Arab World Regional Special Section

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Welcome

WELCOME TO THIS special section on the Arab world, covering Arab speaking countries from the Atlantic Ocean to the Gulf. The Arab world includes diverse countries with varying ethnicities, cultures, dialects, history, and socioeconomic backgrounds. The countries are also extremely diverse in the abundance of human and natural resources with a high variance of distribution of each across the Arab nations. With limited research support in many countries and a lack of a corresponding consuming industry, the Arab region has struggled in computing research till the early 2000s. Nevertheless, over the last decade, the region witnessed a significant investment in research support and the corresponding enabling industry. Several countries are moving toward a knowledge-based economy, while others have opened up to more industry. This is apparent by the recent inception of new research-based universities and labs in Egypt, Morocco, Qatar, Saudi Arabia, and United Arab Emirates, and the recent change of the computing industry landscape in Egypt, Jordan, and Lebanon.

To create this special section, we launched an open call for contributions to a virtual workshop. The workshop, held on Aug 29–30, 2020, featured 32 selected talks, five invited academic keynotes, and two invited industrial keynotes. Following the workshop, the organizing group met twice with the Advisory Board Committee members, Ahmed Elmagarmid (QCRI, Qatar), Mootaz Elnozahy (KAUST, Saudi Arabia), Lina Karam (LAU, Lebanon), and Taieb Znati (UAEU, UAE). The meetings concluded with selection of 18 papers to invite for this special section. Nine of these papers were selected from the workshop, while the rest were invited to ensure diversity and broad representation without sacrificing quality.

Articles in this issue are diverse in several aspects. Geographically, the authors represent 12 Arab countries, namely, Algeria, Egypt, Jordan, Lebanon, Morocco, Palestine, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, and the UAE. Out of the 18 papers, 11 have authors from academia, nine have authors from research labs, six from the industry, one from government, and one from an NGO. Nine out of the 18 papers have female authors while 16 have male authors. In terms of topics, the papers cover AI, bioinformatics, computer networks, database systems, education, HCI, HPC, ML, NLP, security, speech, and transportation.

Of course, this issue is by no means comprehensive of all the exciting research in the Arab world. Yet, it is a start that would help strengthen the research collaboration and communication with various regions of the world. Articles in this issue are either describing a topic very specific to the region and/or distinguished research that came out of the region and had international impact. We sincerely hope that readers will find the articles exciting and eye opening. The Arab world has a huge potential in research and development that is yet to be exploited.

Finally, we would like to thank all the authors, workshop participants, and our advisory board for their efforts in coming up with this issue. Special thanks go to Christine Bassem (Wellesley College, USA), Tamer Elbatt (AUC, Egypt), and Cherif Salama (AUC, Egypt) for their tireless efforts in the workshop organization and selection of articles in this issue.

—*Sherif G. Aly, Mohamed Mokbel, and Moustafa Youssef*
Coordinators of the Arab World Region Special Section

Sherif G. Aly is a professor and chair of the Department of Computer Science and Engineering at The American University in Cairo, Egypt.

Mohamed Mokbel is Chief Scientist at Qatar Computing Research Institute, HBKU, Doha, Qatar.

Moustafa Youssef is a professor at the American University in Cairo and Alexandria University, Egypt.

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