



**Editor: Fei-Yue Wang,**  
Chinese Academy of Sciences,  
feiyue@ieee.org

## Social Media and the Jasmine Revolution

Fei-Yue Wang, *Chinese Academy of Sciences*

**O**ur November/December 2010 issue focused on social media, and its publication arrived just in time for the current turmoil in the Middle East. That special issue, dedicated to social media analytics and intelligence, attracted almost 100 submissions. I would like to thank Guest Editors Daniel Zeng, Hsinchun Chen, Robert Lusch, and Shu-Hsing Li for their hard work and great success.

The Tunisian revolts were called the Jasmine Revolution by the news media, but I prefer the former Tunisian prime minister's assertion that this was "a revolution of Facebook and Twitter," or to be technically exact, a revolution of social media.

### Hope for a Glorious Revolution

Revolution is a difficult subject. As someone who grew up amid the Great Proletarian Cultural Revolution, I am quite sensitive and disdainful of the term. The difference between what constitutes a revolution and what is only evolutionary is confusing, vague, and possibly nonexistent. It used to be much clearer; revolutions were mostly confined to the battlefield and muskets and cannons were involved, as in the American Revolution. Or as Chairman Mao famously and concisely stated: "Political power grows out of the barrel of a gun."

Today's revolutions are much more tricky. There has been a progression toward civility and tolerance. Color revolutions—prettily named Rose, Cedar, and Tulip—swept across the Balkan states. But the recent violence in the Middle East threatens this peaceful evolution of revolutions. Clearly, the Tunisian Jasmine is no longer pure white; it has been stained. Perhaps we should revisit history and learn something from the Glorious Revolution of 1688, also known as the Bloodless Revolution—albeit an inaccurate label, it is still a goal we should strive for.

There is one revolution I have always liked, the Information Revolution. As a researcher, I have tried to investigate and evaluate the impact of new information technology on our society. I have always expected that IT advances would revolutionize our economical productivity and efficiency. Now I think that their impact on social aspects, especially stability and security, is a more urgent and pressing matter. Social media has provided a particular example, causing an economic revolution in the West by dramatically changing traditional means of publication and communication. In the Middle East, it has incited a political revolution, which has already thrown, and continues to throw, several countries into turmoil.

### We'd Like to Hear from You

#### Letters to the Editor:

Send letters, including a reference to the article in question, to [dstrok@computer.org](mailto:dstrok@computer.org).

Letters will be edited for clarity and length.

#### Articles:

If you're interested in submitting an article for publication, see our author guidelines at

[www.computer.org/intelligent/author.htm](http://www.computer.org/intelligent/author.htm).

## New Editorial Board Members



**Wenji Mao** is an associate professor in the Institute of Automation at the Chinese Academy of Sciences. Her research interests include social computing (especially social modeling and social reasoning), intelligent agents, artificial intelligence, and security informatics as well as their applications in intelligent systems. She cochaired the First and Second International Workshops on Social Computing

and has been a special issue guest editor for *IEEE Intelligent Systems*, *Information Systems and E-Business Management*, and the *Journal of Computer Science and Technology*. Mao has an MS from the Chinese Academy of Sciences and a PhD in computer science from the University of Southern California. She is a member of the ACM, AAAI, and INFORMS and serves on the Technical Committee on Homeland Security of the IEEE Systems, Man, and Cybernetics Society and IFAC Technical Committee 9.1 on Economic, Business, and Financial Systems. Contact her at wenji.mao@ia.ac.cn.



**Raymond Perrault** has been director of the Artificial Intelligence Center at SRI International since 1988. From 2002 to 2009 he was co-principal investigator of the CALO Project, a large, multi-institutional, DARPA-funded project focused on building an intelligent office assistant that learns through interaction with its user and the world. The CALO project management team won the DARPA Award for Excellence by a Performer in 2007. His research interests include natural language processing, speech act theory, discourse, planning, plan recognition, formal language theory, and intelligent virtual assistants. Perrault

has a BSc in mathematics from McGill University and a PhD in computer and communication sciences from the University of Michigan. From 2001 to 2010, he was co-editor in chief of *Artificial Intelligence*. He is a founding fellow of the American Association for Artificial Intelligence and a founding principal of the Center for the Study of Language and Information at Stanford University. He has been a president of the Board of Trustees of International Joint Conferences in Artificial Intelligence and of the Association for Computational Linguistics. Contact him at perrault@ai.sri.com.



**Alessandro Sperduti** is a full professor of computer science in the Department of Pure and Applied Mathematics at the University of Padova, Italy. His research interests include supervised and unsupervised neural network models for processing structured information (sequences, trees, and graphs), kernel methods, and data and process mining methods and applica-

tions. He is also interested in intelligent systems for processing of textual documents and images. He is cochair of the 2011 IEEE Symposium on Computational Intelligence and Data Mining (IEEE CIDM) and has been a special issue guest editor for *Neural Networks*, *IEEE Transactions on Knowledge and Data Engineering*, and *Cognitive Systems Research*. He is on the editorial board of the *IEEE Transactions on Neural Networks*, *European Journal on Artificial Intelligence (AI COM)*, *Neural Information Processing - Letters and Reviews*, and *Neural Processing Letters*. He is a senior member of IEEE. He has served as chair of the Data Mining Technical Committee (DMTC) of the IEEE Computational Intelligence Society. For the same society, he is currently the chair of the Neural Network Technical Committee (NNTC). Contact him at sperduti@math.unipd.it.

### Cybermovement Organizations

A study of the impact of social media on societal stability can begin with various *cybermovement organizations* (CMO, a term I coined for social computing many years ago) as well as their formation, structure, development, and internal and external dynamics. We have witnessed several CMOs emerging from Facebook and Twitter that have played significant roles in social change, serving as grassroots campaigns in political elections and as an organizational tool in the recent Middle East revolution. To deal with the huge amount of Web data involved, many AI methods and tools addressed by our magazine, such

as social networking, data mining, machine learning, language processing, and text and content analysis, are essential for the success of such a study.

A special kind of CMO is a *cyber-enabled social movement organization* (CeSMO); human fresh search engines (HFSE) in China and crowdsourcing in the US are two typical examples. Within a particular CeSMO, a few netizens using minimal effort and in a short amount of time are able to attract huge crowds creating enormous momentum within cyberspace. The release of this gathered energy into the physical space then in turn is capable of causing great turmoil. This social phenomenon has

been repeatedly observed all over the world, and its process and significance must be further investigated.

CeSMOs can also be interpreted as *cyber-enhanced social movement organizations*. These organizations begin traditionally but are then enhanced with new tools in social media and cyberspace. The key differences between traditional movement organizations and CMOs is their speed and size of influence. Traditional organizations are intrinsically limited by their contact capacity and bogged down with bureaucratic procedure and document-driven communication. Their cyberspace counterparts, on the other hand, can disseminate information and calls for action

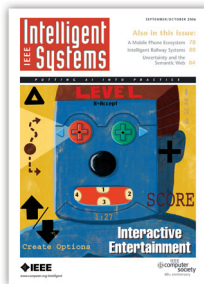
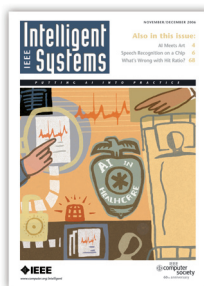
# Call for Articles

*Be on the Cutting Edge of Artificial Intelligence!*

Publish Your Paper  
in IEEE Intelligent Systems

IEEE Intelligent Systems  
seeks papers on all aspects  
of artificial intelligence,  
focusing on the development  
of the latest research into  
practical, fielded applications.

For guidelines, see  
[www.computer.org/mc/  
intelligent/author.htm](http://www.computer.org/mc/intelligent/author.htm).



immediately and pervasively. This extreme imbalance and asymmetry between the traditional and the new should be cause for great concern in any society.

## The Future Society Online

We need to find a balance, perhaps a dynamic one, between the speed and scale of social and information revolutions. Otherwise, civilized revolutions might end up in tragic disasters. New intelligent systems and technology as well as CMO tools such as HFSE, crowdsourcing, and social-media-based emergency maps might help prevent some such situations. However, to find a long-term solution for the stability of future societies online, we must invest in an *open society*, a concept originally developed by philosophers Henri Bergson and Karl Popper. Going forward, we need to redesign and reconstruct the open society concept to consider and include novel, smart technologies.

I hope in this future society online, CMOs will become a lifestyle, a new way of living, studying, and working motivated only by humanitarian interests, nothing political.

Now let me welcome three new members to the *IEEE Intelligent Systems* editorial board: Raymond Perrault of SRI International, Wenji Mao of the Chinese Academy of Sciences, and Alessandro Sperduti of the University of Padova to our *IEEE Intelligent Systems* editorial board. I look forward to working with you all in our very own society online. ■

**cn** Selected CS articles and columns  
are also available for free at  
<http://ComputingNow.computer.org>.

The #1 AI Magazine  
[www.computer.org/intelligent](http://www.computer.org/intelligent)

IEEE  
Intelligent  
Systems