Welcome to the SPS Seasonal School on Signal Processing and Communication Systems for 5G. The jointly, internationally, organized by IEEE Vizag Bay Section Communications Society & SPS Joint Chapter, Vizag, India, IEEE Long Island Section SPS Chapter, New York, USA, and IEEE Finland SP/CAS Chapter, Finland presents the following Distinguished Lecture:

LDPC based Advanced Error Correction Coding and 5G
Monday September 13th 2021 at 8AM-12PM Pacific

Abstract:

Low-Density Parity-Check (LDPC) codes are now being used in Hard disk drive read channels, Wireless (IEEE 802.11n/ IEEE 802.11ac, IEEE 802.16e WiMax), 10-GB, DVB-S2, Flash SSD and more recently in 5G-NR cellular radio. This lecture covers Low-Density Parity-Check (LDPC) code based Advanced Error Correction Coding Algorithms and Architectures. LDPC codes now have been firmly established as coding techniques for communication and storage channels. This talk gives an overview of the development of low complexity iterative LDPC solutions for communication channels. Complexity is reduced by developing new or modified algorithms and new hardware architectures.

Distinguished Lecturer:

Dr. Kiran Gunnam is an innovative technology leader with vision and passion who effectively connects with individuals and groups. Dr. Gunnam's breakthrough contributions are in the areas of advanced error correction systems, storage class memory systems and computer vision based localization & navigation systems. He has helped drive organizations to become industry leaders through ground-breaking technologies. Dr. Gunnam has 75 issued patents and 100+ patent applications/invention disclosures on algorithms, architectures and real-time low-cost implementations for computing, storage and computer vision systems. He is the lead inventor/sole inventor for 90% of them. Dr. Gunnam's patented work has already been incorporated in more than 2 billion data storage and WiFi chips and is set to continue to be incorporated in more than 500 million chips per year.

Dr. Gunnam is also a key contributor to the precise localization and navigation technology commercialized for autonomous aerial refueling and space docking applications. His recent patent pending inventions on low-complexity simultaneous localization and mapping (SLAM) and 3D convolutional neural network (CNN) for object detection, tracking and classification are being commercialized for LiDAR+camera based perception for autonomous driving and robotic systems.

Dr. Gunnam received his MSEE and PhD in Computer Engineering from Texas A&M University, College Station. He is world-renowned for balance between strong analytical ability and pragmatic insight into implementation of advanced technology. He served as IEEE Distinguished Speaker and Plenary Speaker for 25+ events and international conferences and more than 3000 attendees in the USA, Canada and Asia benefited from his talks.

Logistics:

When: The 13th of September 2021 @ 8am—12pm Pacific
Where: Virtual Meeting

Registration Fees:

Free for all registered participants

Registration: https://attend.ieee.org/sps-ss/

Technical Lecture Coordinators:

Dr. Murthy, Chair of IEEE Vizag Bay Section Chapter (tsnmurthyece.jntuk@ieee.org)
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