



ENGMEDNEWS

Newsletter of Biomedical Engineering Society of India

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Contents

Message	- 1
Faculty/ Research Focus	- 2
Event	- 3
Book	- 4

Dear Members,

Greetings! Wish you happy new year 2019.

Find here the call for filing Nomination for the various posts of the BMESI Executive Council and also other details.

Thank you very much for supporting the BMESI, continuously.

With Regards

Editor-in-Chief
ENGMEDNEWS

NOMINATION CALL: BMESI EXECUTIVE COUNCIL ELECTION 2019

Esteemed members of the BMESI, Greetings from Manipal!

As per the approval of the present Executive Council of BMESI, I am happy to announce the election to various positions in the Executive Council of BMESI. I shall act as the returning officer. The Executive Council positions and election dates are listed below.

A BMESI member may self-nominate or nominate another member for a position. If you are nominating multiple candidates, please use the nomination form as many times.

Please submit your nominations well before the last date. I look forward to your active participation and support in conducting this election.

IMPORTANT DATES:

15 th December, 2018	: Call for nomination through Google sheet begins
15 th January, 2019	: Call for nomination ends. Nomination committee scrutinizes nomination forms
20 th January, 2019	: Last Date for withdrawal of nominations
28 th January, 2019	: Online election begins
28 th February, 2019	: Election ends
15 th March, 2019	: Announcement of results
1 st April, 2019	: New Executive Council of BMESI takes charge

Best regards,

Dr. Niranjana U C

Returning Officer of the BMESI Executive Council election

NOTE:

For filling the Nomination, Google link has been sent to all the members from the BMESI office. Suppose your email is updated and if you have not received the communication please contact following email: bmesiindia@gmail.com



Dr. Sushil Chandra
Scientist 'G' and Head
Dept. of Biomedical Engineering
INMAS, DRDO, Delhi.

Dr. Sushil Chandra completed his Bachelors (B.E) in Electronics Engineering from Madan Mohan Malaviya Engineering College, Ghorakpur in 1983. He joined Defence Research and Development Organization (DRDO) in July 1986 as Scientist- B in Defence Electronics Applications Laboratory (DEAL), Dehradun, thus beginning his professional career as a scientist for the armed forces. He completed his M.Sc in Electronics Engineering from Aligarh Muslim University in 1988 and obtained a diploma in Management from Indira Gandhi National Open University in 1992. He continued to work in DEAL till he got promoted and joined the Institute of Nuclear Medicine and Allied Sciences (INMAS) as a Scientist 'C'. In 2017, he was awarded Ph.D. in Cognitive Sciences from Netaji Subash Institute of Technology, New Delhi. Currently he is serving as Scientist 'G' and is also the Head of the Department of Biomedical Engineering at INMAS, DRDO.

On the course of his 32 years of service as a scientist in DRDO, he has worked on and gained expertise in the field of applied human cognition, meditation research, Artificial Intelligence, mobility enhancement, augmented/virtual/ mixed reality, performance enhancement, cognitive assessment, cognitive rehabilitation, physiological signal processing, and defence electronics. He is well known for adopting a multidisciplinary approach to research by building multi-institutional teams and aligning their efforts with organizational goals.

His body of work mainly addresses different problems in Biomedical Engineering and its applications in Defence R&D. Initially, he worked extensively on developing biosensors, defence electronics, Tropo communication systems and rehabilitation devices. His responsibilities included design and development of secured and HF communication, adaptive variable data rate model, software based radios, anti-jam data links and secure Satcom systems. He contributed to the development of cholesterol biosensor and rehabilitation devices for patients with spinal cord injury, design and development of obstacle climbing power wheel chair and robotic lower extremity prosthesis.

In the later part of his career, he singularly focused his efforts in the field of Cognitive Science. His interest lies in investigating the use of Applied Cognitive Science and modern technologies of Augmented and virtual reality for performance enhancement. Currently, his team, consisting a plethora of neuroscientists, psychologists and computer scientists are working on evaluating a military personnel's cognitive abilities and its correlation to their on-field performance. The objective is to design cognitive frameworks for performance enhancement that accommodates real world cognitive stressors such as sleep deprivation, workload, and physical exertion and thereby assisting both individual and team cognitive performance in network centric warfare (NCW) settings. He and his team have also been developing cognitive assessment and enhancement modules in Indirect Vision, Virtual reality, augmented reality, Night Vision, 360- degree vision for enhancing task performance.

His vision for the future entails on working towards integration of Humans and Systems, where human factors concepts, which play a detrimental role in determining the performance are imbibed in the design process of the system. He intends to automate complex decision making models by amalgamating cognitive architectures with machine learning models to assist the military personnel to achieve better on-field performance.

Dr. Chandra is the visiting Faculty/Advisor at various Engineering Colleges having departments / labs working exclusively on Biomedical Engineering, Biomedical Technology and Disaster Management. He has regularly been invited to deliver keynote / plenary lectures at various IITs and other Engineering Institutes. He has supervised more than 100 Engineering Graduates, 30 Postgraduate and three Ph.D. students. He has also been pivotal in coordinating a large number of research projects between various professional & educational institutes with INMAS. He has more than 30 publications in peer-reviewed journals. He has also authored a Book titled, "Topics in Electromagnetic Waves".

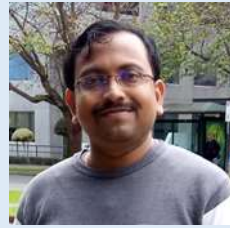
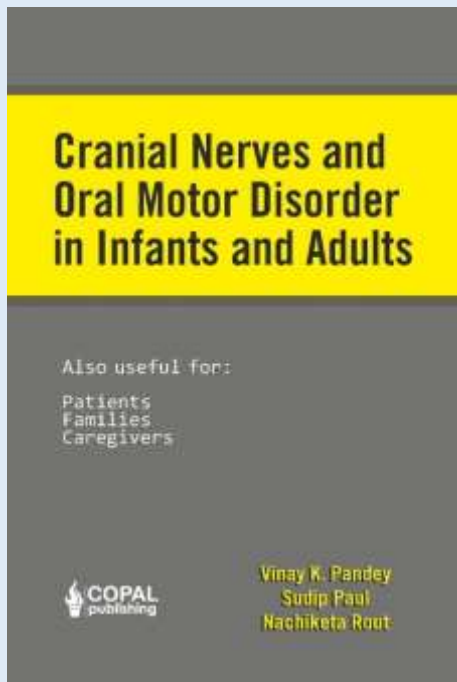
Event

ONE DAY SUMMIT ON TECHNOLOGY TRENDS & ADVANCEMENTS IN HEALTHCARE on 17th NOV 2018, AT CANARA ENGINEERING COLLEGE IN ASSOCIATION WITH BMES INDIA (R)

The event was organized at Canara Engineering College in association with BMES India (R). Dr Annappa, Prof. C.S NITK, one of the organizers, delivered the welcome address and Dr. Niranjan U.C, Director R&T Manipal Dot Net, the program convener gave the opening remarks. Dr. N. Sriram, Professor and Head Medical Electronics RIT, delivered the keynote address on **“Clinical Engineering: A New Dimension in Healthcare”**. Mr. Raghu S - Ph.D. Scholar at Maastricht University, Netherlands- spoke on **“Modelling Machine Learning Algorithms for Classification of Epileptic Seizures in EEG Signals”**. Dr Rajini - VP Corporate affairs - Skanray Technologies spoke on **“Ventilator technology and Emergency Medicine”**.

In Session 2, Mr Rama Reddy, Department of Biotechnology Project Lab, Department of Medical electronics, spoke on **“Medical IoT: challenges and opportunities”**. Mr Sanjay Kimbahune-Senior Scientist TCS, delivered a talk on **“Sensor Driven Monitoring and Assessment of Health Parameters”**. Dr. Shabana Urooj, Head EEE Dept. Gautam Buddha University Noida, addressed the gathering on **“Networking and interdisciplinary hand-shakes for significant growth of medical tech”**. Prof. Nandish, SOIS Manipal (PhD) spoke on Medical Image Processing, Analytics and Visualization - Interoperability Standard in Medical Imaging along with the **“3D Volume rendering using VTK – Demo”**. Dr Sampath Kumar Bhagwath MD Kumuda HealthCare, reminisced his journey into entrepreneurship, in his talk on **“SPINAK - a 3D diagnostic tool for spinal disorders”**. Mr. Sandeep Patil (PhD), Executive Director, Applied Cognition Systems spoke on **“Extended Care in Healthcare Paradigm”**. The talk on **“Need for standards and IEEE Standards in Healthcare”** is delivered by Mr. Munir M Mohammad a senior program officer, IEEE India office Bangalore. Dr. Ganesh Bhat, Principal, Canara college of Engg, appreciated the supports of all the resource persons from Healthcare Industry and Academic /Research Institutes. Ms. Ashwini V R the student Branch Councilor coordinated the event.





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This book provides comprehensive diagnostic and intervention techniques, covering various aspects of Cerebral Palsy (CP) and other associated disorders. This is covering various milestone achieved till date in CP management from historical to the newly developed methods for treatment. A brief introduction of developmental delay causing various neurological processes leading to disability is also described in a systematic manner from root cause to the affected body parts. Explanation and effect of various cranial nerves affecting motor, speech and swallowing are integral part of this book. Various approaches of cranial nerve stimulation from non-pharmacological method with evaluation and assessment of applied methods are given to understand the association between therapy and outcome of these methods. The chapters involved in this book are designed to help children and their parents, medical practitioners/clinicians, health professionals, speech language pathologists, doctors and physicians. This is the first volume of this book and other volumes may come as the new technological development and therapeutic techniques will come in near future.

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The Editorial Team of ENGMED NEWS wishes everyone a very

PROSPEROUS AND HAPPY

NEW YEAR

2019