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Automatic
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The Department of Automatic Control & Systems Engineering
is pleased to announce the following seminar:

“Artificial Intelligence – Machines, Genes & Brains”

Professor Asoke K Nandi

*Department of Electronic and Computer Engineering
Brunel University London, UK*

Wednesday, 12 June 2019 at 14:00

LT2, The Diamond

Abstract

This presentation will highlight three selected examples of exciting results from artificial intelligence at the interface of computer engineering, physics, bioinformatics, and neuropsychology. These have been drawn from the speaker's own research.

1. H Ahmed and A K Nandi, "Three-stage Hybrid Fault Diagnosis for Rolling Bearings with Compressively-sampled data and Subspace Learning Techniques", *IEEE Transactions on Industrial Electronics*, DOI: [10.1109/TIE.2018.2868259](https://doi.org/10.1109/TIE.2018.2868259), vol. 66, no. 7, pp. 5516-5524, 2019.
2. B Abu Jamous, F M Buffa, A L Harris, and A K Nandi, "In vitro downregulated hypoxia transcriptome is associated with poor prognosis in breast cancer", *Molecular Cancer*, DOI: [10.1186/s12943-017-0673-0](https://doi.org/10.1186/s12943-017-0673-0), vol. 16, no. 105, (19 pages), 2017.
3. C Liu, B Abu Jamous, E Brattico, and A K Nandi, "Towards tunable consensus clustering for studying functional brain connectivity during affective processing", *International Journal of Neural Systems*, DOI: [10.1142/S0129065716500428](https://doi.org/10.1142/S0129065716500428), vol. 27, no. 2, 1650042 (16 pages), 2017.

Biography

Professor Nandi received the PhD degree in Physics from the University of Cambridge (Trinity College). He held academic positions in several universities, including Oxford, Imperial College London, Strathclyde, and Liverpool as well as Finland Distinguished Professorship. In 2013 he moved to Brunel University London.

In 1983 Professor Nandi co-discovered the three fundamental particles known as W^+ , W^- and Z^0 , providing the evidence for the unification of the electromagnetic and weak forces, for which the Nobel Committee for Physics in 1984 awarded the prize to two of his team leaders for their decisive contributions. His current research interests lie in signal processing and machine learning, with applications to functional magnetic resonance data, gene expression data, communications, and biomedical data. He made fundamental theoretical and algorithmic contributions to many aspects of signal processing and machine learning. He has much expertise in "Big Data". Professor Nandi has authored over 580 technical publications, including 230 journal papers as well as four books, entitled *Automatic Modulation Classification: Principles, Algorithms and Applications* (Wiley, 2015), *Integrative Cluster Analysis in Bioinformatics* (Wiley, 2015), *Blind Estimation Using Higher-Order Statistics* (Springer, 1999), and *Automatic Modulation Recognition of Communications Signals* (Springer, 1996). The h-index of his publications is 70 (Google Scholar) and ERDOS number is 2.

Professor Nandi is a Fellow of the Royal Academy of Engineering and a Fellow of six other institutions including the IEEE. He received many awards, including the IEEE Heinrich Hertz Award in 2012, the Glory of Bengal Award for his outstanding achievements in scientific research in 2010, the Water Arbitration Prize of the Institution of Mechanical Engineers in 1999, and the Mountbatten Premium of the Institution of Electrical Engineers in 1998. Professor Nandi is an IEEE Distinguished Lecturer (EMBS, 2018-2019).