

NEW DIRECTIONS— NEW DIRECTOR

WERNER KUHN (Ph.D. ETH, Zurich; professor, Institute Geoinformatics, University of Münster) has accepted the position of professor in the Department of Geography at the University of California, Santa Barbara, as well as appointment to the Jack and Laura Dangermond Endowed Chair, and directorship of the Center for Spatial Studies (with Mary Hegarty).



Kuhn has been a professor of Geographic Information Science at Münster, teaching geospatial semantics, reference systems, and cartography (among other subjects) since 1996. Beginning in 2002 he has led the Münster Semantic Inter-operability Lab (MUSIL), working on semantic interoperability, data integration, and ontologies for geospatial information. Kuhn is also one of the founding members of the Vespucci Initiative for Advancing Geographic Information Science, organizing annual summer institutes and specialist meetings. His research, teaching, and service activities are directed to the improvement of the usability of spatial information for individual, organizational, and societal problem solving.

We welcome Werner Kuhn as the new director of the Center for Spatial Studies beginning November 1, 2013 and look forward to the new programs and initiatives he will bring with him.

IS THERE LIFE AFTER SPATIAL?

Since its inception in 2007, the Center for Spatial Studies has hosted eight student research associates and 16 (mostly international) visiting scholars. With time, comes change. Our first director, MICHAEL GOODCHILD, retired in 2012, and with the ongoing graduation and departure of student research associates and the farewells to visiting scholars, we stopped to inquire about their current whereabouts. What becomes of them after their time at spatial@ucsb? Where do their careers take our “alumni”? Some have reported back to us.

FROM SPATIAL@UCSB TO A GARDEN IN SEATTLE

In Suzhou, an ancient Chinese city that—like all Chinese cities—is now bursting with construction, there is a garden known as the Humble Administrator’s Garden (zhuozheng yuan in Pinyin). It was established in the 16th century by Wang Xiancheng, who had experienced a tumultuous official life before retiring to Suzhou. The garden was named from a verse of the poet Pan Yue, who wrote “I enjoy a carefree life by planting trees and building my own house . . . I irrigate my garden and grow vegetables for me to eat . . . such a life suits a retired official like me well.”

I retired from UCSB in June 2012, and in October my wife, Fiona, and I moved to a new house in Seattle, planning to live closer to the family, enjoy the amenities of a big city, benefit from a very walkable location, and explore a new environment. After 24 years of enjoying the paradise of Santa Barbara, it was time to buck the trend and move to damp, rainy, gritty Seattle.

PAST EVENTS 2012–2013

12/2012 Specialist Meeting:
Spatial Thinking Across the Col-
lege Curriculum
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2/27/13 Student Forum:
Spatial Lightning Talks

[www.spatial.ucsb.edu/events/student-
forums.php](http://www.spatial.ucsb.edu/events/student-forums.php)

6/6/13 spatial@ucsb.local2013: Visual-
ization of Spatial Data
www.spatial.ucsb.edu/events/local-gis.php

UPCOMING EVENTS 2013–2014

8/11–25/13 International Summer School
for Spatial Cognition
<http://iscsi.spatial.ucsb.edu/>

12/11–12/13 Specialist Meeting: Advancing
the Spatially Enabled Smart
Campus, Upham Hotel
www.spatial.ucsb.edu/events/ASESC/

6/3/14 spatial@ucsb.local2014:
Poster and Plenary Sessions,
Corwin Pavilion, TBA

LIFE AFTER SPATIAL—

It is now July, and the garden is blooming and producing vegetables in the improbable quantities typical of gardens in the Pacific Northwest. But after a year I still find myself chasing that elusive retirement rainbow. Despite all my efforts to say “no,” I am traveling as much as ever (this is being written in a hotel room in San Diego), and have a longer backlog of email and writing commitments than ever. Whether that is because of the things I took on in anticipation of being bored in retirement, or whether it is because people simply assume that retirees have plenty of time available, I cannot say. I still have five active research projects at UCSB and several graduate students to advise. My current hope is that by the end of 2013 I will finally have received a bare passing grade in Retirement 101, and will have found the carefree life of Wang Xiancheng.

*Mike Goodchild
Director Emeritus, spatial@ucsb*

RESEARCH ASSOCIATES AND POST-DOCS:

ALAN GLENNON—During his tenure at the Center for Spatial Studies, Alan Glennon provided research and development consulting services to the university community. He administered the Center’s spatial Help Desk, met with faculty and students to advise on geospatial integration, organized lunch discussions, hosted an after-hours coding group, delivered GIS lectures and talks, and led applied workshops. Glennon completed his dissertation on geographically-embedded networks in March 2013; he is now a visiting professor at Universidade Nova de Lisboa, Portugal.

WENWEN LI joined spatial@ucsb in August 2010 as a Post-Doctoral Scholar. She worked on the University of California Multi-campus Research Project Initiative (MRPI), “a virtual-collaboratory for policy analysis in the L.A. region.” She is now assistant professor at the GeoDa Center for Geospatial Analysis and Computation, School of Geographical Sciences and Urban Planning, at Arizona State University. Her research specializes in the fields of geographic information science and remote sensing, semantic interoperability, spatio-temporal data mining, spatial information retrieval, and distributed geospatial information processing. The goal of her research is to develop integrated, sustainable, and smart cyberinfra-structures to revolutionize knowledge discovery in data and computational intensive geographical sciences. In particular, she is interested in utilizing semantic technology to improve the access, integration, and interoperability of distributed GIS data, analytical tools, and models. Li’s research has been applied to a number of science disciplines, such as climatology, public health, and hydrology. She also is interested in developing analytical methods (e.g., spatial optimization) to support regional economic modeling.



VISITING SCHOLARS:

KUN LEE—At the time of his sabbatical visit to Santa Barbara (2007–2008), Kun Lee was professor of Urban Sociology at the University of Seoul. He was appointed president of the University of Seoul in 2011; his term will end in April 2015 and he will be happy to return to his teaching and research.



DANIEL LEWIS—Following his return from a spring 2011 UCSB visit, Daniel Lewis was able to write and submit his Ph.D. thesis. He was awarded a Ph.D. in January 2012 from University College London (UCL), UK.

During his visit to spatial@ucsb, Lewis worked with Keith Clarke, Mike Goodchild, and Don Janelle, benefiting also from daily interactions with the students and faculty in the UCSB Department of Geography.

Lewis currently works as a Research Fellow at London School of Hygiene and Tropical Medicine (LSHTM), UK. He is responsible for the application of GIS and spatial analysis in a major evaluation of urban regeneration in East London, headed by Steven Cummins. The study evaluates the impact of urban regeneration—accelerated by the staging of the Olympic and Para-lympic Games in East London in 2012—on the health and wellbeing of young people and their families. The UK government had made numerous promises about how London 2012 would benefit local communities, particularly in terms of increasing physical activity among the young. Spatial analysis in this study will provide evidence as to whether experiences of the games in East London actually support these claims.

INTERNATIONAL SPATIAL COGNITION SUMMER INSTITUTE (ISCSI 2013)

TO BE HELD AT UCSB, AUGUST 11–25, 2013

The campus of the University of California, Santa Barbara, will be the site of ISCSI 2013, the International Spatial Cognition Summer Institute. The Institute is a combined summer school, conference, and workshop on the interdisciplinary field of spatial cognition, that is, the study of spatial perception, thinking, reasoning, and communication by humans, nonhuman animals, and computational entities such as robots. Participants will include internationally prominent instructors from geography, cartography, and geographic information science; cognitive, developmental, and environmental psychology; computer and information science; linguistics; architecture; and neuroscience. Students will be primarily graduate students and early-career researchers from these disciplines.

This institute follows the successful ISCSI 2003, which was held in Bad Zwischenahn, Germany. At the 2013 meeting, we hope to further promote international and interdisciplinary interaction by scholars in the field of spatial cognition. The program consists of sixteen short courses, taught by internationally recognized instructors. All students will make short oral presentations of their research activities as they relate to spatial cognition. The keynote speakers are Ben Kuipers (Department of Computer Science and Engineering, University of Michigan), Individual Differences in Spatial Cognition; and Jack Loomis, (Department of Psychological and Brain Sciences, UC-Santa Barbara) Spatial Thinking in Science Practice and Education. The Institute's website can be found at www.spatial.ucsb.edu/events/spatial-cognition.php.

MINOR IN SPATIAL STUDIES

After a short two years since its inception, the Minor in Spatial Studies has been an unqualified success. Three students graduated in the first quarter that it was available, but graduates have steadily increased each quarter and the program now boasts a total of 45 graduates.

This minor is an interdisciplinary program that complements a student's academic major with concepts and tools for spatial thinking, spatial analysis, and spatial representation. For the minor, students select one of three foci that allies most clearly with their career interest: (a) Spatial Thinking, (b) Space and Place, and (c) Spatial Science. The curricula for these areas of study include a breadth of courses that reflect the pervasive nature of spatial reasoning across diverse fields of knowledge. Graduates have come from the departments of Biology/EEMB, Chemistry, Chicano Studies, Communication, Environmental Studies, Geography, Geology, Mathematics, Psychology, and Sociology. Interest from students in Applied Statistics and Probability, Art History, and Film and Media Studies has increased in the past year. Further information about the minor is available at www.spatial.ucsb.edu/programs/academic-minor.php.



FRESHMAN SEMINAR:

THINKING SPATIALLY IN THE
ARTS AND SCIENCES

After a very successful Freshmen Seminar in fall quarter 2012, Thinking Spatially in the Arts and Sciences (INT 94PN) will hold a second Freshman Seminar course during fall quarter 2013. On Wednesdays from October to December (4:00–4:50 p.m., HSSB 2201) the seminar will explore spatial reasoning for problem solving (sciences), creative expression (arts), and interpretation (humanities). Students will learn how statistics, graphs, maps, and virtual reality aid learning, analysis, data visualization, discovery/solutions to socio-environmental problems, and space/place interpretation. Arts, humanities, social and natural sciences, and engineering faculty will illustrate spatial tools to integrate knowledge across disciplines.

The schedule is as follows:

- 2 Oct. M. Hegarty (Psychological & Brain Sciences); D. Janelle (Center for Spatial Studies); D. Montello (Geography)—Why Think Spatially? Spatial Studies at UCSB
- 9 Oct. R. Church (Geography)—The Art Gallery Problem: A Spatial Perspective
- 16 Oct. V. Welter (History of Art & Architecture)—Architecture: Learning to Dwell in Space
- 23 Oct. W. Meiring (Statistics & Applied Probability)—Spatial Association and Spatial Prediction
- 30 Oct. M. Hegarty, D. Montello—Sense-of-Direction: Are You a Space Wizard or Just Lost in Space?
- 6 Nov. K. Yasuda (Art)—Proximity Art Research
- 13 Nov. J. Jablonski (Map & Imagery Laboratory)—A History of Maps in 45 Minutes
- 20 Nov. D. Janelle—Convergent Places, Warped Spaces
- 4 Dec. M. Goodchild (Geography)—How I Think Spatially

SPATIAL THINKING ACROSS THE COLLEGE CURRICULUM

In December 2012, 43 disciplinary experts, including geographers, cognitive scientists, and administrators, convened in Santa Barbara for a 2-day specialist meeting on Spatial Thinking Across the College Curriculum. The meeting was conceived and organized by the Center for Spatial Studies (spatial@ucsb, University of California, Santa Barbara), and the Spatial Intelligence and Learning Center (SILC, Temple University), and was funded by SILC, spatial@ucsb, and Esri.

The meeting featured plenary presentations by experts on the challenges of spatial thinking in different disciplines, cognitive analyses of spatial thinking processes, current best practices in educating spatial thinking, and making the case for education in spatial thinking. In smaller breakout sessions, groups worked together to identify our current state of understanding of spatial thinking, gaps in our knowledge, and priorities for research and practice in educating spatial thinkers at the college level.

While all of the meeting participants were studying or teaching spatial thinking at some level, it became clear that spatial thinking means different things to scholars from different disciplines. There was a consensus that we must develop a better understanding and articulation of what is meant by spatial thinking or thinking spatially. One important research goal is to characterize varieties in the nature of spatial thinking across disciplines. However, participants also believed that there are core spatial concepts and skills that are more domain-general, such that it is also necessary to identify what is common across disciplines. Among the concepts that were discussed were distance, dispersion, and scale; core skills that were identified included proficiency in designing, critiquing alternative spatial representations, and proficiency in using spatial technologies.

It was concluded that educating spatial thinking should not wait until we have more fundamental understanding. Several promising approaches to the teaching of spatial thinking are already implemented at different colleges and universities, including general education courses, spatial minors, and freshman seminars; such attempts to teach spatial thinking can also feed into a fundamental understanding of its nature.

Current attempts to teach spatial thinking seem very promising, yet objective evidence for their effectiveness is limited and we are not currently in a position to advocate a best approach or set of approaches for teaching spatial thinking across the college curriculum. We need research on teaching spatial thinking, including assessments of what is learned from existing programs. Finally, meeting participants agreed that we must document and demonstrate where and how spatial thinking prepares students for academic success and allows them to better compete in the job market and global economy.

The full meeting report is available at:
www.spatial.ucsb.edu/events/STATCC/docs/STATCC-Final-report.pdf.



THINK SPATIAL
BROWN BAG SERIES
2013–2014
12:00–1:00 p.m.

8/22/13 Tao Cheng
Spatio-temporal Analytics and Applications
Professor in GeoInformatics
Department of Civil, Environmental, and Geomatics Engineering
University College London
4824 Ellison Hall

The fall schedule for 2013–2014
will be posted in September 2013 at
www.spatial.ucsb.edu/events/brownbags/index.php

