

Editorial

Introducing the IEEE TRANSACTIONS ON BIOMETRICS, BEHAVIOR, AND IDENTITY SCIENCE

IT gives us immense pleasure to introduce IEEE TRANSACTIONS ON BIOMETRICS, BEHAVIOR, AND IDENTITY SCIENCE (T-BIOM). Biometrics and Identity Science is a core opportunity area with a large social impact that is becoming a major component in several large-scale identity management projects. For example, Office of Biometric Identity Management (OBIM), India's Unique Identification Authority of India (UIDAI - Aadhaar) project, the FBI's Next Generation Identification (NGI) system, Canada Border Services, and other nation-wide identity management programs have shown the usefulness of biometrics for identity management.

The major motivation for starting the new Transactions is to focus on the advancements on biometrics and identity science. T-BIOM will also focus on the "behavior" aspects of an individual's activity, such as behavior modeling for person recognition, behavior patterns in surveillance video, as well as the evolution from biometrics into the science of identity analysis. It is envisioned that T-BIOM will add the scholarly value to the biometrics research community and provide a highly reputed venue to publish top quality research papers. A broad scope will also ensure a widespread reach to academic, technical, engineering, and legal/law enforcement communities investing in biometrics.

The success of a new Transactions is dependent on four factors: i) a strong editorial board, ii) authors submitting high-quality research, iii) reviewers providing thoughtful, constructive, and timely feedback, iv) readers benefiting from the top-quality research published in the Transactions. To accomplish success in the first factor, the IEEE Biometrics Council is pleased to appoint Prof. Kevin W. Bowyer as the founding Editor-in-Chief (EiC) of T-BIOM. Prof. Bowyer is a well-known researcher in the area of biometrics and a Schubmehl-Prein Family Professor at the University of Notre Dame, Notre Dame, IN, USA. He has extremely rich scholarly and editorial experience. He was EiC of *IEEE Transactions on Pattern Analysis and Machine Intelligence*, founding EiC of the *IEEE Biometrics Compendium*, and General Chair or PC Chair of several highly reputed conferences, such as CVPR, BTAS,

and IJCB. He has received numerous awards and published over 300 research papers, including 120 journal articles. We truly believe that his extensive experience in comprehending and fulfilling the requirements of a top-quality Transactions will help in achieving success in the remaining three factors.

In the process of starting a new Transactions, we had received support from several individuals. First and foremost, we would like to recognize the support of IEEE and the staff members, specifically, Meena Shanmugavel, Laura Creighton, Dawn Melley, Michael Wehrman, Timothy Pastore, Krista Thom, Martin Morahan, Katie Sullivan, Christine Vartanian, and Sonal Parikh. We would also like to acknowledge Peter Luh, members of the Proposal Development Committee, Finance Committee, Periodical Committee, and TAB. Special thanks to Sven Dickinson, Pat Flynn, Pablo Estévez, Nikhil Pal, Greg Byrd, Manuel Delgado Restituto, Robert Butera, and Nigel Lovell for their continued support in the entire duration. We are truly grateful to our technical co-sponsors, the IEEE Computer Society, the IEEE Computational Intelligence Society, the IEEE Engineering in Medicine and Biology Society, and the IEEE Circuits and Systems Society.

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Mayank Vatsa received the M.S. and Ph.D. degrees in computer science from West Virginia University, USA, in 2005 and 2008, respectively. He is currently the Head of the Infosys Center for Artificial Intelligence, an Associate Professor with IIIT-Delhi, India, and an Adjunct Associate Professor with West Virginia University, USA. He has co-edited a book entitled *Deep Learning in Biometrics* and co-authored over 250 research papers. His areas of interest are biometrics, image processing, machine learning, computer vision, and information fusion. He was a recipient of the A. R. Krishnaswamy Faculty Research Fellowship at the IIIT-Delhi, the FAST Award Project by DST, India, the Prestigious Swarnajayanti Fellowship Award from Government of India, and several best paper and best poster awards at international conferences. He is the Area Chair of *Information Fusion* (Elsevier), the General Co-Chair of IJCB 2020, and the PC Co-Chair of ICB 2013, IJCB 2014, and ISBA 2017. He is the Vice President (Publications) of the IEEE Bio-Metrics Council, where he started the IEEE TRANSACTIONS ON BIOMETRICS, BEHAVIOR, AND IDENTITY SCIENCE. He is a Senior Member of the ACM and IEEE.



Mark S. Nixon is currently a Professor of computer vision with the University of Southampton, U.K. His research interests are in image processing and computer vision. His team develops new techniques for static and moving shape extraction, which have found application in automatic face and automatic gait recognition and in medical image analysis. The members of his team were early workers in face recognition, later came to pioneer gait recognition, and then joined the pioneers of ear biometrics. Recently, his team has been pioneering soft biometrics for human identification. He has supervised many research projects with funding from sources, including DARPA, U.S. Army, EPSRC, NERC, EU, and General Dynamics. His vision textbook, with A. Aguado, *Feature Extraction and Image Processing*, Third Edition (Academic Press, 2012), has become a standard text in computer vision. With T. Tan and R. Chellappa, their book *Human Identification Based on Gait* is part of the Springer Series on Biometrics and was published in 2005. He is the President of the IEEE Biometrics Council. He has chaired/program chaired many

conferences, such as BMVC, ICPR, IEEE BTAS, IAPR ICB, IAPR/IEEE IJCB, IEEE ISBA, and IAPR/IEEE IJCB 2017 and given many invited talks. He is a member of IAPR TC4 Biometrics. He is a fellow of IET and IAPR, and a Distinguished Fellow of BMVA.