

A Quick Intro to NUS School of Computing

Limsoon Wong



KENT RIDGE CAMPUS
(correct as at 25 Feb 2008)

The map shows the layout of the Kent Ridge Campus, including the following buildings and areas:

- YONG SIEW TOH CONSERVATORY OF MUSIC
- University Cultural Centre & Museum
- Kent Ridge Crescent
- Sports & Recreation Centre
- Lower Kent Ridge Road
- SCHOOL OF COMPUTING (INTERIM CLUSTER)
- UNIVERSITY HALL
- YONG LOO LIN SCHOOL OF MEDICINE
- FACULTY OF DENTISTRY
- FACULTY OF SCIENCE
- NATIONAL UNIVERSITY HOSPITAL
- SCHOOL OF DESIGN & ENVIRONMENT
- UNIVERSITY SCHOLAR PROGRAMME
- SCHOOL OF COMPUTING
- NUS BUSINESS SCHOOL
- Heng Mui Keng Terrace
- FACULTY OF ART & SOCIAL SCIENCES
- Central Library
- Upper Kent Ridge Road
- Lower Kent Ridge Road
- South Buona Vista Road
- West Coast Road
- Pasir Panjang Road
- Ayer Rajah Expressway

Photograph of NUS buildings and a road.

National University of Singapore

Copyright © 2008 by Limsoon Wong



NUS Fact Sheet

- From a modest medical school **founded in 1905**, NUS has evolved into Singapore's global univ with distinctive strengths in education and research and an entrepreneurial dimension. It has **an enrolment of ~23,500 undergrad and ~9,000 grad students from ~90 countries**
- NUS's 14 faculties offer a broad-based curriculum underscored by multi-disciplinary courses and x-faculty enrichment. It also enjoys a close teaching-research nexus with 13 natl-level, 12 univ-level and 80 faculty-based research institutes and centres

Copyright © 2008 by Limsoon Wong



School of
Computing



Copyright © 2008 by Limsoon Wong

SOC Fact Sheet

- **Established July 1998, to provide high-quality infocomm education and high-impact infocomm research for service to country and society**
- **Departments:**
 - Computer Science
 - Information Systems
- **Staff : 120 core faculty**
- **Students: 2035**
 - 1535 undergrads
 - 500 grad students (350 PhD + 150 MComp)

Main Research Areas

Computer Science

- AI
- Bioinformatics
- Database
- Media
- Prog & S/W Engineering
- Systems & Networks

Information Systems

- E-Commerce
- Internet & Info Privacy
- Knowledge Management
- Virtual Communities

Advance knowledge and foster innovation, educate students and nurture talent, in service of country and society



Research Impact

Research Area	# researchers considered	FULL PROFESSORS										
		Limsoon's position	Joxan's position	Ling's position	Beng Chin's position	Kian Lee's position	Chew Lim's position	Sanjay's position	Mohan's position	Tat Seng's position	Thiagu's position	Wynne's position
	w/ 20+ citations											
All CS	100,000	1455 1.46%	713 0.71%		2953 2.95%	3391 3.39%					3982 3.98%	3982 3.98%
	w/ 1+ citation											
PL & SW Eng	100,000	4812 4.81%	121 0.12%								2583 2.58%	
AI	80,000		1054 1.32%								4559 5.70%	2520 3.15%
Machine Learning	45,000						1403 3.12%	467 1.04%	1246 2.77%			3888 8.64%
Data Mining	20,000	627 3.14%		2421 12.11%	2962 14.81%	2962 14.81%	2058 10.29%					39 0.20%
Info Retrieval	30,000	2803 9.34%		1700 5.67%	898 2.99%	2322 7.74%			2127 7.09%	656 2.19%		
WWW	30,000			1364 4.55%	906 3.02%	947 3.16%				3941 13.14%		2907 9.69%
Databases	75,000	232 0.31%	924 1.23%	502 0.67%	247 0.33%	273 0.36%				3443 4.59%		1478 1.97%
RT & Embedded Sys	15,000		2147 14.31%									3326 22.17%
Comp Bio	25,000	120 0.48%					3108 12.43%					
Multimedia	45,000				1156 2.57%	1320 2.93%	2248 5.00%		382 0.85%	197 0.44%		2623 5.83%

Libra Academic Search, Nov 2008

Copyright © 2008 by Limsoon Wong



Research Funding

Annual New Funding (\$M)

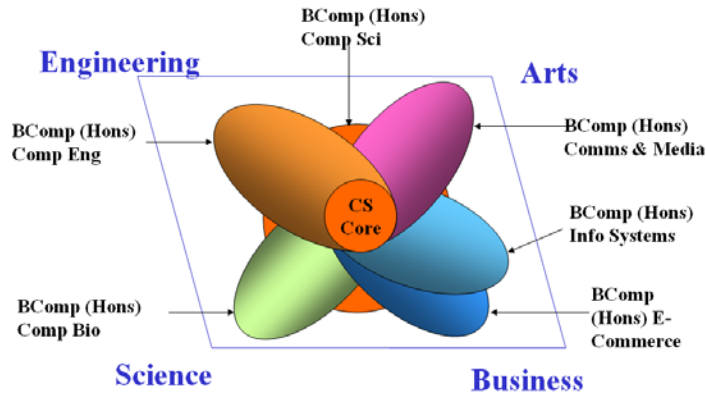
	AcRF	A*STAR	Others	Total
FY07	3.1	1.5	4.2	8.8
FY06	2.8	1.0	1.7	5.5
FY05	3.5	2.4	1.4	7.3
FY04	2.9	1.2	0.4	4.5
FY03	3.2	2.4	0.2	5.8

NUMBER OF PROJECTS PER YEAR					
FY2005		FY2006		FY2007	
On-going	New	On-going	New	On-going	New
69	43	79	42	73	42

Copyright © 2008 by Limsoon Wong



Undergraduate Programmes



Good students are encouraged to participate in:
 UROP, ATAP, FYP, & SIG



Advanced Technology Attachment Programme (6-month internship) with:



Graduate Programmes

- **PhD Research in**
 - Algorithms and Theory
 - Artificial Intelligence
 - Biomedical Computing
 - Database Mgmt Systems
 - Info Security
 - Media, Graphics, HCI
 - Prog Lang, S/W Eng
 - Systems and Networking
 - Culture and Info Systems
 - Economics of IT
 - E-Commerce
 - E-Government
 - Group Support Systems
 - Negotiation Support Systems
 - Info Privacy
 - User-Database Interaction
- **Master of Computing in**
 - Computer Science
 - Infocomm Security
 - IT Project Management

Copyright © 2008 by Limsoon Wong

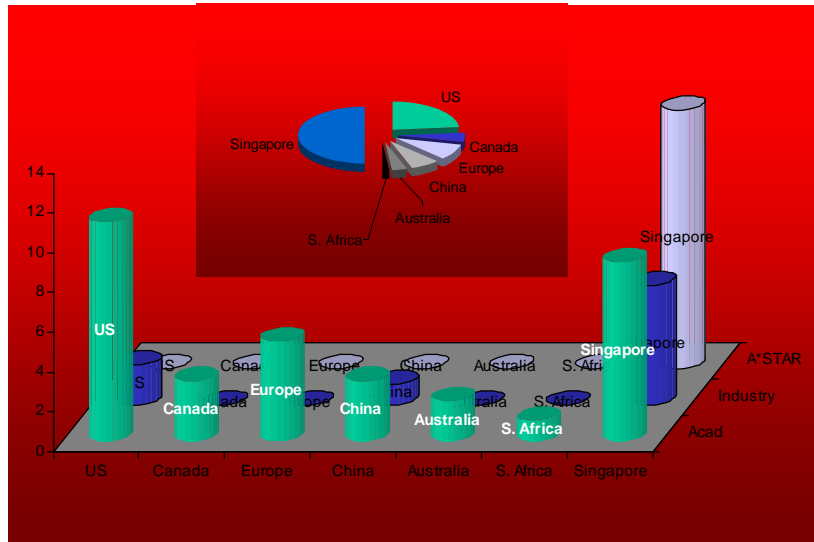


Financial Support for PhD Students

- **Research Scholarship (Fee + Stipend \$2,000 & above/month)**
- **PhD Top-up (\$500)**
- **President's Graduate Fellowship (\$3,000 /month)**
- **Support for traveling to overseas conferences**
- **Research & Teaching Assistantships**

Copyright © 2008 by Limsoon Wong

Where PhD Students Go in 2006/7



Copyright © 2008 by Limsoon Wong

Working with Industry

- **Consulting**
- **Technology licensing**
- **Research contract**
- **Joint research labs**
- **Example research contract**
 - General Motors
 - Performance Modeling and Tool-Support for Designing FlexRay-based ECU Networks
 - \$0.5M
- **Example joint research lab**
 - I²R
 - Knowledge discovery from clinical data
 - \$1.0M

Copyright © 2008 by Limsoon Wong



SOC Incubation Centre

Companies graduated:

- Friar Tuck
- GeoFoto
- Delcon Networks
- Intelligent Optimization
- Mozat
- Atsuma Technology
- Multitrex
- Innvo Systems
- IQExplorers.com
- Frensville

Current incubatees:

- DreamAxis
- Mosonex
- Smoove
- LD Tech
- Nineo.com
- DecisionWare
- TenCube

THE BUSINESS TIMES

Mozat unleashes the potential in mobile devices

Chen Huijen
 984 words
 5 September 2006
 Business Times Singapore
 English
 (c) 2006 Singapore Press Holdings Ltd

THE beginnings of homegrown mobile phone applications were working on their PhDs when they were still at the National University of Singapore.

"Basically, we saw that people were using their mobile phones for more than just making calls and sending text messages. You cannot carry it anywhere you go. And with just that idea, Mr Yin and his team started working on their PhDs at the National University of Singapore.



FRIARTUCK CREATES SCHEDULES IN MARS TIME FOR NASA

When NASA needed software to schedule scientists and engineers for the Mars rover's landing on Mars on January 4, they did not turn to Microsoft or other software giant. They turned to FriarTuck that specializes in complex scheduling solutions.

In Science team alone, there are about 200 scientists working on filling 22 different operational roles. Any one scientist is qualified to fill any one of those roles. Creating and maintaining the staffing for the duty planner staff the 22 roles for both rovers while adhering to the constraints of the Mars environment that are designed to minimize personnel fatigue. On top of this, the team also has to manage a wide range of other tasks.

SoC Start-up Clinches Grand Prize in National Entrepreneurship Competition



From left to right: SoC Start-up team members, SoC Start-up team members, SoC Start-up team members, SoC Start-up team members, SoC Start-up team members, SoC Start-up team members, SoC Start-up team members, SoC Start-up team members, SoC Start-up team members, SoC Start-up team members.

TenCube