

The Semicentennial Anniversary of the University of Illinois at Chicago

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Fifty years ago, the “Chicago Circle Campus of the University of Illinois” was established, by converting the Navy Pier college for returning veterans into a research university located in downtown Chicago. We discuss some of the history and development of what is now the Department of Mathematics, Statistics, and Computer Science at University of Illinois at Chicago.

Named the University of Illinois at Chicago Circle, the new campus opened in February 1965.

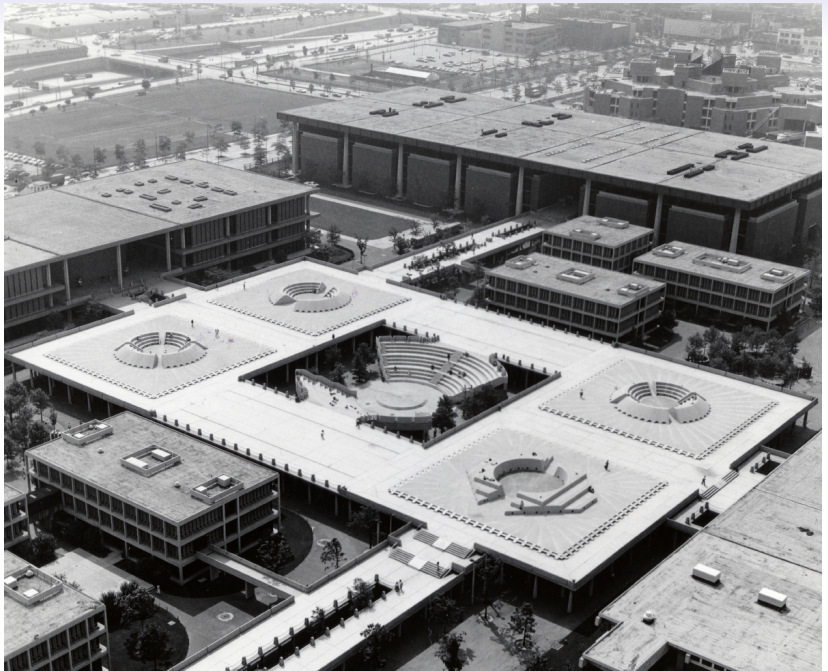
Unlike the Navy Pier campus, Circle was a degree-granting institution, with ambitions to become a great university.

Many of the newly recruited faculty came because it was connected to a strong research university and they pushed for rapid development into a research-oriented school emphasizing graduate instruction. Within five years of the campus opening, virtually every department offered graduate degrees.

<https://circleback.uic.edu/>

<http://uicarchives.library.uic.edu/circle-campus/>







The site for the new University of Illinois at Chicago Circle campus consisted of 105 acres at the corner of Halstead and Harrison streets. Originally, the campus was named University of Illinois at Congress Circle for the nearby Congress Interchange.

That name for the junction between the Dan Ryan, Kennedy and Eisenhower expressways changed to the Circle Interchange in late 1964 (becoming the Jane Byrne Interchange in 2014) prompting the last-minute adjustment to the campus name just prior to its “unofficial” opening on February 22, 1965.

To design the campus, the University chose the firm Skidmore, Owings and Merrill, led by Architect Walter Netsch, who planned the U.S. Air Force Academy in Colorado Springs.

Netsch designed the campus in the Brutalist style based on the metaphor of a stone dropped in a pond of water. At the center was the Circle Forum, a Greek-styled amphitheater built for plays, assemblies and concerts. Each ripple outward from the center held buildings with common functions.

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From this concrete brutalism, many mathematical flowers bloomed!

The MSCS Department has 14 Sloan Foundation Fellows:

1. Gerard Awanou (2009-2011)
2. Izzet Coskun (2009-2011)
3. Marc Culler (1986-1988)
4. Laura DeMarco (2010-2012)
5. Lawrence Ein (1987-1989)
6. Henri Gillet (1986-1988)
7. Steven Hurder (1985-1987)
8. Charles Knessl (1990-1992)
9. Howard A. Masur (1980-1982)
10. Dhruv Mubayi (2005-2007)
11. Peter B. Shalen (1977-1979)
12. Brooke Shipley (2002-2004)
13. Kevin Whyte (2004-2006)
14. Stephen Yau (1980-1982)

And 14 NSF Career Awards:

1. Rafail Abramov (2009-2014)
2. Alina Cojocaru (2008-2013)
3. Izzet Coskun (2010-2015)
4. David Dumas (2010-2015)
5. Alexander Furman (2001-2006)
6. Isaac Goldbring (2014-2019)
7. Daniel Groves (2010-2015)
8. Irina Nenciu (2012-2017)
9. Brooke Shipley (2002-2007)
10. Dima Sinapova (2015-2020)
11. Christof Sparber (2014-2019)
12. Jan Verschelde (2001-2006)
13. Kevin Whyte (2004-2009)
14. Min Yang (2008-2013)

The Department of Mathematics, Statistics, and Computer Science at UIC(C) became known for its:

1) Research groups in

- algebraic geometry and number theory
- algebraic & low dimensional topology
- applied mathematics
- dynamical systems
- finite group theory
- mathematical logic
- statistics

2) Mathematics Education programs

3) Hiring of women in mathematics

The data on MSCS doctoral degrees and their first positions, shows that it provided many faculty for local universities and colleges:

- Chicago State University
- City Colleges of Chicago
- College of DuPage
- DePaul University
- Elmhurst College
- Loyola University
- North Park University
- Northeastern Illinois University
- Northern Illinois University
- Oakton Community College
- Roosevelt University
- St. Xavier University

The data on doctoral degrees and their thesis advisors reveals also the changes in the department as it matured and changed.

1971 3 doctorates, advised by:

- Noburo Ito
- Reuben Sandler
- William W. Tait

1972 3 doctorates, advised by:

- Norman Blackburn
- Philip Dwinger
- Neil Rickert

1973 6 doctorates, advised by:

- Paul Fong
- Shmuel Kantorovitz
- Marvin Knopp
- Richard Larson
- T.E.S. Raghavan
- Robert Soare

1974 1 doctorate, advised by:

- Melvin Heard

1975 14 doctorates, advised by:

- Philip Dwinger
- Paul Fong (3)
- Noburo Ito (2)
- Shmuel Kantorovitz
- James Moeller
- I. Parthasarathy
- Louis Pennisi
- T.E.S. Raghavan (2)
- Stanley Sclove
- Victor Twersky

1976 7 doctorates, advised by:

- AOL Atkin
- Louise Hay
- Richard Larson
- James Moeller
- Louis Pennisi
- G.V. Ramanathan
- Victor Twersky

1977 7 doctorates, advised by:

- David Foulser
- Brayton Gray
- Samad Hedayat
- Charles Lin
- Louis Pennisi
- Vera Pless
- Stanley Sclove

1978 0 doctorates,

1979 4 doctorates, advised by:

- Eugene Barston
- Samad Hedayat
- James Moeller
- Louis Pennisi

1980 6 doctorates, advised by:

- John Baldwin
- Brayton Gray
- Samad Hedayat
- Vera Pless
- T.E.S. Raghavan
- John Wood

The names mentioned above reveals a core of research faculty, who carried the graduate program through the 1970's. Analysis, applied math, statistics & operations research are well-represented.

For those of us who arrive at UIC in the 1980's, these were the "old timers":



Neil Berger, Charlie Tier and Gene Barston



Charles Lin



Floyd Hanson



Bill Howard



John Baldwin

The doctoral data does not tell the full story, as during the 1970's the MSCS department was also known for its strength in topology and homotopy theory:

- Pete Bousfield
- Brayton Gray
- Victor Gugenheim
- James Heitsch
- Lou Kauffman
- Anatoly Libgober
- Marty Tangora
- John Wood

There was a strong interaction with researchers at Northwestern University and the University of Chicago in these fields as well.



Pete & Marie Bousfield



T.E.S. Raghavan, Marty Tangora and Glen Manacher



John & Nan Wood with Herb Curtis

Then in the period 1983 to 1989, the department expanded again to almost 80 faculty in total, guided by new leadership:



Louise Hay

The hiring expanded, in particular, the group in low-dimensional topology and dynamical systems to include:

- Marc Culler
- Shmuel Friedland
- Henri Gillet
- James Heitsch
- Steve Hurder
- Howard Masur
- Peter Shalen
- John Wood

The department became internationally renown for its researchers in 3-manifold topology, geometric group theory, dynamical systems & foliation theory, and Teichmüller theory.



John Wood & Howard Masur



The Fifth Floor Gang:
Gillet, Heitsch, Hurder, Tangora, Masur
(with Bud Feinstein on right)

Compare now the list of doctorates 10 years after these hirings:

1990: #9; 1991: #15; 1992: # 17; 1993:#16; 1994: #13

1995: #7; 1996: #14; 1997: # 14; 1998:# 9; 1999: #15

1999 15 doctorates, advised by:

- John Baldwin
- Willem Blok
- Shmuel Friedland (2)
- Henri Gillet
- Floyd Hanson
- Samad Hedayat
- Steve Hurder
- Steve Jordan
- Anatoly Libgober
- Glenn Manacher
- David Marker
- Vera Pless
- T.E.S. Raghavan
- Stephen Yau

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Sometimes, hiring just doesn't work out, as the attempt by MSCS to develop a strength in Riemannian geometry in the period 1986-90. Several new faculty were hired, then lured away within a few years, so the group never congealed.

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On the other hand, sometimes the problem is that you hire “too good”, and the faculty is constantly moving on.

UIC Faculty who went to a better place

- Ian Agol (UC Berkeley)
- Matthias Aschenbrenner (UCLA)
- Norman Blackburn (Manchester)
- Laura DeMarco (Northwestern University)
- Robert Grossman (U of C)
- William M. Kantor (University of Oregon)
- Nets Katz (Washington University, St. Louis)
- Ju-lie Kim (MIT)
- Wolfgang Maass (Linz)
- Jim Milgram (Stanford University)
- Mihnea Popa (Northwestern University)
- Nick Shepherd-Barron (Cambridge, UK)
- Robert Irving Soare (U of C)
- William W. Tait (Philosophy) U of C
- Yuri Tschinkel (Courant Institute)
- Karen Uhlenbeck (U of C)

