

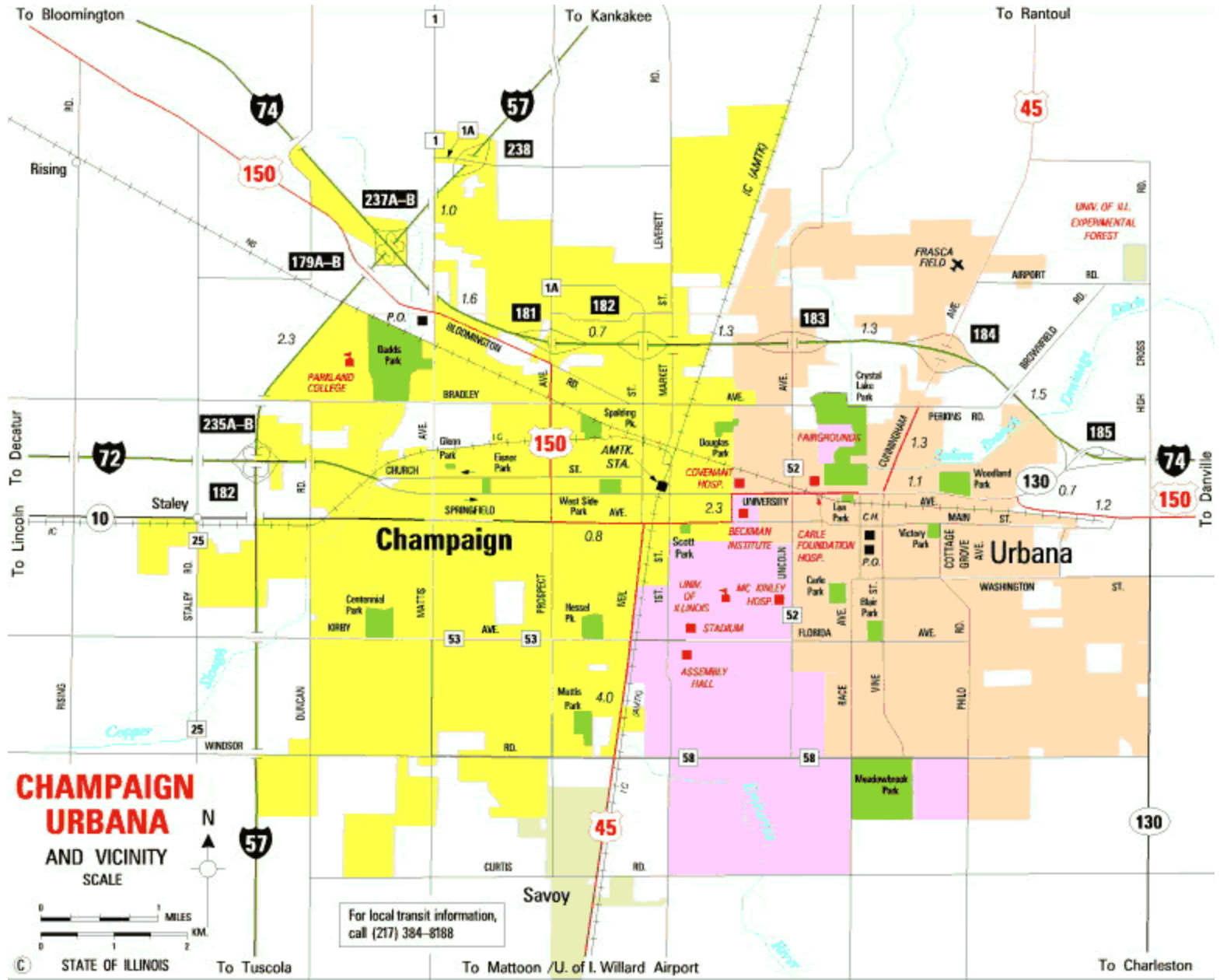


# PHYSICS ILLINOIS

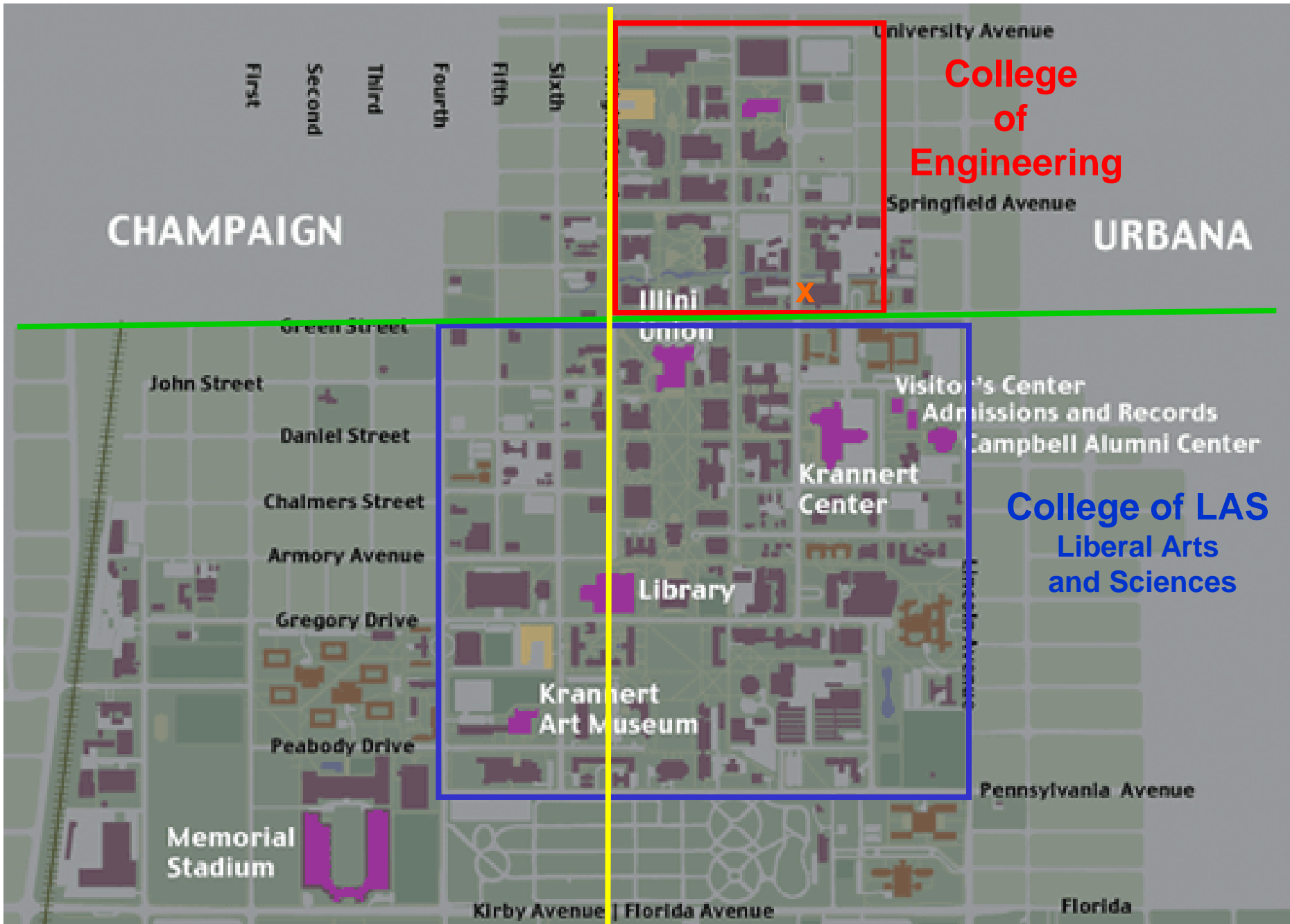
University of Illinois at Urbana-Champaign

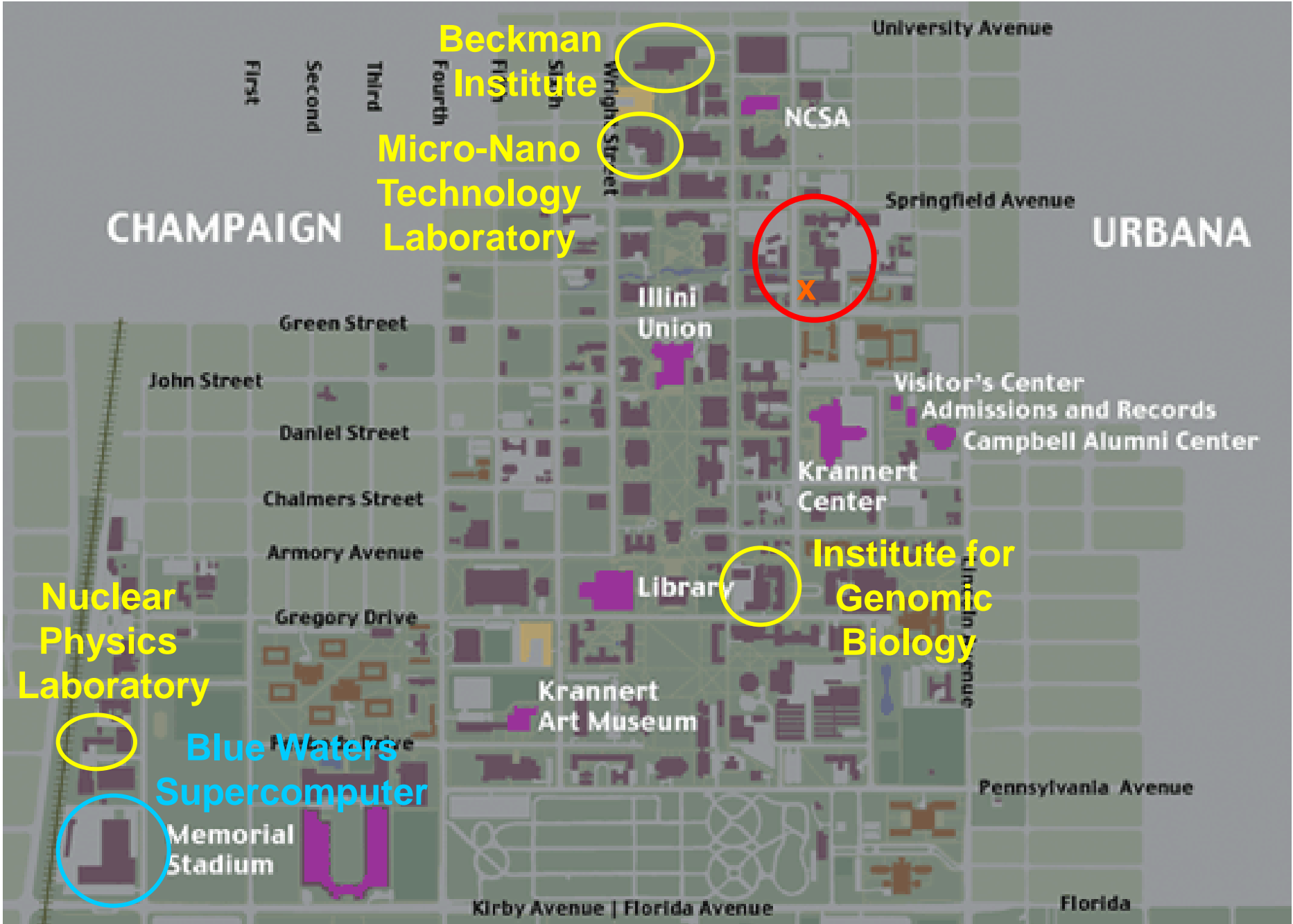
*Physics 110:  
“your physics career”*

*Fall 2013*



# The University of Illinois at Urbana-Champaign





**Beckman  
Institute**

**Micro-Nano  
Technology  
Laboratory**

**Nuclear  
Physics  
Laboratory**

**Blue Waters  
Supercomputer**

**Memorial  
Stadium**

**Institute for  
Genomic  
Biology**

NCSA

Illini  
Union

Krannert  
Center

Library

Krannert  
Art Museum

Visitor's Center  
Admissions and Records  
Campbell Alumni Center

CHAMPAIGN

URBANA

University Avenue

Springfield Avenue

Green Street

John Street

Daniel Street

Chalmers Street

Armory Avenue

Gregory Drive

Illinois Avenue

Pennsylvania Avenue

Kirby Avenue | Florida Avenue

Florida

First

Second

Third

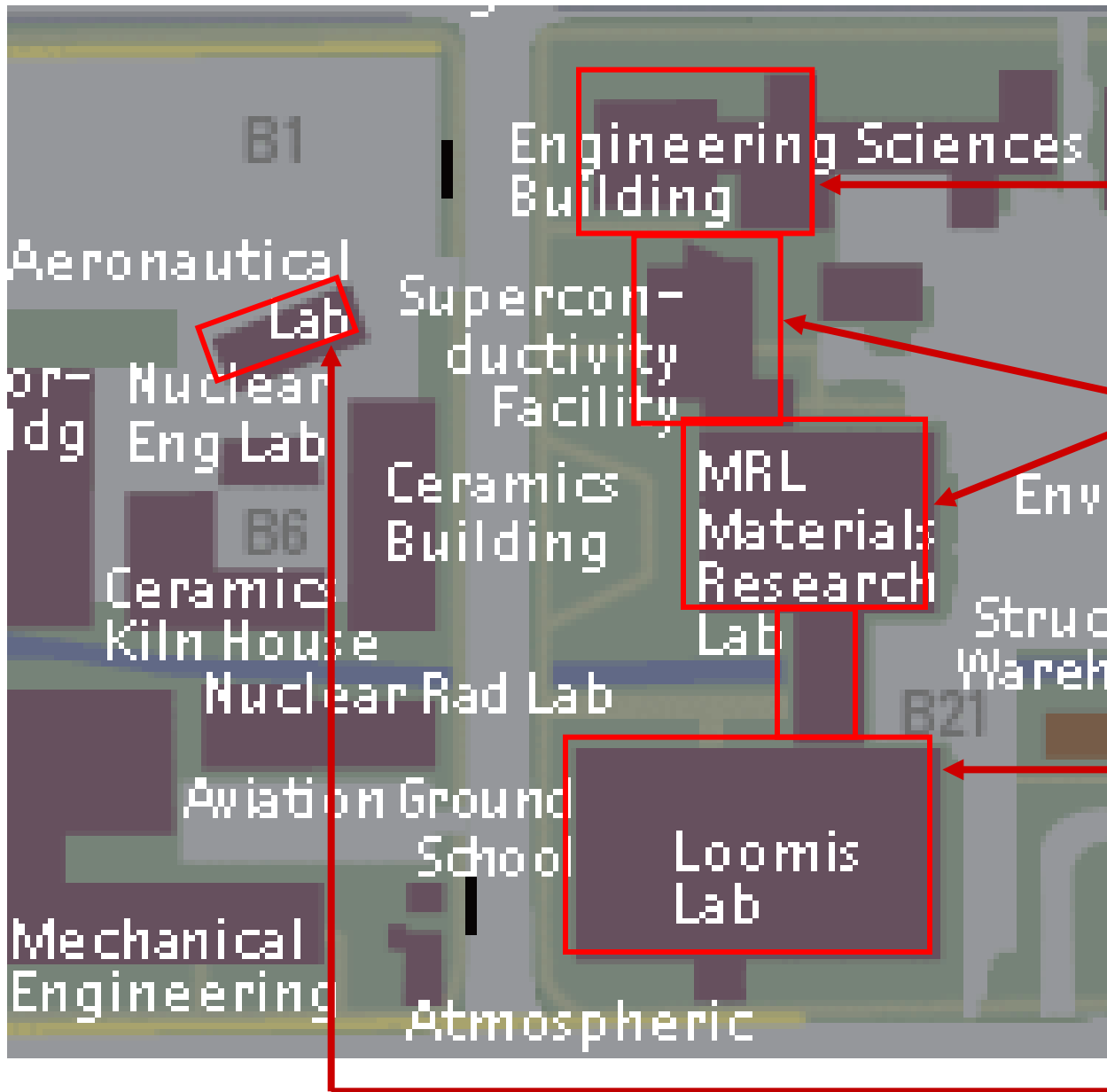
Fourth

Fifth

Sixth

Wright Street

Illinois Avenue



Engineering Sciences Building

Upper level labs  
Condensed matter theory

Superconductivity Facility

Condensed matter experiment

MRL Materials Research Lab

Physics courses  
High Energy Physics  
Nuclear Physics  
Astrophysics  
Biological Physics  
AMO Physics

Loomis Lab

High Energy Physics experiment prep

Aeronautical Lab

Nuclear Eng Lab

Ceramics Kiln House

Nuclear Rad Lab

Aviation Ground School

Mechanical Engineering

Ceramics Building

Atmospheric

Lab

Struct Wareh

B1

B6

B21



# PHYSICS ILLINOIS

## People

- 55 Active faculty (tenure/tenure-track) + 5 new hires coming
- ~10 Research faculty and instructors
- ~30 Emeritus Faculty
- ~50 Postdocs
- ~40 Staff members
- ~260 Graduate students (~100 Teaching assistants)
- ~550 Undergraduate Physics majors (from COE and LAS)
- ~5000 Students taught Physics per semester

## Department Highlights

- #2 ranking in Undergraduate Engineering Physics
- #9 ranking in Physics Graduate Program
- #2 ranking in Condensed Matter Physics
- National Academy of Sciences: 6 active + 5 emeritus
- Nobel Laureate: Tony Leggett
- Howard Hughes Medical Investigator: Taekjip Ha
- National Medal of Science: Charlie Slichter
- Olympic Silver Medalist: Jonathon Kuck
- ~\$25M per year in research expenditures

## Research Programs--- Department of Physics

As a top-10 ranked department, our philosophy is to maintain strength in all major disciplines while growing targeted areas and promoting interdisciplinary programs

Group	Theory	Experiment	TOTAL
Condensed Matter Physics	9	11	20
AMO Physics	0	2	2
Biological Physics	3	4	7
High Energy Physics	3	6	9
Medium Energy Physics	0	5	5
Astrophysics/Cosmology	3	1	4
Cross-Cutting Physics	3	2	5
Physics Education Research	1	2	3
<b>TOTAL</b>	<b>22</b>	<b>33</b>	<b>55</b>

# Advantages of a Large and Broad Program

1. **Choices** --- many courses and research disciplines to consider
2. **Interactions** --- much modern science is at the intersections of traditional disciplines within and beyond Physics  
*e.g. nanoscience, biophysics, quantum information ...*
3. **Resources** --- access to state-of-the-art laboratory infrastructure  
*e.g. Physics, MRL, NCSA, IGB,, MNTL, BI, ...*
4. **Relevance** --- ability to address major societal issues  
*e.g. energy, environment, health, informatics, ...*

## **The Strategic Plan of the *University of Illinois at Urbana-Champaign***

Core agenda: Sustain creativity and discovery

New programs: Illinois Informatics Initiative  
Integrated Sciences for Health Initiative  
Illinois Sustainable Energy and the Environment Initiative

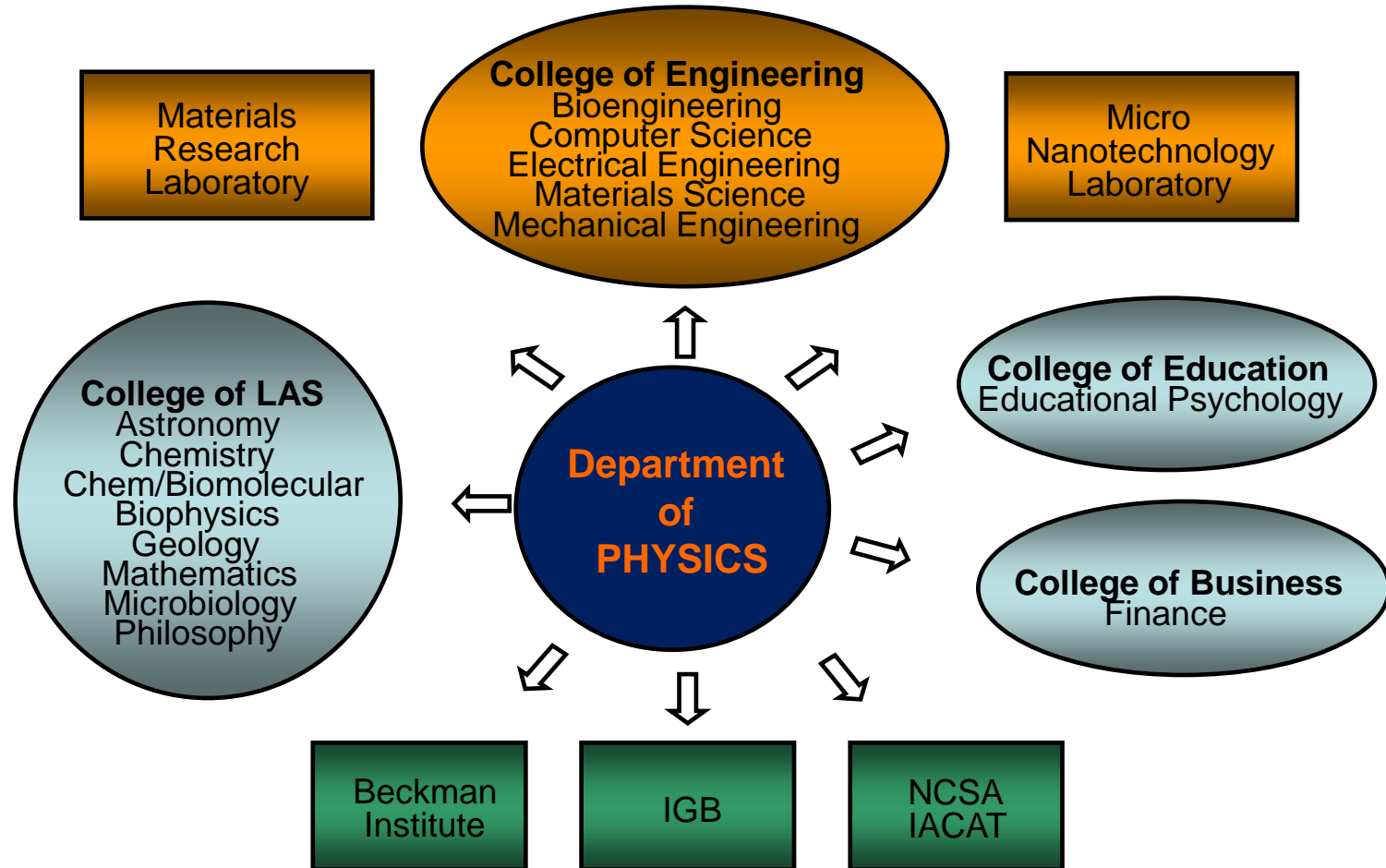


## Interdisciplinary Research-- Department of Physics

- Materials Research Laboratory (MRL)
- MicroNanoTechnology Laboratory (MNTL)
- Beckman Institute (BI)
- Institute for Genomic Biology (IGB)
- National Center for Supercomputing Applications (NCSA)
- Institute for Condensed Matter Theory (ICMT)
- Center for the Physics of Living Cells (CPLC)

# The role of Physics at The University of Illinois

Physics couples fundamental and applied science,  
bridges NORTH and SOUTH of Green Street,  
and anchors research centers on campus



## Ongoing Department Projects (relevant to Physics Majors)

Enhancement to introductory course content and delivery

Enhancements to undergraduate advising/mentoring

Enhancements to undergraduate research (senior thesis, REU, research in labs)

Enhancements to upper-level laboratory courses --- 5<sup>th</sup> and 6<sup>th</sup> floor ESB

Creation of new courses for computation

Lobby renovation --- Loomis 1<sup>st</sup> floor

Undergraduate Lounge --- 2<sup>nd</sup> floor LLP (275)

Offices for Physics Society, Society for Women in Physics, and Physics Van

Upgrades to classroom quality and technology --- student fees

*major construction in Spring and Summer 2014*

Physics Illinois Partnership Program --- recruiting and outreach

Physics Ambassador Program --- recruiting



**Department of Physics**  
**University of Illinois at Urbana-Champaign**

***Department Head***

Dale Van Harlingen (*211 Loomis*)

***Associate Head for Undergraduate Programs***

Kevin Pitts (*231 Loomis*)

***Associate Head for Graduate Programs***

Lance Cooper (*227 Loomis*)

***Undergraduate Office (231 Loomis)***

Kate Shunk and Sandra Johnson

***Chief Advisor: College of Engineering***

Alfred Hubler

***Chief Advisor: College of Liberal Arts and Sciences***

Matthias Grosse Perdekamp

***Physics Teaching Advisor:***

Mats Selen

***Recruiting and Outreach Coordinator:***

Toni Pitts

***Director of Course Delivery:***

Rebecca Wiltfong

***Course Operations Manager:***

Elaine Schulte

***Communication Coordinator:***

Siv Schwink

***Advancement Coordinator:***

Erin Kirby

***Director of External Affairs and Special Projects***

Celia Elliott

# Department of Physics Undergraduate Student Network

