

COMMITTEE ON GEOGRAPHICAL SCIENCES

Department Website: <http://geography.uchicago.edu>

The Committee on Geographical Sciences pursues a geospatial perspective on fundamental issues in the urban, environmental, and social sciences. The main area of interest is the interaction between physical/natural environments, built environments, and people, utilizing a geospatial perspective and methodology to explore issues that impact neighborhoods, cities, regions, and global communities. Example topics include: cultural landscapes and morphological agency, the social justice of urban design, the impact of climate change on urban sustainability, and the geo-visualization of economic disparities. Our faculty pursue research that is spatial, place-based, and policy-oriented.

The Committee on Geographical Sciences supports course work and research opportunities for graduate students in the University. Students from degree programs in different divisions can work with the committee for specialized training. The Committee also supports the Concentration in Geographic Information Science in the Master of Arts Program in Social Sciences (MAPSS) (<https://geography.uchicago.edu/content/new-mapss-geographic-information-science-concentration/>).

Considerable resources to support research in geographical sciences and spatial analysis exist both at the University and in the Chicago area. The Regenstein Library contains a considerable map collection, a unique repository of geography monographs and many specialized holdings. The Newberry Library in downtown Chicago is home to the Hermon Dunlap Smith Center for the History of Cartography which is the home of a world class collection of antique and historical maps.

In addition, several research centers at the University focus on topics germane to geographical sciences, urban studies and spatial analysis.

The Center for Spatial Data Science (<https://spatial.uchicago.edu>) (<https://spatial.uchicago.edu/>) (<https://spatial.uchicago.edu>) develops state of the art methods for geospatial analysis, spatial econometrics, and geo-visualization; implements them through open source software tools; applies them to policy-relevant research in the social sciences; and disseminates them through training and support. It is the home of the GeoDa software for spatial analysis, which has close to 250,000 users world-wide.

The Population Research Center (<https://voices.uchicago.edu/popcenter/>) (<https://voices.uchicago.edu/popcenter/>) focuses on research on human and social capital in an urban context. This urban emphasis is rooted in the emerging significance of global trends in urbanization, and the ongoing and pressing concerns regarding urban populations in the U.S. With this focus, the tools of demography and theoretical precepts of human and social capital can be brought to urban studies.

The Violence, Law, and Politics Lab (<https://vlplab.com/>) studies how local, national, and global politics affect the geography and prevalence of violence in cities and neighborhoods. The lab is interdisciplinary and multi-method and currently focuses on whether violence in American cities can be reduced via increased government accountability, transparency, and the provision of humanitarian or economic assistance.

The Environmental Neuroscience Lab (<https://voices.uchicago.edu/bermanlab/>) (<https://voices.uchicago.edu/bermanlab/>) researches how the physical environment affects the brain and behavior. Specifically, it focuses on how physical low-level features of nature (such as color and spatial properties) relate to improvements in global brain network connectivity. The lab aims to gain a better understanding and quantification of the relationships between the brain and the environment in order to influence to design of physical environments in ways that will optimize human mental and physical health.

The University of Chicago Research Computing Center (RCC) provides specialized support for Geographic Information Sciences (<https://gis.rcc.uchicago.edu/>) (<https://gis.rcc.uchicago.edu>). RCC-GIS supports users who want to incorporate GIS methods and software as well as a range of spatial analysis tools. It offers services related to cartography, data mining and transformation, spatial statistics, and software solutions. RCC-GIS also offers a range of specialized workshops and bootcamp courses on GIS and spatial analysis software and methods.

More information about the Committee on Geographical Sciences can be found at <https://geography.uchicago.edu>.

