IEEE Transactions on Affective Computing – on novelty and valence [Editorial]

Björn Schuller

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IT is exciting times for the field of Affective Computing. Not only is Artificial Intelligence as a whole experiencing so far unseen interest, but in particular, today's hopes in Human-Computer Interaction and Social Robotics lie on Affective Computing as hardly ever before. Accordingly, one can see the market power and presence of increasingly more start-ups and even established enterprises gain momentum and weight on almost monthly basis–the race is on: Experiencing Affective Computing on the broad consumer market in everyday usage seems around the corner as never before.

It is also exciting time for the *IEEE Transactions on Affective Computing* (*TAC*): In its tenth year, the journal is experiencing different emotions: First things first, I am overly pleased to announce the new and third overall Editor in Chief–Elisabeth André of the University of Augsburg in Germany, following the founding editor Jonathan Gratch (University of Southern California, USA) and myself (Imperial College London, UK), as the journal's first female editor-in-chief. After four years of service, my second and by terms of the IEEE statutes thus final term as Editor in Chief came to an end with the end of 2018, and I am truly excited and overly happy to see Elisabeth taking over as she represents the field like few or no other both in terms of width and depth. In terms of novelty, it will also be up to her to award the first annual most cited article of the year award, and I am truly looking forward to see the great plans and ideas of hers for the journal turn into reality. Her biography and photo can be found at the end of this editorial.

It is with further joy to announce that outstanding new Associate Editors could be won for the journal: We warmly welcome, named in alphabetical order: For speech-based emotion recognition Fabien Ringeval (Université Grenoble Alpes, France), for affect in speech and language Khiet Truong (University of Twente, The Netherlands), and for Artificial Intelligence and Affective Computing Shangfei Wang (University of Science and Technology of China, P.R. China) in this role. Similarly, many new reviewers helped with the heavy load of reviewing increasingly more submissions, and it is hard to thank them enough for this excellent support. Highest quality reviewing is time intensive and sometimes perceived as less rewarding, but in fact it serves both ends the best–the reviewer as well as the authors.

At the same time–remaining with positive valence–the journal reached its highest official Impact Factor, peaking at 4.585 according to the Journal Citations Report by Clarivate Analytics (originally ISI Impact Factor, and successively Thomson Reuters Impact Factor). In the last year, it was at 3.149–at the begin of my term at 1.873–well reflecting the increasing interest in the field and the excellent submissions and highest quality efforts put into the journal by all making it what it is.

Further good news concerns the huge success of the 2018 First Asian Conference on Affective Computing & Intelligent Interaction (ACII Asia 2018) which was held for the first time as a regionally focused conference supported by the AAAC—the Association for the Advancement of Affective Computing (AAAC) who–commonly with the IEEE–is supporting and behind these Transactions. The first ACII Asia was held 20-22 May 2018 in Beijing, China under the theme of "Affective Intelligence" chaired by Jianhua Tao (Institute of Automation, Chinese Academy of Sciences, P.R. China), myself (Imperial College London, UK), and Nick Campbell (Trinity College Dublin, Ireland). Fifty-nine submissions for regular papers were received, and the proceedings were published by the IEEE. Furthermore, the results of the second Multimodal Emotion Challenge (MEC 2017) were announced at ACII Asia 2018. Two best papers of the conference were invited in an extended version for this journal.

Along these lines, we can look forward to the AAAC's 8th International Conference on Affective Computing & Intelligent Interaction (ACII 2019) to be held 3-6 September 2019 in Cambridge, UK, chaired by Jonathan Gratch (University of Southern California, USA), Hatice Gunes (University of Cambridge, UK), myself (Imperial College London), and Michel Valstar (University of Nottingham, UK). The proceedings shall again be published by the IEEE.

We also look forward to the finalization of the currently open Special Issue/Section on Automated Perception of Human Affect from Longitudinal Behavioral Data and thank the Guest Editors Pablo Barros (University of Hamburg, Germany), Stefan Wermter (University of Hamburg, Germany), Ognjen Rudovic (Massachusetts Institute of Technology, USA), and Hatice Gunes (University of Cambridge, UK).

Sad news include the termination of service of the Associate Editor Yi-Hsuan Yang (Academia Sinica, Taiwan) whom we thank for his great service over the last two years.

However, there is also truly sad news: Our Associate Editor Stefan Steidl of FAU Erlangen-Nuremberg in Germany unexpectedly passed away at a young age in October 2018. His contributions to the journal and to the field of Affective

Computing, such as major efforts in the first ever Emotion Challenge we held together with Anton Batliner at Interspeech in 2009, based on the famous FAU Aibo Emotion Corpus collected by him, Anton, and Christian Hacker, and to the nine follow-up challenges, will be remembered as milestones. His love of and dedication to detail will further remain unrivalled. Stefan, we will truly miss you–as friend, colleague, and scientist.

A minor change is also found in the brilliant staff at IEEE which can hardly be thanked enough. Therefore, I would like to thank in particular Antonia Carl who sadly quit her brilliant service, and heartily welcome Desiree Noel, the new Administrator. I further thank again Jennifer Carruth, Kathy Santa Maria, Hilda Carman, and Kimberly Sperka.

The Steering Committee's excellence in steering remains unchanged, and I would like to overly thank Hatice Gunes (SC Chair), Jonathan Gratch, Peter Robinson, and Mohammad Soleymani (Secretary) representing the IEEE Computer Society, Goutam Chakraborty, and, and Bao-Liang Lu representing the IEEE Computational Intelligence Society, and Pascal Fung for the IEEE Signal Processing Society. In particular, I would also like to thank Weiming Shen representing the IEEE Systems, Man and Cybernetics Society, whose great service also comes to an end after six years.

Concluding this editorial and my service as its Editor in Chief, I truly look forward to the journal's bright future with Elisabeth André as the new Editor in Chief, but also to the bright future of Affective Computing, which will soon improve our lives in many ways as long as we keep an eye also on the ethical side and social implications given by future Artificial Intelligence empowered by Artificial *Emotional* Intelligence ensuring auditability, benchmarking, confidence, data-reliance, and explainability.

With best wishes for 2019,

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Björn W. Schuller
Outgoing Editor-in-Chief

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Elisabeth André received multiple degrees in computer science from Saarland University, including a doctorate. She is a full professor of computer science and founding chair of Human-Centered Multimedia at Augsburg University in Germany, where she has been since 2001. Previously, she was a principal researcher at the German Research Center for Artificial Intelligence (DFKI GmbH) in Saarbrücken. She has made major scientific contributions to the field of socially-aware interfaces with an impact that reaches far beyond the borders of computer science. She has undertaken a number of very successful interdisciplinary collaborations with psychologists, pedagogues, medical scientists and media artists that have resulted into a variety of award-winning applications, among them pedagogically well-grounded and empirically validated learning environments for children and young people. She has not only made substantial scientific contributions to the area of computer-enhanced learning, her research has also inspired a number of very interesting industrial collaborations with the aim to integrate the new methods and techniques for social and emotional learning into commercial serious games. She has been elected a member of the prestigious Academy of Europe and the German Academy of Sciences Leopoldina. To honor her achievements in bringing Artificial Intelligence techniques to HCI, she was awarded a EurAI fellowship (European Coordinating Committee for Artificial Intelligence) that recognizes "individuals who have made significant, sustained contributions to the field of artificial intelligence (AI) in Europe". Recently, she was elected to the CHI Academy, an honorary group of leaders in the field of human-computer interaction.