LETTER FROM THE GUEST EDITORS

Thanks to its exceptional leadership and an engaged membership, NACIS has assumed an active role in building connections across otherwise segmented cartographic communities. NACIS cultivates and integrates perspectives on cartographic design from industry, government, and higher education, which enables the productive exchange of ideas across these sectors. It connects students with employers, simultaneously building individual careers and the collective cartographic workforce. In its mapgiving activities, NACIS brings maps to people who do not always have the opportunity to engage with them. Finally, through initiatives like the *Atlas of Design* and *CartoTalk*, NACIS has helped to shape the global cartographic conversation.

It is in the NACIS spirit of bridge building that we offer this special issue of *Cartographic Perspectives*. The issue presents a veritable "who's who" of cartographic acronyms, and is a direct collaboration of NACIS (through its publication, *CP*), the International Cartographic Association (ICA), and the Cartography Special Group of the Association of American Geographers (AAG). The ICA promotes the scholarship and professional practice of cartography in an international context, with a congress of over seventy-five member nations convening biennially at an international destination. While the 2015 conference will be held in Rio de Janiero, Brazil, the 2017 meeting will be held in Washington, DC (the first ICA conference in the US since 1978!). It will be important to gather support from the NACIS community as that event approaches. The Cartography Specialty Group of the AAG, while much smaller is size and scope, promotes the scholarship and professional practice of cartography within the broader geography community, and is charged with organizing sessions on and competitions in cartography during the AAG annual meeting.

This special issue had its genesis in the form of four sessions focused on the topics of Cognition, Behavior, and Representation at the 2014 AAG Annual Meeting in Tampa, Florida. The sessions were organized jointly by the AAG Cartography Specialty Group and three ICA Commissions: the Commission on Cognitive Visualization (represented by Amy Griffin and Sara Fabrikant), the Commission on Geovisualization (represented by Anthony Robinson), and the Commission on Use and User Issues (represented by Robert Roth). For NACIS members looking forward to the 2017 ICA conference, it is important to note that there are twenty-five ICA Commissions active today. Several of these ICA Commissions actively collaborate with NACIS already, including the ICA Commissions on Mountain Cartography (see *CP 67*) and Map Design (see *CP 73*).

A total of twenty abstracts were presented as part of these jointly organized AAG sessions last April, resulting in a healthy discussion on the topics of cognition, behavior, and representation, which we happily extended beyond the paper sessions and into the evening over drinks. We then invited the presenters to expand their presentations into full papers for consideration in *Cartographic Perspectives*, with the goal of highlighting emerging trends in cartographic research and extending the reach of the discussion beyond the conference presentations themselves. Following peer review, four research papers were accepted for this special issue. Before introducing each paper, we'd like to thank the contributors to the AAG sessions and the numerous individuals who volunteered their time as reviewers. In total, cartographers from eleven countries participated in the special issue in some way (Australia, Belgium, Canada, China, the Czech Republic, Germany, the Netherlands, Sweden, Switzerland, the United Arab Emirates, and the United States of America)—an indication of the reach that such collaborations offer.

Our first paper approaches the central theme of the recent 2014 NACIS conference: cartography and time. Menno-Jan Kraak (Vice President of the ICA), Barend Köbben, and Yanlin Tong of the University of Twente in the Netherlands provide a systematic review of methods for representing movement, such as timelines, flow maps, linear cartograms, and the space-time cube. They argue that an integrated approach that coordinates multiple representations offers the best pathway to understanding movements in space and time. The paper is packed with useful illustrations for representing movement on maps and timelines, and includes source code for implementing several of the examples in D3 (a resource that will be of use to professionals as well as scholars). Menno-Jan, Barend, and Yanlin also are the first contributors to *CP* to discuss and implement eye-tracking, an evaluation technique praised in other cartographic outlets for its ability to study the impact of map design on cognition.

In the second paper, David Retchless of Penn State discusses the conceptualization and representation of uncertainty on map-based visualizations of global sea level rise. David introduces and synthesizes current perspectives on uncertainty representation in the disciplines of Cartography and GIScience, and appends to these perspectives emerging ideas on uncertainty representation in the cognitive and decision sciences. David then uses this foundation to discuss how individual differences on risk perception and response impact decisions regarding risk and resiliency. The paper closes with helpful recommendations for cartographers when designing maps of uncertain future sea levels, many of which translate to other, potentially deleterious impacts of climate change. In doing so, David reminds that cartographers and maps have an important role to play in addressing impending, global-scale problems.

Next, Thomas Pingel (President of the AAG Cartography Special Group) of Northern Illinois University and Victor Schinazi of the Swiss Federal Institute of Technology in Zürich evaluate the relationship between the size of a navigable space and the strategies that people use to search for objects in such space. This work highlights the importance of studying spatial cognition and wayfinding behavior within cartography, as it is essential for cartographers to understand how people conceptualize and utilize the places we ultimately represent in our maps. Through an empirical study, Tom and Victor reveal that individuals tend to adopt a more systematic search pattern as the size of the space they need to navigate increases. Their results suggest ways in which we might use this knowledge of human spatial cognition to inform how we design maps that support navigation.

The peer-reviewed content of this special issue concludes with a paper from Ian Muehlenhaus of James Madison University (and Past President of the AAG Cartography Special Group). Ian explores the potential intersections between film theory and cartography, adapting approaches from film studies to interrogate map designs. To this end, Ian argues that traditional map evaluation too often is focused on the content of the representation, rather than the overall form of the representation. Ian goes on to demonstrate how maps can be evaluated in terms of their form, eloquence, and meaning, and proposes that film theory can be used to reshape the ways in which cartographers conceptualize map evaluation and critique. Ian's paper builds on his recent presentations in NACIS sessions on map design, and illustrates the overlapping interests of NACIS, the ICA, and the AAG Cartography Specialty Group.

NACIS, the ICA, and the AAG Cartography Specialty Group have highly compatible aims. It is our hope with this special issue to continue bridging gaps across these cartographic communities, especially given the recent United Nations resolution in support of the International Map Year in 2015–2016, and the upcoming 2017 ICA meeting in Washington, DC. These activities represent excellent opportunities for NACIS members to highlight their academic and professional excellence in an international forum. We are excited to share the NACIS way with cartographers from across the globe, and hope you join us in Rio, DC, and beyond to celebrate all that cartography has to offer.

Anthony C. Robinson and Robert E. Roth