Pervasive computing has always involved blurring the boundaries between disciplines. Any serious attempt at a pervasive computing deployment typically involves bringing together researchers from a wide range of disciplines, including technologists, application specialists, and social scientists. It’s this mix of disciplines, historically a distinguishing feature of Xerox PARC but now relatively commonplace, that helps make the field so exciting.

The group living and working at the intersection of arts and technology has always been particularly keen to embrace the pervasive computing vision. From Natalie Jeremijenko’s classic “Dangling String” (http://en.wikipedia.org/wiki/Natalie_Jeremijenko#XEROX_PARC) to Steve Benford’s collaborations with Blast Theory, artists and technologists have collaborated to produce compelling pervasive computing experiments (see IEEE Pervasive Computing’s special issue on art, design, and entertainment, vol. 3, no. 1, 2004, for a selection of articles in this area).

A few weeks ago, I had the pleasure of participating in FutureEverything (http://futureeverything.org), a festival based in Manchester, England, that celebrates digital innovation. The organizers “create year-round digital innovation projects that combine creativity, participation, and new technologies to deliver elegant business and research solutions.” The festival, which ran from 11–14 May 2011, featured an interesting mix of art, music, and “ideas” on topics such as open data visualization. My group was there to trial an experimental travel system that uses crowd-sourced data to help users make better-informed travel decisions (www.our-travel.org.uk). We promoted the system to festival goers, who could either download an app for their iPhone or use a Web-based interface for Android and other smartphones. What was interesting was the level of engagement we were able to solicit from users. The festival goers proved a willing test community and actively contributed a range of feedback on the system. Collaborations with artists have gone somewhat out of vogue in our community due to a sense that this methodology had been explored. Visiting FutureEverything confirmed in my mind that there is still a rich vein of collaboration to explore. IEEE Pervasive Computing provides a natural home for articles resulting from these endeavors.

This special issue focuses on automotive pervasive computing. Pervasive computing has much to offer the transport domain and the special issue editors have done an excellent job of collecting articles that focus specifically on the use of pervasive computing in the automotive sector. On behalf of the magazine, I would like to express my thanks to Albrecht Schmidt (University of Duisburg-Essen), Joe Paradiso (MIT Media Lab), and Brian Noble (University of Michigan) for all their work.

If you’re working in the area of pervasive computing and transport and missed the deadline to submit papers for this issue, you can, of course, always submit your articles as regular papers. These are peer-reviewed in the normal fashion and then appear as nontheme papers in later issues. This issue features two such articles.

In “A Location-Aware Framework for Intelligent Real-Time Mobile Applications,” Sean Barbeau and his colleagues at the University of South Florida present their work on a platform to improve the battery life of smartphones using GPS for location-based applications. As anyone working in this area is well aware, the need to offer users reasonable battery life while supporting fine-grained location-based applications is a constant challenge. Systems that enable finer grained tracking while preserving reasonable battery life open up the possibility of new forms of applications, particularly in the transport sector, so I hope this article will be of interest to all readers of the magazine.
In “Ubitrack: Automatic Configuration of Pervasive Sensor Networks for Augmented Reality,” Daniel Pustka and his colleagues also focus on location tracking, but in this case looking more generally at the problem of dynamically incorporating several heterogeneous sensors to support a wide range of application scenarios.

In addition to our special issue and regular articles, this issue offers a range of departments. The Conferences department reports on the recent HotMobile workshop, held in Phoenix, Arizona. This workshop series has long been associated with pioneering work in pervasive computing and this recent event included many papers that stimulated much discussion. For a history of HotMobile, visit www.hotmobile.org. We also have departments on education, experimental methodology, pervasive health, smartphones, and three work-in-progress reports—all in all a very full issue.

Our next issue is on “Large-scale Opportunistic Sensing,” and we currently have a live call for papers on “Pervasive Information and Communication Technologies for Development (ICT4D).” You can always view our editorial calendar and the latest calls for papers at www.computer.org/portal/web/pervasive/home.

CHANGES TO THE EDITORIAL BOARD
After being involved with the magazine for many years, Keith Farkas is leaving the editorial board. Keith was a founding member of IEEE Pervasive Computing’s editorial board. On behalf of everyone I would like to thank Keith for his many contributions.

REFERENCE

IEEE Pervasive Computing
seeks accessible, useful papers on the latest peer-reviewed developments in pervasive, mobile, and ubiquitous computing. Topics include hardware technology, software infrastructure, real-world sensing and interaction, human-computer interaction, and systems considerations, including deployment, scalability, security, and privacy.

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