed for a *high-level view* of assistant-level faculty hiring among competing computer science programs in Asia and the top 10 U.S. computer science programs.

Inequality among publications in different research fields. Some research fields, e.g., computer architecture, may require significantly more effort to produce a quality paper. In addition, producing papers for some selected conferences may be more difficult, in terms of their selectivity, acceptance rate, and paper length, than for other conferences. No effort was made to normalize them, because the purpose is to obtain a high-level competitive analysis.

Publication is only part of the research. Presentations at selected top conferences offer opportunities to disseminate research results to the target *research community*. The target research community here refers to recognized world first-class institutions, such as the top 10 U.S. ranking computer science programs (shown in Table 4 and in a previous report [1]). However, note that having publications accepted at these prestigious conferences can produce recognition that is either positive or negative, depending on the quality of the work. These conferences do, however, provide important windows of opportunity, especially for lesser-known assistant-level faculty members from lesser-known academic institutes, to establish their academic standing and gain recognition in the target research community.

Errors in the dataset. The large size of the dataset collected from the web (publication records of over 130+ assistant-level faculties in 20 academic programs) inevitably has errors. Please let us know of any errors you find. It is our belief that these errors do not significantly affect our findings and recommendations.

FINDINGS

Analyzing the dataset in Tables 2-5 produced findings that are quantitative. They are divided into two groups: (1) those from the Top.US dataset, and (2) those from the Asia competitor dataset. Since qualitative findings require interviews with the faculty members, this could be considered for future work.

Quantitative Analysis of the Top.US dataset (the top 10 U.S. computer science programs ranked by U.S. News 2009).

- **High productivity at the selected top conferences.** Productivity, the primary measure in this report, is defined as the average number of papers published at selected top conferences per assistant-level faculty member during the period 2000-2009. It includes publications during PhD studies (after 2000) *plus* publications during the first few years working as faculty. Tables 2 and 4 show that the average productivity for assistant-level faculty at the top 10 U.S. computer science programs is 9.9 papers (Max=23, Min=3, STD=4.7). These publications are often listed as selected/primary publications on their publication web pages or resumes.

- **Most assistant-level faculty accumulated a significant number of publications at the selected top conferences during their PhD/postdoc studies.** For graduating PhD students applying for assistant-level faculty positions at the top U.S. CS programs, almost all successful candidates, as shown in Table 4, accumulated a significant number of papers at these selected top conferences (average ~ 10). Three examples from Table 4 are provided here. Theory faculty had many STOC/FOCS publications during their PhD studies, e.g., Rafael Pass of Cornell accumulated five STOC and four FOCS papers during his graduate study (2003-2006). Networking faculty had many SIGCOMM papers during their PhD studies, e.g., Matthew Caesar of UIUC accumulated four SIGCOMM papers during his graduate study (2004-2007). The Architecture faculty had many ISCA/MICRO papers during their PhD studies, e.g., Hyesoon Kim of Georgia Tech accumulated two ISCA papers and six MICRO papers during her graduate study.

- **Most assistant-level faculty continue publishing at selected top conferences after starting their faculty careers.** Table 4 shows that these assistant-level faculty members produce a significant quantity of papers at these selected top conferences after joining their universities. Here are three examples from Table 4: Philip Levis, who joined Stanford in 2006 in sensor networking, published seven ACM SENSYS papers, two ACM SOSP papers, and one OSDI paper during 2007-2009; Kristen Grauman, who joined U.T. Austin in 2007 in computer vision, published five CVPR papers, one ICCV paper, and two NIPS papers during 2008-2009; James Fogarty, who joined U. Washington in 2006 in human computer interaction, published nine CHI papers and two UIST papers during (2007-2009). Such a concentrated publication effort at these selected top conferences strongly implies that accumulating these publications essential for tenure review evaluation. Additional evidence to further support this claim (not done in this report) could come from examining the publication records of recent tenure promotion cases at top U.S. computer science programs.

- **Publication strategy focusing on 1~3 selected top conferences.** Table 4 shows that most assistant-level faculty target most of their papers at the top 1~3 conferences in their specific areas, e.g., CHI/UIST for human computer interaction, FOCS/STOC for theory and algorithms, CCS/USENIX.sec/IEEE.sec for security, ICCV/CVPR for computer vision, and SIGGRAPH for computer graphics. This publication strategy is well-known among U.S. academics as an effective and efficient means of establishing creditability within a target research community. Three examples from Table 4 are provided here. Tadayoshi Kohno of U. of Washington has produced 13 papers at the three security conferences (ACM CCS/IEEE.sec/USENIX.sec). David Blei of Princeton has produced 11 papers at two machine learning related conferences (NIPS/ICML). Derek Hoiem of UIUC has produced 15 papers at three computer vision conferences (ICCV/CVPR/SIGGRAPH).

- **Computer science journals play little or no role in their publication strategies (except perhaps in fields not researched, such as bioinformatics, robotics, and visualization).** The publication histories of assistant-level faculty show that when considering publication of research work they pay little or no attention to computer science journal papers. Table 1 below shows that most of assistant-level faculty have no, or low single digit, computer science journal publications—they may publish in none computer science journals such as Nature, or Science. Table 1 provides a sample of one assistant-level faculty member from each of the top 10 U.S. computer science programs and counts the number of their computer science journal publications. The number of computer science journals is low (0-4). The data further reveal that most faculty stop publication with conference full papers and do not write journal papers. Such a low number of computer science journal papers imply that journal publications receive little or no attention from these assistant-level faculty members when applying for faculty positions and preparing for tenure evaluation. This finding is expectable given that most of the top U.S. computer science departments have long adopted the CRA (Computing Research Association) report "Best Practices Memo, Evaluating Computer Scientists and Engineers For Promotion and Tenure" published on August 1999 (http://www.cra.org/reports/tenure_review.html).

Table 1. Computer science journal publications among new assistant-level faculty hires in the top 10 U.S. computer science programs

University	Assistant-level faculty (area)	Computer science journal paper(s)
MIT	Constantinos Daskalakis (Theory)	No journal paper
Stanford	Jeff Heer (Visualization) Philip Levis (Systems & Networking) Jure Leskovec (AI)	Each has 4 journals papers (mostly CACM or ACM Transactions)
Berkeley	Koushik Sen (Programming)	No journal paper
CMU	Matthew Kam (HCI)	One journal paper (IEEE Computer magazine)

UIUC	Matthew Caesar (Systems & Networking)	One journal paper (IEEE Network magazine)
Cornell	Dan Cosley (HCI)	Two journal papers (no IEEE Transaction)
Princeton	Michael Freedman (Systems & Networking)	One journal paper (IEEE/ACM Transaction on Networking) interestingly listed under "Referred Conference Publications"
U. of Washington	Luis Ceze (Computer Architecture)	Two journal papers (CACM magazine and ACM Transaction on Architecture and Code Optimization)
Georgia Tech	Nathan Clark (Networking, security)	Two journal papers (IEEE Transaction on Computer and one less-known one)
U.T. Austin	Michael Walfish (Networking)	No journal paper

- **Publication web pages are superbly maintained and updated.** Almost all surveyed assistant-level faculty at the top 10 U.S. computer science programs have well-designed, attractive publication web pages. Recent research work and papers are updated in a timely fashion and well advertised to increase their reach and impact. It is common to see presentation slides, videos, etc., along with paper pdf files. The acceptance rates of their papers are commonly quoted.

- **Global optimization in faculty diversity.** Table 4 shows that the top 10 U.S. computer science programs hired a total of 54 assistant-level faculties from 2006-2009. Among these, 17 faculty members (32%) received their undergraduate degrees outside of the U.S., covering a wider talent pool in Europe, South America, Canada, East Asia, and India.

- **Top three hiring areas are Systems and Networking (12), HCI (11) and AI (8).** Table 6 and Figure 2 show that the highest number of hires of assistant-level faculty (12) come in Systems and Networking, followed by Human Computer Interaction with 11 hires, and third is Artificial Intelligence with eight hires. Also note that the number of assistant-level faculty hires in Security, including Systems and Networking Security and Theory and Algorithm Cryptography, is high at nine. The six assistant-level faculty hires in the Machine Learning and Data Mining areas are also high.

Quantitative Analysis of the Asia. Competitors dataset

- **Productivity ranking: NUS highest (6.8) NTU.tw lowest (1.3).** Table 2 and Figure 1 show that the productivity ranking is NUS@singapore (highest at 6.8), followed by HKUST@HK (5.8), then HKU@HK (5.5), CUHK@HK (5.0), NTU@singapore (5.0), SMU@singapore (4.0), KAIST@korea (3.6), POLY@HK (3.1), HKBU (2.3), and finally NTU@taiwan (lowest at 1.3). The dataset for Seoul National University (SNU) was not collected due to the small number of assistant-level faculty and limited accessibility of publication information in English.

- **Global optimization of faculty diversity – money helps.** NUS (#1 in Productivity) has been known to aggressively recruit with attractive salaries and startup research funding (i.e., salary of US 120,000++ per year) and has been successful in getting highly qualified candidates from abroad and on board. Table 3 reveals that on its assistant-level faculty roster, only one out of the five recent hires is of Singaporean origin. Similarly, HKUST (#2 in productivity) is also known for competitive salaries, comparable to the U.S. Table 3 reveals that on its assistant-level faculty roster, only one out of the six recent hires is from Hong Kong. By drawing faculty from a wider talent pool, NUS, HKUST, CUHK, HKU and NTU.sg (productivity >= 5.0) are catching up with the productivity performance of the top 10 U.S. computer science programs.

- **NTU.tw is falling significantly behind.** The assistant-level faculty determines the future quality of a department, and they are typically the most productive members of a department. Unfortunately, we are falling significantly behind—productivity=1.3. This means that the assistant level faculty has not been getting opportunities to establish their credibility and publish research results in their target research communities.

- **PhDs from HKUST/NUS with high productivity are hired outside their nations and regions.** Table 3 shows that NTU@singapore hired four PhDs from Hong Kong (two from HKUST and two from CUHK) and KAIST hired one PhD from Singapore (NUS). It further reveals that in these cross-national and -regional hires, the assistant-level faculty had particularly high productivity (i.e., publications at the selective top conferences). For example, Ivor Tsang of NTU.sg has productivity=9, Hoi Chu Hong of NTU.sg has productivity=17 (the highest among those surveyed in Asia), Xiaokui Xiao of NTU.sg has productivity=9, James Cheng has productivity=3 (noted that *Cheng had five uncounted papers at the top data mining conferences ICDM/CIKM/ICDE*), Kyriakos Mouratidis of SMU has productivity=6, and Yu-Wing Tai of KAIST has

productivity=5. This implies that publications at these selected top conferences played a crucial part in their hiring.

- **Local hires in the top Hong Kong and Singapore computer science programs generally have higher productivity than their assistant-level faculty peers who earned PhD degrees outside Asia.** Table 3 shows two such local hires: Chi-Wing Wong of HKUST (productivity=9) and Ho Leung Chan of HKU (productivity=6). Both of them have relatively higher productivity (publications at the selected top conferences) than their assistant-level faculty peers with PhDs from outside Asia. This implies that these publications are even more important for domestic hires than hires from abroad.

- **Furthermore, hires with PhDs from China generally have better productivity than their assistant-level faculty peers earning PhD degrees outside China.** Table 3 shows two such China hires: Ivor Tsang of NTU.sg (PhD/Zhejiang) had two especially prestigious SIGGRAPH papers, and Dong Xu of NTU.sg (PhD/UST.China) had productivity=17 (one of the highest in those surveyed in Asia).

- **High correlation exists between before-hire and after-hire publication performance.** Table 3 shows that most assistant-level faculty onboard for more than two years have continued to publish at those selected top conferences. For example, Pedro Sander of HKUST had two SIGGRAPH papers before being hired and two after. Lap Chi Lau had two FOCS/STOC papers before being hired and one FOCS/STOC paper after.

- **Postdoc experience valuable for local Asian PhDs.** The experience column of Table 3 shows that five of the eight local hires (at computer science programs with productivity >= 5.0) had postdoc or research experience after obtaining their PhD degrees. These experiences also helped boost their publications.

- **PhDs with Chinese undergraduate degrees (who may earn PhD degrees in Asia or West) are filling the rosters of assistant-level faculty.** In computer science programs in Singapore and Hong Kong, 25 PhDs received their undergraduate degrees in China, making up 43% of the assistant-level faculty rosters of those computer science programs.

- **SMU is a new competitive newcomer.** SMU (Singapore Management University), a relative newcomer in computer science programs, has filled 1/3 of its roster with recent assistant-level faculty (12 out of 33) in the past three years. Through its collaboration with CMU computer science, it has been able to gain access to researchers with reasonably good qualifications.

- **Top four hiring areas Systems & Networking (19), Graphics & Vision (13), AI (12) and Database (10).** In comparison to hiring areas in the U.S. dataset, the Asia dataset shows more hires in the areas of Graphics & Visions and Database, which have been strong research areas for Asia as shown in the number of publications at the selected top conferences in Table 5. We can also observe two general hiring strategies by the top computer science programs in Asia. (1) Emphasis on quality – these top computer science programs in Asia tend to hire assistant-level faculty members with strong publication records, regardless of the research areas of these assistant-level faculty members and whether the hiring departments may already have sufficient number of faculty members in that particular research area. It is a guess that given limited selection of qualified candidates, quality selection comes before preferable research areas. (2) Specialize on certain hiring areas: these top computer science programs in Asia may hire assistant-level faculty members in their specialized (i.e., strong) areas to maintain their lead.

SUGGESTIONS

From the findings described above, we came up with the following suggestions for our assistant-level faculty recruitment (and other related policies):

Awareness of what is going on outside Taiwan. These findings may come as a surprise to some of us, especially in the drastic improvements made by our Asian competitors. Therefore, it is desirable to repeat this competitiveness analysis continuously. Awareness of what the outside world, especially our competitors in Asia, are thinking and doing, is essential for setting faculty recruiting policies that will make us more competitive outside of Taiwan and enable us to adapt and respond to international competition.

Know what we want. Our findings strongly suggest that our competitors in Singapore and Hong Kong are quickly adapting to the quality standard (i.e., publications at the selected top conferences) set by the top US computer science programs. Based on the strong performance from our Asian competitors, this quality standard is unlikely to remain only a western or U.S. quality standard, but become accepted as the international quality standard practiced and met by our Asian competitors. For example, NUS developed a research performance benchmark (http://www.comp.nus.edu.sg/~tankl/bench.html) based on conference publications, in which it ranked itself between "21-27 in comparison to a list of the top 70 departments of CS in the US". This report made the quality standard NUS wants clear, and defined with whom NUS wants to compete. Therefore, it is essential to know what

quality standard we want and with whom we want to compete. It is a choice between global competitiveness (i.e., regaining or catching up on our international competitiveness with our Asian competitors) or local optimization (i.e., continuing in our old way). The challenge here is to obtain a general consensus among all of our junior and senior faculty members on what we want.

Hire winners with good track records for delivering the results we want. Our finding strongly suggests a high correlation between past performance before being hired and future performance after hiring. For example, a PhD student with a history of publications at SIGGRAPH is very likely to continue producing papers at SIGGRAPH, or SIGGRAPH-quality papers, after becoming a faculty member.

Clearly articulate what we want to our new assistant-level faculty hires. After hiring, clearly articulate and actively support our assistant-level faculty members such that they can deliver what we want. Realize that they also only have 24 hours in a day. To help the department regain our competitiveness among our Asian competitors, discuss what publications strategies they may want to consider or prioritize.

Clearly articulate what we want to our PhD students. On equal quality footing, hiring is bidirectional (tri-directional, etc.) That is, we mutually recognize the quality of our main research product—PhD graduates. As shown in Table 4, this type of multi-directional hiring is done among the top U.S. computer science departments and is very likely to occur soon among the top Asia computer science programs. For example, NTHU has already hired two PhDs from Hong Kong (one from HKUST, one from HKU). Do we have qualified PhD graduates, with matching qualifications, for this multi-directional hiring? To prepare such PhD graduates, we must articulate what we want to our PhD students and prepare them for competition outside of Taiwan.

Academic competitiveness only meaningful with workplace happiness. It is the strong opinion of this report that academic competitiveness and excellence are meaningful only when all assistant-level and senior-level faculty members enjoy their work and workplace. Therefore, creating a happy workplace is essential because happy faculty members are more likely to be productive and successful. Happy faculty members are also more likely to make other faculty members and students working around them happy and productive.

Table 2. Productivity comparision among selected computer science programs (recent assistant-level faculty hires 2006-2009). Productivity measures the average number of papers published at the selected top conferences (2000-2009) per recent assistant-level faculty hire (2006-). It counts both the papers published before the faculty hiring date (i.e., during PhD/postdoc studies) and after faculty hiring date (i.e., during the first few years at the hiring university). For example, Productivity = 5.0 means that on average, each assistant-level faculty published 5 papers at the selected top conferences (2000-2009).

	University	Abbreviation	Department	Total faculty (full-time, all ranks, research track only)	# of recent assistant-level faculty hires (2006-2009), full-time, research track only	Productivity* (avg # full papers in selected conferences per new faculty hire)	Sources
Singapore	National University of Singapore	NUS	School of computing, Department of computer science	80	5	6.8	http://www.comp.nus.edu.sg/cs/acad_staff.html
	Nayang Technological University	NTU.sg	School of computer engineering	109	15	5	http://www3.ntu.edu.sg/SCE/
	Singapore Management University	SMU	School of information systems	33	12	4.1	http://www.sis.smu.edu.sg/
Hong Kong	Hong Kong University of Science and Technology	HKUST	Department of computer science and engineering	45	6	5.8	http://www.cse.ust.hk/
	Chinese University of Hong Kong	CUHK	Department of computer science and engineering	30	5	5	http://www.cse.cuhk.edu.hk/
	University of Hong Kong	HKU	Department of computer science	22	4	5.5	http://www.cs.hku.hk/
	Hong Kong Polytechnic University	POLY	Department of computing	39	7	3.1	http://www.comp.polyu.edu.hk/
	Hong Kong Baptist University	HKBU	Department of computer science	17	4	2.3	http://www.comp.hkbu.edu.hk/v1/
Korea	Korea Advance Institute of science and technology	KAIST	Department of electrical engineering and computer science, Division of computer science	50	11	3.6	http://cs.kaist.ac.kr/index.cs
	Seoul National University		School of computer science and engineering				http://cse.snu.ac.kr/english/index.asp (skipped due to a small number of assistant professors and lack of transparent info)
Taiwan	National Taiwan University	NTU.tw	Department of Computer Science and Information Engineering	43	6	1.3	
U.S.	Top 10 U.S. Computer Science programs (USNews ranking)	Top.US	MIT, Stanford, Berkeley, CMU, UIUC, Cornell, Princeton, Washington, Georgia Tech, U.T. Austin		54	9.9	See the RecentHiresUS sheet

Figure 1. Productivity comparison in the performance of recent assistant-level faculty hires among different selected computer science programs in Asia and the top 10 U.S. computer science programs.

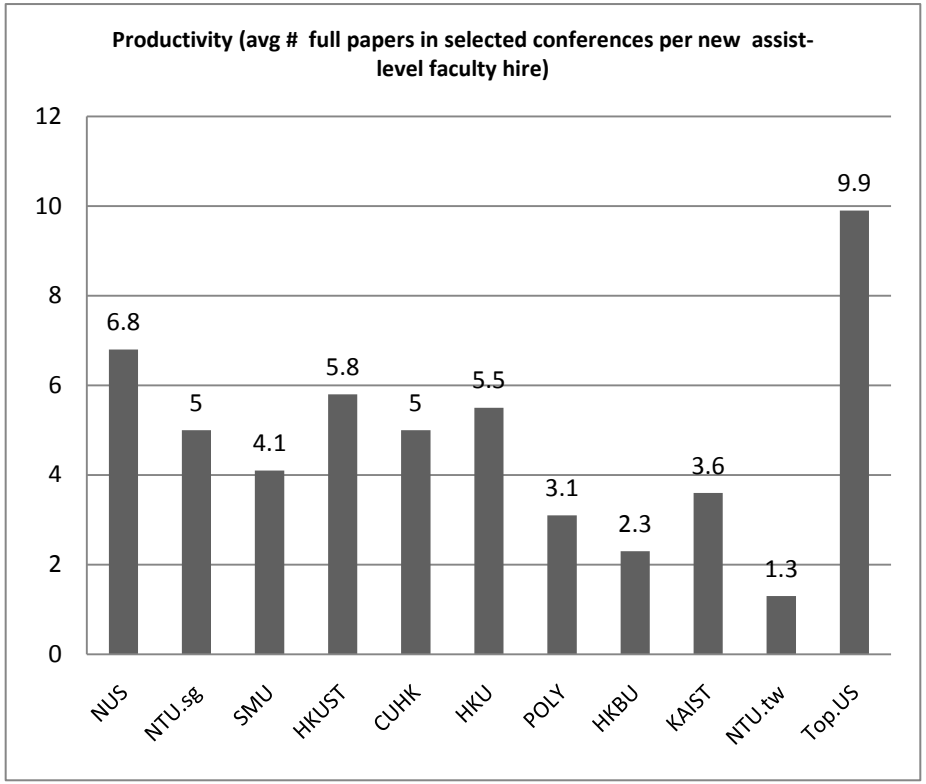

Table 3. Profiles of recent assistant-level faculty hires (2006-2009) in selective Asian computer science programs. **Year hire**: Year when the assistant-level faculty was hired. **Origin:** Country where the faculty received his/her undergraduate degree. This indicates where the faculty may be originally from. **PhD(year):** Institute where the faculty received his/her PhD degree (graduation year). **Selected publications (before hire. 2000-)** count the number of papers published at each of the selected top conferences before the faculty joined the recruiting institute (and after 2000). It is an indication on the publication qualification of the faculty when he/she applied for the faculty position. For example, "SENSYS(2), INFOCOM(2)" means that the faculty had two full papers at SENSYS and 2 full paper at INFOCOM. **Selected publications (after hire. 2000-)** count the number of papers published at each of the selected top conferences after the faculty joined the recruiting institute. **Productivity per assistant-level faculty (unit: the number of papers)** count the number of papers published at the selected top conferences from 2000-2009. For most of the assistant-level faculty, this number includes both the papers published during the faculty's PhD studies (at the PhD university) plus the papers published during the first few years of faculty/postdoc research at the new university. **Experience** lists both full-time, e.g., full(Intel), or postdoc, e.g., postdoc(Princeton), experiences prior to becoming faculty.

	Name	Year hired	Origin (undergrad)	PhD	Research area	Selected publications (before hire, 2000-YearHired)	Selected publications (after hire, YearHired-2009)	Experience	Productivity	Sources
HKUST	Lin Gu	2008	China	Virgina(06)	Sensor networking	SENSYS(2), INFOCOM(2)	x	full(Google)	4	http://www.cs.virginia.edu/~lg6e/
5.8	**Sunghun Kim**	2008	**Korea**	UC.Santa Cruz(06)	Software engineering	ICSE(1)	**SOSP(1)**, FSE(1)	postdoc(MIT)	3	http://people.csail.mit.edu/hunkim/cv.pdf
	Pedro Sander	2006	**US**	Harvard(03)	Graphics	**SIGGRAPH(2)**	**SIGGRAPH(2)**, SIGMOD(1)	full(AT&T)	5	http://www.cse.ust.hk/~psander/#GeneralInfo
	Chi-Wing Wong	2008	HK	HKUST(08)	Database	VLDB(4), KDD(2), INFOCOM(1)	VLDB(2)		9	http://www.cse.ust.hk/~raywong/
	Ke Kevin Yi	2007	China	Duke(06)	Database, algorithm	SODA(2), **SIGMOD(2)**	**PODS(3), SIGMOD(3)**, SODA(1), VLDB(2)	full(AT&T)	**13**	http://www.cse.ust.hk/~yike/cv.htm
	Charles Zhang	2008	Canada	Toronto(07)	Software engineering	*x*	ICSE(1)		1	http://www.cse.ust.hk/~charlesz/
CUHK	**Andrej Bogdanov**	2008	**Russia**	Berkeley(05)	Theory	**FOCS(4), STOC(1), INFOCOM(1)**	x	**postdoc(Princeton, Rugers, Tsinghua)**	6	http://www.cse.cuhk.edu.hk/~andrejb/
5.0	**Lap Chi Lau**	2007	HK	Toronto(06)	Theory	**FOCS(2), STOC(2)**	**FOCS(1), STOC(1)**		6	http://www.cse.cuhk.edu.hk/~chi/research.htm
	Patrick P. C. Lee	2009	HK	Columbia(08)	Networking	INFOCOM(4)	x	postdoc(U.Mass)	4	http://www.cse.cuhk.edu.hk/~pclee/www/index.html
	Qiang Xu	2006	China	McMaster(05)	Hardware	*don't know pubs in this field*	*don't know pubs in this field*			http://www.cse.cuhk.edu.hk/~qxu/publications.htm
	Shengyu Zhang	2008	China	Princeton(06)	Theory	FOCS(1), STOC(1), [illegible]	SODA(1)	postdoc(Caltech)	4	http://www.cse.cuhk.edu.hk/~syzhang/
HKU	Ho Leung Chan	2009	HK	HKU(07)	Theory, algorithm	SODA(3), FOCS(1)	SODA(2)	postdoc(Pittsburg, Max-Planck)	6	http://i.cs.hku.hk/~hlchan/
5.5	Hubert Chan	2009	?	CMU(07)	Theory, algorithm	FOCS(1), SODA(4), IEEE.sec(1)	x	postdoc(Max-Planck)	6	http://i.cs.hku.hk/~hubert/
	Chuan Wu	2008	China	Toronto(08)	Networking	INFOCOM(2), MM(1)	INFOCOM(1)		4	http://i.cs.hku.hk/~cwu/CV/cv.pdf
	Reynold Cheng	2008	HK	Purdue(05)	Database	SIGMOD(1), VLDB(4)	SIGMOD(1)	faculty(POLY)	6	http://i.cs.hku.hk/~ckcheng/
POLY	Zhu Li	2008	China	Northwestern(04)	Multimedia	MM(1)	x	full(Motorola)	1	http://www4.comp.polyu.edu.hk/~cszli/
3.1	Chi Lik Eric Lo	2007	HK	ETH(07)	Database	SIGMOD(2), VLDB(1), [illegible]	SIGMOD(1)	full(Google)	5	http://www4.comp.polyu.edu.hk/~csclllo/
	Ajay Kumar	2009	India	HKU(01)	Vision	CVPR(3)	x	faculty(IIT)	3	http://www4.comp.polyu.edu.hk/~csajaykr/

	Dan Wang	2007	China	SimonFraser(06)?	Networking	x	INFOCOM(1)		1	http://www4.comp.polyu.edu.hk/~csdwang/Publication/publications.htm
	Qixin Wang	2008	China	UIUC(08)	Systems	RTSS(4)	x		4	http://www4.comp.polyu.edu.hk/~csqwang/
	Man Lung Yiu	2009	HK	HKU(06)	Database	VLDB(4), SIGMOD(2)	x	postdoc(Aalborg)	6	http://www4.comp.polyu.edu.hk/~csmlyiu/
	Lei Zhang	2006	China	西北工业大学.China(01)	Vision	x	CVPR(2)	postdoc(McMaster)	2	http://www4.comp.polyu.edu.hk/~cslzhang/
HKBU	Chen Li	2009	China	EPFL(08)	AI	AAAI(1), IUI(2)	x		3	http://www.comp.hkbu.edu.hk/~lichen/
2.3	Byron Choi	2008	HK	UPenn(06)	Database	WWW(1), SIGMOD(1)	x	postdoc(NTU.sin)	2	http://www.comp.hkbu.edu.hk/~bchoi/
	Haibo Hu	2008	China	HKUST(05)	Database	VLDB(1), SIGMOD(1)	x		2	http://www.comp.hkbu.edu.hk/~haibo/
	Hai Liu	2008	China	CityU HK(06)	Networking	INFOCOM(2)	x		2	http://www.comp.hkbu.edu.hk/~hliu/
NUS	**Michael Brown**	2007	**US**	Kentucky(01)	Vision	**CVPR(5), ICCV(2)**	**CVPR(3)**	faculty(HKUST)	**10**	http://www.comp.nus.edu.sg/~brown/
6.8	Ben Leong	2006	Singapore	MIT(06)	Networking	NSDI(1)	x	**Liskov's student**	1	http://www.comp.nus.edu.sg/~bleong/resume.pdf
	Zhenkai Liang	2008	China	SUNY(06)	System, security	**CCS(2), Usenix.sec(1)**	**FSE(1)**		4	http://www.comp.nus.edu.sg/~liangzk/
	Haifeng Yu	2006	China	Duke(02)	Systems, Networking	**SIGCOMM(1),** NSDI(4), **SOSP(1), OSDI(1)**, VLDB(1)	SIGMOD(1), **IEEE sec(2)**, IPSN(1)	**full(Intel research), visit-faculty(CMU)**	**12**	http://www.comp.nus.edu.sg/~yuhf/
	Shengdong Zhao	2009	US	Toronto(08)	HCI	**CHI(3), UIST(2)**, WWW(1)	**CHI(1)**		7	http://www.comp.nus.edu.sg/~zhaosd/
NTU.sg	Anwitaman Datta	2006	India	EPFL(06)	Systems	VLDB(1)	x		1	http://www.ntu.edu.sg/home/anwitaman
5.0	Philip Chi-Wing Fu	2008	HK	Indiana(03)	Graphics & Viz	SIGGRAPH(1)	x		1	http://www3.ntu.edu.sg/home/cwfu/papers/
	Ying He	2006	China	SUNY(06)	Graphics & Viz	x	MM(1)		1	http://www.ntu.edu.sg/home/yhe
	Henry Johan	2006	Japan	U.Tokyo(04)	Graphics	x	x		0	
	Ivor Wai-Hung Tsang	2008	HK	**HKUST(07)**	AI, machine learning	**ICML(4),** IJCAI(1), **NIPS(1)**	**KDD(1), IJCAI(1), CVPR(1)**	postdoc(HKUST)	9	http://www3.ntu.edu.sg/home/IvorTsang/
	Jianmin Zheng	2007	China	Zhejiang(92)	Graphics	**SIGGRAPH(2)**	x	research(BYU)	2	http://www3.ntu.edu.sg/home/asjmzheng/publ.html
	Dusit Niyato	2008	Thailand	Manitoba(08)	Networking	x	x		0	http://www3.ntu.edu.sg/home/dniyato/
	Jun Luo	2008	China	EPFL(06)	Wireless	INFOCOM(4)	x		4	http://www3.ntu.edu.sg/home/junluo/index.htm
	Ping Wang	2008	China	Waterloo(08)	Wireless	x	x		0	http://www3.ntu.edu.sg/home/WangPing/index.html
	Jianxin Wu	2009	China	GeorgiaTech(09)	Vision, machine Learning	ICCV(2), CVPR(1), ICML(1), NIPS(1), IJCAI(1)	x		6	http://www3.ntu.edu.sg/home/jxwu/
	Dong Xu	2007	China	**UST.China(05)**	Vision	**CVPR(10)**	**CVPR(3),MM(2),ICML(1), IJCAI(1)**	postdoc(Columbia)	**17**	http://www3.ntu.edu.sg/home/dongxu/Dong_CV.pdf
	James Cheng	2009	HK	**HKUST(08)**	Database	KDD(2), SIGMOD(1)	x	?	3	http://www3.ntu.edu.sg/home/jamescheng/
	Hoi Chu Hong	2006-2007	China	**CUHK(06)**	Vision, Machine learning, AI	**MM(1), ICML(1), CVPR(2), KDD(1)**	**MM(3), ICML(3), ICCV(1), CVPR(4), AAAI(1)**	?	**17**	http://www3.ntu.edu.sg/home/chhoi/publication.htm

	Xiaokui Xiao	2009	China	**CUHK(08)**	Database	**VLDB(5), SIGMOD(3), KDD(1)**	x	postdoc(Cornell)	9	http://www3.ntu.edu.sg/home/xkxiao/
SMU	Rajesh Krishna Balan	2006	Singapore	CMU(06)	Systems	INFOCOM(1), MOBISYS(1)	MOBISYS(2), FSE(1), ICSE(1)		6	https://mercury.smu.edu.sg/rsrchpubupload/rajesh.pdf
4.1	Shih-Fen Cheng	2007	Taiwan	Michigan(06)	AI	IJCAI(1), AAAI(1)	x		2	https://mercury.smu.edu.sg/rsrchpubupload/sfcheng.pdf
	Richard Davis	2009	**US**	Berkeley(08)	HCI	CHI(3), UIST(1)	x		4	https://mercury.smu.edu.sg/rsrchpubupload/rcdavis.pdf
	Debin Gao	2007	China	CMU(06)	System, security	CCS(1), USENIX.sec(1)	x		2	http://www.sis.smu.edu.sg/faculty/infosys/dbgao.asp
	Jing Jiang	2008	US	UIUC(08)	AI, info retrieval	KDD(1), SIGMOD(1)	x		2	https://mercury.smu.edu.sg/rsrchpubupload/jingjiang.pdf
	Youngsoo Kim	2009	Korea	CMU(07)	Mobile	x	x	postdoc(SNU)	0	http://www.sis.smu.edu.sg/faculty/cv/yskim.pdf
	David Lo	2009	Indonesia	NUS(08)	AI, data mining	KDD(1), FSE(1)	x		2	https://mercury.smu.edu.sg/rsrchpubupload/davidlo.pdf
	Dan Ma	2006	China	Rochester(06)	Management	*don't know pubs in this field*	*don't know pubs in this field*			http://www.sis.smu.edu.sg/faculty/infosys/madan.asp
	Kyriakos Mouratidis	2006	**Greece**	**HKUST(06)**	Database	VLDB(1), SIGMOD(2)	VLDB(3), SIGMOD(1)	postdoc(NUS)	7	https://mercury.smu.edu.sg/rsrchpubupload/kyriakos.pdf
	Jialie Shen	2007	China	NewSouth Wales(07)	AI, info retrieval	SIGIR(1), MM(3)	SIGIR(1), MM(2)		7	https://mercury.smu.edu.sg/rsrchpubupload/JLSHEN.pdf
	Pradeep Reddy Varakantham	2009	**India**	USC(07)	AI, Agents	AAMAS(8), IJCAI(1)	x	postdoc(CMU)	9	http://www.sis.smu.edu.sg/faculty/cv/Pradeep.pdf
	Charles Jason Woodard	2006	US	Harvard(06)	Information management	*don't know pubs in this field*	*don't know pubs in this field*			https://mercury.smu.edu.sg/rsrchpubupload/cwoodard.pdf
KAIST	Jaehyuk Huh	2008	Korea	U.T.Austin(06)	Architecture	**MICRO(1), ASPLOS(1), ISCA(1)**	x	full(AMD)	3	
3.6	Kyomin Jung	2009	Korea	MIT(09)	Algorithm	INFOCOM(2), SODA(1), SIGMETRICS(1), NIPS(1), STOC(1)	x		6	
	Sungho Jo	2007	Korea	MIT(06)	Bioinformatics	x	x	postdoc(MIT)		http://isnl.kaist.ac.kr/mediawiki/index.php/Shjo
	John Kim	?	Korea	Stanford(08)	Architecture	**ISCA(7), MICRO(1)**	x	Also employed at Northwestern?	8	http://web.kaist.ac.kr/~jjk12/publications.html
	Kee-Eung Kim	2006	Korea	Brown(01)	AI, CHI	x	IJCAI(1), AAAI(1)		2	http://ailab.kaist.ac.kr/en/site/publications
	Moonzoo Kim	2006	Korea	U.Penn(01)	Software engineering, verification	ICSE(1)	x		1	http://pswlab.kaist.ac.kr/members/moonzoo_kim/moonzoo-kims-home-page
	Soontae Kim	2007	Korea	PennState(03)	Hardware	*don't know pubs in this field*	*don't know pubs in this field*			http://ecl.kaist.ac.kr/xe/?mid=publication
	Alice Haeyun Oh	?	Korea	MIT(08)	AI, natural language processing	CHI(1)	x		1	http://people.csail.mit.edu/aoh/
	Insik Shin	2008	Korea	U.Penn(?)	Systems	RTSS(5)	x		5	http://locust.kaist.ac.kr/htmls/publications.html
	Yu-Wing Tai	2009	HK	**NUS(09)**	Graphics	CVPR(5)	x		5	http://yuwing.kaist.ac.kr/CV_YuWingTAI.pdf
	Sungeui Yoon	2007	Korea	UNC(05)	Graphics	SIGGRAPH(1)	x		1	http://sglab.kaist.ac.kr/papers.htm

NTU.tw	
1.3	

Total	293
Average	4.2
Std	3.8

Table 4. Profiles of recent assistant-level faculty hires (2006-2009) in the top 10 U.S. computer science programs (U.S. News ranking) **Productivity:** Average number of papers published at the selected top conferences (2000-2009) per recent assistant-level faculty hire (2006-). It counts both the papers published before the faculty hiring date (i.e., during PhD/postdoc studies) and after faculty hiring date (i.e., during the first few years at the hiring university). For example, Productivity = 5.0 means that on average, each assistant-level faculty published 5 papers at the selected top conferences (2000-2009).

School	Name	Origin (undergrad)	Year Hired	PhD	Research fields	Description	Selected publications (2000-)	Productivity	Source
MIT, CSAIL	Scott Aaronson	U.S.	2007	Berkeley(04)	Theory	Quantum computers, computational complexity theory	STOC(4), FOCS(1)	5	http://www.scottaaronson.com/vita.pdf
	Konstantinos Daskalakis	Greece	2009	Berkeley(08)	Theory	Algorithmic game theory, computational biology, applied probability	STOC(5), FOCS(2), SODA(3), INFOCOM(1)	11	http://www.eecs.berkeley.edu/~costis/academic.html
	Jonathan Kelner	U.S.	2008	MIT(06)	Theory	Pure mathematics to the solution of fundamental problems in algorithms and complexity theory	STOC(1), FOCS(4), ICML(1)	6	http://math.mit.edu/~kelner/publications.html
	Armando Solar-Lezama	Mexico	2009	Berkeley(08)	Programming language	Exploit massive computing power to help programmers tackle challenging programming problems	PLDI(3), ASPLOS(1)	4	http://www.cs.berkeley.edu/~asolar/Resume.htm
	Nickolai Zeldovich	U.S.	2008	Stanford(07)	Systems & networking	Security	SOSP(1), OSDI(2), NSDI(1), USENIX.sec(1)	5	http://people.csail.mit.edu/nickolai/cv.pdf
Stanford, computer science	Jeff Heer	U.S.	2009	Berkeley(08)	HCI	Visualization	CHI(7), UBICOMP(1)	8	http://hci.stanford.edu/jheer/cv/#pubs
	Jure Leskovec	Slovenia	2009	CMU(08)	AI	Data mining, social network	SIGKDD(6), WWW(4), ICML(3), INFOCOM(1), AAAI(1)	15	http://www.cs.cmu.edu/~jure/jure-cv.pdf
	Philip Levis	U.S.	2006	Berkeley(06)	Systems & networking	Sensor networking (Tiny OS)	Sensys(8), IPSN(3), SOSP(2), OSDI(1), NSDI(1)	15	http://csl.stanford.edu/~pal/pubs.html
	Fei-Fei Li	China	2009	Caltech(05)	Vision		ICCV(6), CVPR(8)	14	http://cs.stanford.edu/groups/vision/publications.html#refereed_pape
UC Berkeley, EECS, computer science division	Pieter Abbeel	Belgium	2008	Stanford(08)	AI	Robotics, Machine learning	NIPS(6), ICML(5), AAAI(1)	12	http://www.cs.berkeley.edu/~pabbeel/
	Koushik Sen	India	2007	UIUC(06)	Programming systems		FSE(6), PLDI(3), ICSE(4)	13	http://srl.cs.berkeley.edu/~ksen/doku.php?id=publications
	Yun S. Song	U.S.	2007	Stanford(01)	Computational biology		*don't know pubs in this field*	*unknown*	
CMU, School of computer science	Laura A. Dabbish	U.S.	2008	CMU(06)	HCI	CSCW, social computing	CHI(5), CSCW(3)	8	http://www.cs.cmu.edu/~dabbish/cv.html
	Matthew Kam	U.S.	2009	Berkeley(08)	HCI	E-learning applications for third world	CHI(4)	4	http://www.cs.cmu.edu/~mattkam/
	Eric Paulos	U.S.	2008	Berkeley(02)	HCI, Ubicomp		CHI(7), UBICOMP(3), Sensys(1)	11	http://www.paulos.net/publications.html
	Andre Platzer	U.S.	2008	Oldenburg(08)	Programming language	Formal verification	*don't know pubs in this field*	*unknown*	http://symbolaris.com/meta/andre.html

	Carolyn Rose	U.S.	2008	CMU(97)	HCI	CSCW, tutoring systems	CHI(4), CSCW(3), IJCAI(1)	8	http://www.cs.cmu.edu/~cprose/
	Noah Smith	U.S.	2006	Johns.Hopkins(06)	AI	Natural language processing, computational linguistics, machine learning	*don't know pubs in this field*	*unknown*	http://www.cs.cmu.edu/~nasmith/
	Adrien Treuille	U.S.	2008	U.Wash(08)	Graphics		SIGGRAPH(6)	6	http://www.cs.cmu.edu/~treuille/
	Luis Von Ahn	U.S.	2006	CMU(05)	HCI		CHI(6), STOC(1), NIPS(1)	8	http://www.cs.cmu.edu/~biglou/
UIUC, Department of computer science	Matthew Caesar	U.S.	2008	Berkeley(07)	Networking		SIGCOMM(5), NSDI(1)	6	http://www.cs.uiuc.edu/homes/caesar/pubs.html
	Brighten Godfrey	U.S.	2009	Berkeley(09)	Networking & Theory		SIGCOMM(1), FOCS(1), INFOCOM(2), IPSN(1), SODA(1)	6	http://www.cs.illinois.edu/homes/pbg/
	Julia Hockenmaier	Germany	2007	Edinburg(03)	AI	Natural language processing	*don't know pubs in this field*	*unknown*	http://www.cs.illinois.edu/homes/juliahmr/HockenmaierCV.pdf
	Derek Hoiem	?	2009	CMU(07)	Vision		ICCV(5), CVPR(8), SIGGRAPH(2)	15	http://www.cs.illinois.edu/homes/dhoiem/
	Sam King	?	2007	Michigan(06)	Systems, security		SOSP(2), OSDI(2), ASPLOS(2), IEEE sec(2), USENIX.sec(1)	9	http://www.cs.uiuc.edu/homes/kingst/Research.html
Cornell, Department of computer science	Dan Cosley	U.S.	2006	Minnesota(06)	HCI	Online communities, and recommender systems	CHI(8), CSCW(2), *IUI(3)* , SIGKDD(1), SIGIR(1), VLDB(1)	13	http://www.cs.cornell.edu/~danco/
	Rafael Pass	Sweden	2006	MIT(06)	Theory, Crypto		STOC(6), FOCS(5)	11	http://www.cs.cornell.edu/~rafael/
	Ashutosh Saxena	India	2009	Stanford(09)	AI, Robotics	Artificial Intelligence, Machine Learning, Robotics, Computer Vision	NIPS(4), ICML(2), AAAI(3), IJCAI(1)	10	http://www.cs.cornell.edu/~asaxena/publications.html
	Noah Snavely	?	2009	U. Wash(08)	Vision and Graphics		ICCV(4), SIGGRAPH(3), CVPR(3)	10	http://www.cs.cornell.edu/~snavely/
	Hakim Weatherspoon	?	2007	Berkeley(06)	Systems	Fault-tolerance, reliability, security, and performance of Internet-scale systems	NSDI(2), ASPLOS(1)	3	http://www.cs.cornell.edu/~hweather/
Princeton, Department of computer science	David M. Blei	U.S.	2006	Berkeley(04)	Machine learning	Machine learning, graphical models, computational statistics, information retrieval, natural language processing.	NIPS(8), ICML(3), SIGIR(2), SIGKDD(1), CVPR(1)	15	http://www.cs.princeton.edu/~blei/blei-cv.pdf
	Michael J. Freedman	U.K.	2007	NYU(07)	Systems, security	Distributed systems, security, networking, applied cryptography.	SIGCOMM(1), NSDI(5), CCS(2), IEEE sec(1), USENIX.sec(1)	10	http://www.cs.princeton.edu/~mfreed/
U. of Washington, Department of computer science	Magdalena Balazinska	Canada	2006	MIT(06)	Database		VLDB(5), SIGMOD(4), Mobisys(4), NSDI(1), Usenix.sec(1)	15	http://www.cs.washington.edu/homes/magda/
	Luis Ceze	Brazil	2007	UIUC(06)	Architecture		ASPLOS(2), ISCA(3), MICRO(2)	7	http://www.cs.washington.edu/homes/luisceze/pubs.html

	James A. Fogarty	U.S.	2006	CMU(06)	HCI, Ubicomp		CHI(13), UIST(6), CSCW(1), UBICOMP(1), AAAI(2), SIGGRAPH(1)	24	http://www.informatik.uni-trier.de/~ley/db/indices/a-tree/f/Fogarty:James.html
	Tadayoshi Kohno		2006	UCSD(06)	Security		ACM CCS(6), IEEE sec(4), USENIX.sec(3), NSDI(1), Mobisys(1), CHI(1)	16	http://www.cs.washington.edu/homes/yoshi/papers/index.html
	James R. Lee		2008	Berkeley(07)	Theory		FOCS(7), STOC(5), SODA(3)	15	http://www.cs.washington.edu/homes/jrl/
	Shwetak N. Patel	U.S.	2008	GeorgiaTech(08)	HCI, Ubicomp		UBICOMP(9), CHI(2), CSCW(1), UIST(2)	14	http://abstract.cs.washington.edu/~shwetak/?Curriculum_Vitae
	Georg Seelig	Switzerland	?	?	Computational Biology		*don't know pubs in this field*	*unknown*	http://www.cs.washington.edu/homes/seelig/people/seelig/cv_pubs_seelig_long.pdf
Georgia Tech, College of computing	Maria-Florina Balcan	Romania	2009	CMU(08)	AI	Machine learning	SODA(2), STOC(1), FOCS(1), ICML(2), NIPS(1)	7	http://www.cc.gatech.edu/~ninamf/
	Nathan Clark	U.S.	2007	Michigan(07)	Architecture, Compiler		ASPLOS(1), ISCA(2), MICRO(2)	5	http://www.cc.gatech.edu/~ntclark/
	Nick Feamster	U.S.	2006	MIT(05)	Network, security		SIGCOMM(6), CCS(1), Usenix.sec(3), Sigmetrics(2), NSDI(2)	14	http://www.cc.gatech.edu/~feamster/
	Jonathon Giffin	U.S.	2006	Wisconsin(06)	Systems, security		CCS(2), IEEE sec(2), USENIX.sec(2)	6	http://www.cc.gatech.edu/~giffin/
	Hyesoon Kim	Korea	2007	Austin(07)	Architecture	High-performance energy-efficient computer architectures	MICRO(6), ISCA(3), ASPLOS(1)	10	http://www.cc.gatech.edu/~hyesoon/pubs.html
	Guy Lebanon	Israel	2008	CMU(05)	AI	Machine learning	NIPS(5), ICML(3)	8	http://www.cc.gatech.edu/~lebanon/papers/
	Karen Liu	Taiwan	2007	U.Wash(05)	Graphics		SIGGRAPH(5)	5	http://www.cc.gatech.edu/directory/faculty/faculty/directory/karen-liu
	Mark Riedl	U.S.	2008	UNC(05)	HCI	Storytelling, game	AAMAS(2), IUI(2)	4	http://www.cc.gatech.edu/~riedl/#pubs
	Mike Stilman	U.S.	2008	CMU(07)	Robotics	Humanoid Robotics	*don't know pubs in this field*	*unknown*	http://www.cc.gatech.edu/~mstilman/
	Andrea Thomaz	U.S.	2007	MIT(06)	HCI	Human-Robot Interaction	CHI(4), AAAI(2), AAMAS(1)	7	http://www.cc.gatech.edu/~athomaz/pubs.html
	Patrick Gerard Traynor	U.S.	2008	PennState(08)	Security		CCS(4), USENIX.sec(1), Mobicom(1), Mobisys(1), Infocom(1)	8	http://www.cc.gatech.edu/~traynor/
	Richard Vuduc	U.S.	2007	Berkeley(07)	Hardware	High performance computing	*don't know pubs in this field*	*unknown*	http://vuduc.org/cv/vuduc-cv.pdf
UT Austin, Department of computer sciences	Kristen Grauman	U.S.	2007	MIT(06)	Vision		ICCV(5), CVPR(11), NIPS(3), AAAI(1), CHI(1)	21	http://www.cs.utexas.edu/~grauman/grauman_cv.pdf

	Michael Walfish	U.S.	2008	MIT(07)	Networking		SIGCOMM(2), OSDI(1), NSDI(1)	4	http://www.cs.utexas.edu/~mwalfish/walfish-cv.pdf
	Brent Waters	U.S.	2009	Princeton(04)	Security, crypto	Network security; applied cryptography	CCS(10), FOCS(1), STOC(1), IEEE sec(1), WWW(1)	14	http://www.cs.utexas.edu/~bwaters/cv/brent-cv.pdf
Total								465.0	
Average								9.9	
Std								4.7	

Table 5. List of selected top conferences grouped into their research areas and the distributions of recent assist-level faculty hires in different research areas for the Top.US and surveyed Asian computer science programs. **SIG** stands for the ACM special interest group that sponsors the conference. **# of selected publications of Top.US hires** count their publications in the selected top conferences. **# of selected publications of Asia hires** counts their publications in the selected top conferences.

Research field	General/Subfield	SIG	Publication names	# of selected publications of Top.US hires	# of selected publications of Asia hires
Artificial intelligence					
	General		AAAI	10	4
	General		IJCAI	1	7
	Machine learning		ICML	19	10
	Neural computation		NIPS	28	4
	Data mining	SIGKDD	KDD	8	9
	Web		WWW	5	3
	Information retrieval	SIGIR	SIGIR	3	4
	Intelligent agents		AAMAS	3	8
	Intelligent user interface	SIGART, SIGCHI	IUI	5	2
	Robotics			*unknown*	*unknown*
Architecture					
	General	SIGARCH	**ISCA**	8	8
	Arch + PL	SIGARCH/SIGPLAN	**ASPLOS**	8	1
	Micro architecture	SIGMICRO	MICRO	10	2
Database					
	General	SIGMOD	SIGMOD	4	23
	General	SIGMOD	PODS	0	4
	Very large database		VLDB	6	25
Programming language, software engineering					
	Programming language	SIGPLAN	POPL	0	0
	Programming language	SIGPLAN	PLDI	6	0
	Software Engineering	SIGSOFT	FSE	6	3
	Software Engineering	SIGSOFT	ICSE	4	4

Systems & networking					
	Systems	SIGOPS	**SOSP**	5	2
	Systems	SIGOPS	**OSDI**	6	1
	Distributed		USENIX NSDI	13	5
	Sensor networking	SIGMOBILE/SIGOPS	SENSYS	9	2
	Sensor networking		IPSN (ACM)	4	1
	Security	SIGSACT	CCS	25	3
	Security		IEEE security & privacy	10	4
	Security		USENIX security	13	1
	Networking	SIGCOMM	**SIGCOMM**	15	1
	Networking		IEEE INFOCOM	4	19
	Mobile networking	SIGMOBILE	MOBICOM	1	0
	Mobil systems	SIGMOBILE	MOBISYS	6	3
	Real time systems		IEEE RTSS	0	10
	Performance evaluation	SIGMETRICS	SIGMETRICS	2	1
Graphics & vision					
	Graphics	SIGGRAPH	**SIGGRAPH**	16	5
	Vision		ICCV	20	5
	Vision		CVPR	31	39
HCI					
	General	SIGCHI	CHI	62	8
	Interaction	SIGCHI	UIST	8	3
	CSCW	SIGCHI	CSCW	10	0
	Ubiquitous computing	SIGCHI/SIGMOBILE	UBICOMP	14	0
Theory & algorithms					
	General		IEEE FOCS	22	10
	General	SIGACT	STOC	24	6
	Algorithms	SIGACT	SODA	9	14
Multimedia					
	General	SIGMM	MM	0	17
Bioinformatics				*unknown*	*unknown*
Hardware				*unknown*	*unknown*

Others		*unknown*
Total	463	281

Table 6. Research area **d**istribution for recent assistant-level faculty hires in the top U.S. computer science programs and in Asia. **# of recent Top.US assistant-level faculty hires** counts the number of assistant-level faculty hires among the top 10 U.S. computer science programs. **# of recent assistant-level faculty hires in Asia** counts the number of assistant-level faculty hires among the surveyed computer science programs in Asia.

	# of recent Top.US assistant-level faculty hires	**# of recent assistant-level faculty hires in Asia**
Artificial intelligence	9	12
Architecture	3	2
Database	1	10
Programming language, software engineering	3	3
Systems & networking	12	19
Graphics & vision	6	13
HCI	11	2
Theory & algorithms	6	6
Multimedia	0	3
Bioinformatics	2	1
Hardware	1	1
Security	9	2
Machine learning	6	4
Others	0	1

Figure 2. Research area distribution of recent assistant-level faculty hires in the top U.S. computer science programs and in Asia.