

## Human Activity Recognition & Future Challenges

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**Abstract:** Vision-based human activity recognition and analysis are very important research areas in computer vision and Human Robot/Machine/Computer Interaction. Over a decade, a good number of methodologies have been proposed in the literature to decipher various challenges regarding action and activity. However, due to various complex dimensions, a number of challenges still remain unexplored. In this keynote speech, various important aspects of human activity recognition and analysis will be covered. The keynote speech will emphasize on interesting and challenging research aspects to explore in future.

*Core Reference:*

1. Md. Atiqur Rahman Ahad, “Motion History Images for Action Recognition and Understanding”, available in Springer, ISBN: 978-1-4471-4730-5, 2012.
2. Md. Atiqur Rahman Ahad, “Computer Vision and Action Recognition: A Guide for Image Processing and Computer Vision Community for Action Understanding”, available in Springer, ISBN: 978-94-91216-20-6, 2011.



**Biography:** Md Atiqur Rahman Ahad, Senior Member, IEEE, is a *Professor* of Electrical & Electronic Engineering, University of Dhaka (DU). He is currently working as *specially appointed Associate Professor* at Osaka University, Japan. He works on computer vision, imaging, IoT, healthcare, etc. He did B.Sc.(honors) [1<sup>st</sup> class 1<sup>st</sup> position] & Masters [1<sup>st</sup> class 2<sup>nd</sup> position] from the Dept. of Applied Physics & Electronics, DU; Masters from the School of Computer Science & Engineering, University of New South Wales; and PhD from the Faculty of Engineering, Kyushu Institute of Technology [KIT]. He was awarded prestigious UGC Gold Medal 2016 (handed by Honorable President of Bangladesh), JSPS Postdoctoral Fellowship, and a no. of awards/scholarships. He was a Visiting Researcher at KIT. He published two books as single author (available in Springer) & a few book chapters. He

has published 110+ journals and conference papers. He has received 10+ international awards in various conference/journal/society. Ahad was invited as keynote/invited speakers 50+ times in different conferences/universities. He has established several international MOU/collaborations (e.g., Clemson University, University of Hyogo, RCCIIT, Fukuoka Women University, Kyushu University, etc.).

He has been involved with some academic & editorial activities: e.g., Editorial Board Member, *Scientific Reports*, *Nature*; Associate Editor, *Frontiers in ICT*; Editorial Board Member, *Encyclopedia of Computer Graphics and Games*, Springer; Assoc. Technical Editor (former), *IEEE ComSoc Magazine*; Editor-in-Chief: *Int. J. of Computer Vision & Signal Processing* <http://cennser.org/IJCVP>, *Int. J. of Electronics & Informatics* <http://cennser.org/IJEI>, *Int. J. of Environment* <http://benjapan.org/IJE>; General Chair, 2019 8<sup>th</sup> Int. Conf. on Informatics, Electronics & Vision, Japan; 3<sup>rd</sup> Int. Conf. on Imaging, Vision & Pattern Recognition <http://cennser.org/ICIEV>; Publication Chair, 2018 IEEE International Conference on Systems, Man, and Cybernetics (SMC2018) <http://www.smc2018.org/>; Vice Publication Co-chair and Vice Award Chair, Joint 17<sup>th</sup> World Congress of International Fuzzy Systems Association (IFSA) and 9<sup>th</sup> Int. Conf. on Soft Computing and Intelligent Systems; General Chair, 7<sup>th</sup> Intl. Symposium in Computational Medical and Health Technology; and several other international conferences. He served as Guest Editor in *Pattern Recognition Letters*, Elsevier; *Journal of Multimedia User Interface*, Springer; *Journal of Healthcare Engineering*, Hindawi; *International Journal of Innovative Computing, Information and Control*. Ahad is a Member of OSA, ACM, IEEE Computer Society, IAPR, IEEE RAS, IEEE SMC, etc. He is the founder Secretary of IEEE Computer Society Bangladesh Chapter, and Bangladesh Association of Pattern Recognition, EC member of Bangladesh Electronics Society (BES). He volunteers some societies in Bangladesh (e.g., Executive Committee member of BAPA, the largest environmental group) and Japan. More: <http://aa.binbd.com>