

# Opportunities for Research Collaborations

## Short-term and Long-term studies at the Advanced Digital Sciences Center (ADSC)

(an Illinois Research Center in Singapore)

and

## other institutions in Singapore



Ali Asghar Mirarefi  
[mirarefi@illinois.edu](mailto:mirarefi@illinois.edu)

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# Outline



## Information about:

- State of Illinois
  - Champaign-Urbana, a micro-urban population center
  - University of Illinois at Urbana-Champaign, Illinois
- Introduction to Singapore (pdf file provided by A\*GA)
  - Overview of Singapore, a knowledge base economy
  - Research in Singapore (Innovation and Research Intensity)
  - Overview of A\*STAR's Research Entities
  - A\*STAR Graduate Academy (A\*GA)
  - International Awards
- A\*STAR Mission and Organization
- Illinois engagement in Singapore
- Illinois Research Center in Singapore, ADSC
- A\*STAR funding for ADSC
- Short-term and long-term Research Opportunities

## Location of “Illinois”

The University of Illinois is in Champaign-Urbana, in the middle of America.

One-stop transportation links to all the USA, North America and beyond.



# Champaign-Urbana is *micro-urban*.

Under 250,000 people,  
and

- Easy transportation
- Affordable living
- Strong sense of community
- Great cultural & social opportunities
- Very international



<http://micro-urbanist.com/>

THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

# Illinois is a **top-ranked** research university.

Our College of Engineering is usually ranked #5.

Business, physics, chemistry, bio, psychology, communication and information science all have areas in the top 10.



THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



# Illinois does **great research.**

In the top 10 for patents.

Over US\$500,000,000/year on research.

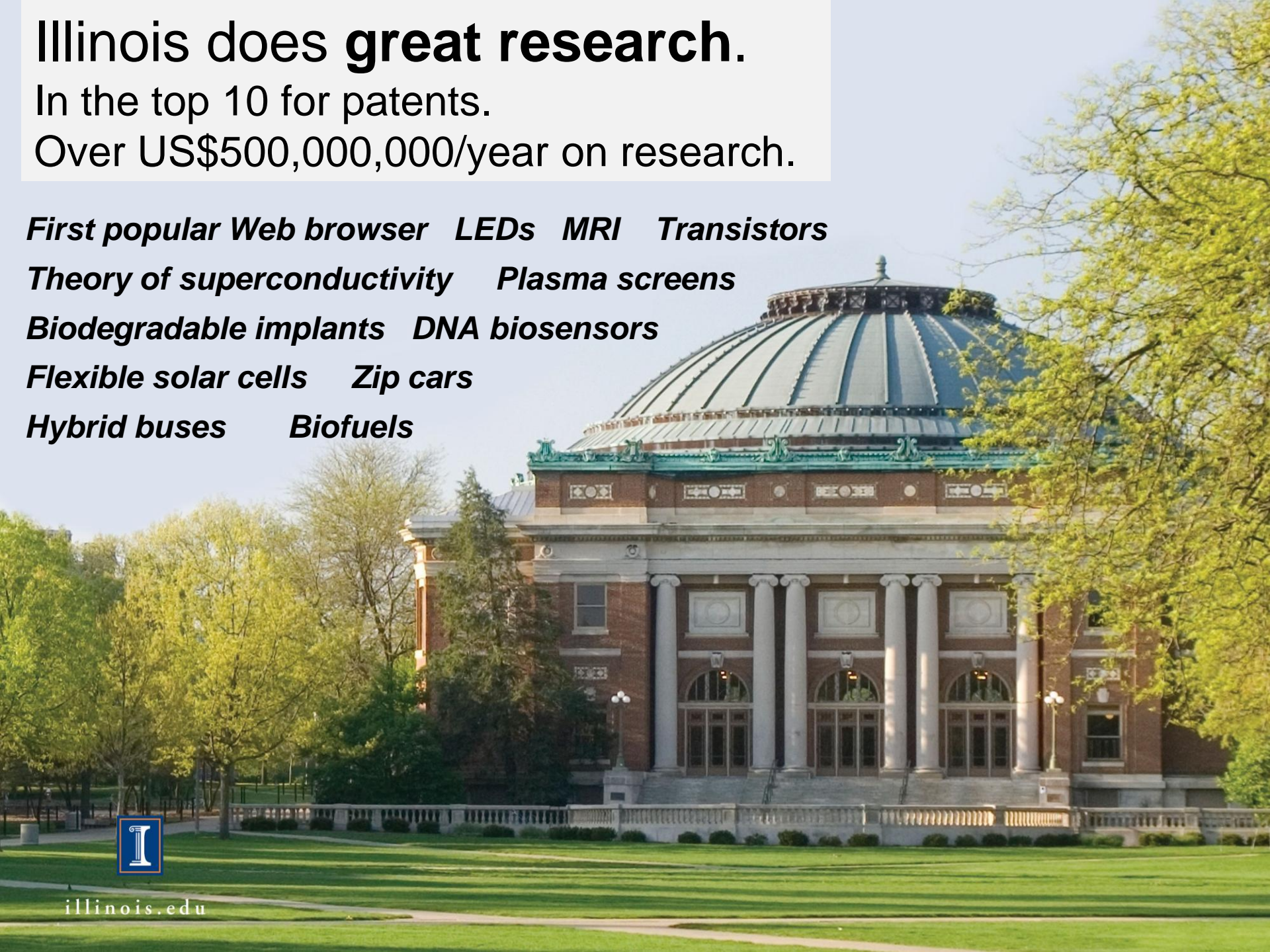
*First popular Web browser   LEDs   MRI   Transistors*

*Theory of superconductivity   Plasma screens*

*Biodegradable implants   DNA biosensors*

*Flexible solar cells   Zip cars*

*Hybrid buses   Biofuels*





Illinois offers **many opportunities.**

Over 2,000 professors.

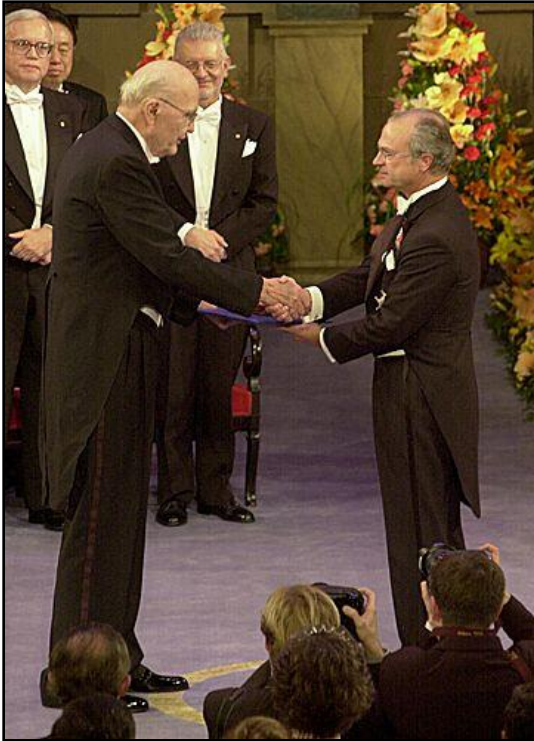
Over 40,000 students.

Over 80 *multi-disciplinary* research centers, labs, and institutes.



25

**Illinois faculty  
and alumni  
have received  
Nobel Prizes**





Illinois alumni change the world.



**Russel Simmons**



**Jawed Karim**



**Max Levchin**



**Marc Andreessen and his pals,  
Netscape co-founders**

# Illinois is very strong in computing and information technology.

Degrees through Electrical & Computer Engineering and Computer Science, *plus* IT application areas and degree options in programs all across the campus.



Blue Waters will be the world's most powerful supercomputer



Copyright Nic Lehoux 2004

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## Blue Waters – Petascale Computing

Peak performance of 10 petaflops

It will achieve sustained performance of 1 petaflop running a range of science and engineering codes.

### Applications:

- **Biology:** Petascale Simulations of Complex Biological Behavior
- **Geosciences:** Earthquake and Tornado Simulation
- **Astronomical Sciences:** Computational Relativity and Gravitation at Petascale
- **Chemistry:**



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**Illinois is a leader in multi-disciplinary science.**

## **Beckman Institute for Advanced Science**

Everything related to the brain, from physics to philosophy.



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**Illinois has world class facilities and research in biomedical sciences.**



## **Institute for Genomic Biology**

- ▶ **Keck Biotechnology Center**
- ▶ **EBI, Energy Biosciences Institute (\$500M program with UC-Berkeley and British Petroleum; world leading biofuels research initiative)**



# **Illinois is very strong in physics, chemistry and materials science.**

**For Micro/Nano-science & engineering and advanced materials:**



**Beckman Institute of  
Advanced Science  
The Frederick Seitz  
Materials Research  
Laboratory**

**Micro and  
Nanotechnology  
Laboratory**

**Nano-CEMMS - Center for  
Nanoscale Chemical-  
Electrical-Mechanical  
Manufacturing  
Systems**

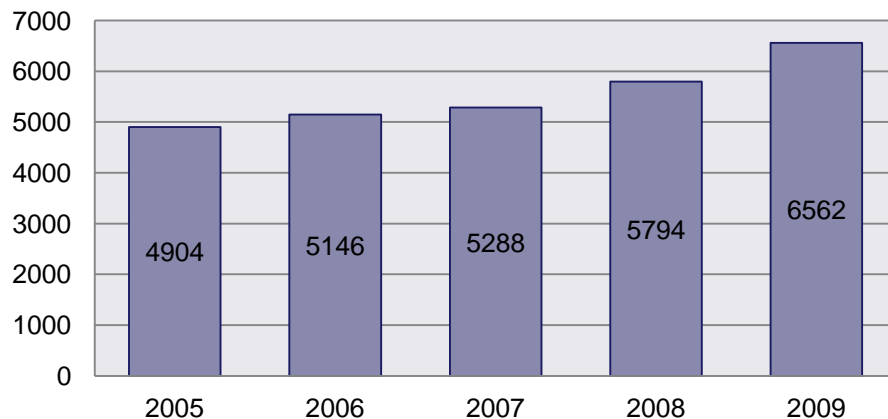
**Water CAMPWS – NSF  
Center for Advanced  
Materials for  
Purification of Water  
with Systems**

**School of Chemical  
Sciences**

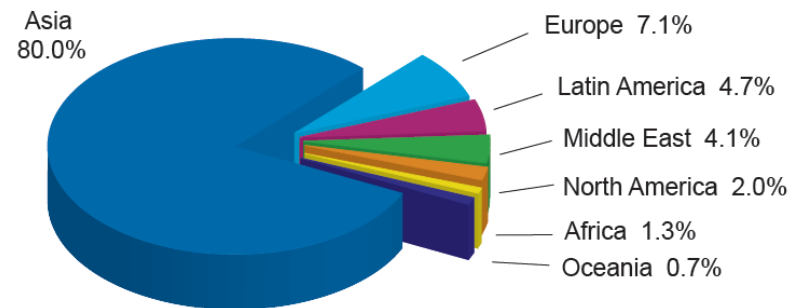


# ILLINOIS HAS MORE INTERNATIONAL STUDENTS THAN ANY OTHER PUBLIC U.S. UNIVERSITY.

**International Students at Illinois**



**Students' Home Countries**



1/3 of grad students from abroad, over 50 students from Singapore!

# ILLINOIS FACULTY COME FROM ALL OVER.

491 Engineering

