Indiana Summit 2019

Organized by Vellore Institute of Technology (VIT) - India
Venue: Indiana University - Purdue University, Indianapolis, USA

October 3-5, 2019

Day 3, 5th October 2019

Day 3: Skype presentation: Session 4: 08.30 Hrs– 10.20Hrs (Indian Time = Local time + 9hrs 30 minutes)

Venue: Hine Hall – Room 132

Session Chair: T.C. Kanish, Vellore Institute of Technology, Vellore, India

S. No	Time (US-Time)	Name of the Presenter	Title	Easy Chair ID
1		Nikhilesh Prabhakar	Analysis of the Complex Air Transport Network: A Global Perspective	255
2		Joxy John	Image Dehazing based on physical model and Gray projection	263
3		N. Saravanan	Design and control of dual-arm Cooperative manipulator using Speech Commands	151
4		M. Vanisri	Object Detection and Identification In Surveillance Images Using Image Processing	162
5		Satish D Mali	A Robust Watermarking Approach for an Authentication of Video Surveillance Applications	293
6		Tatireddy Ravi	Fuzzy Logic Based Controller for Power Quality Enhancement in Grid Integrated Solar Pv System	96
7	08.30– 10.20Hrs	Jagriti Sethi	Label-free detection of beta amyloid from plasma using improved graphene screen-printed electrodes	249
8		Mina Safarzadeh	Electrochemical label free detection of DNA methylation using screen-printed graphene electrodes	248
9		D. Francina Sophiya	Applications of wireless sensor network in agriculture environment	130
10		Abhinav Kumar	Effect of Self-field and Loosening of Stacked Superconducting Tapes on Critical Current of a Single Pancake Coil	170
11		Abhinav Kumar	Density of Kerosene-Aluminium Nanofluid used for Regenerative Cooling Applications of Thrust Chambers	183
12		Shaik Riyaz Ali	Design and modeling of flexible piezo resistive sensors for e-skin applications	40

Day 3: Skype presentation: Session - 5: 08.30 Hrs– 10.20 Hrs (Parallel Session)

Venue: Hine Hall - Room 137

Session Chair: K.Sathish Kumar, Vellore Institute of Technology, Vellore, India

S. No	Time (US-Time)	Name of the Presenter	Title	Easy Chair ID
1		Naleshwarkar Gaurav Sharad	Development of Secure App Based Anti-Theft Handbag	120
2		Ashvini Kulkarni	Statistical analysis of accelerometer, gyroscope with state estimation	158
3		Rama Chaithanya Tangutiri	A Comparative Study of Multi-view Data Visualization on Big data using Different Techniques	267
4		Prathiba A	Authenticated Encryption using Lightweight Cryptographic Primitives for Wireless Sensor Networks	142
5		Vikas Balikai	Time amplifier-based Bang-Bang Phase frequency Detector in 0.18µm CMOS Technology	105
6	08.30– 10.20Hrs	V Hariharasudhan	Routing and Data Transportations in Vehicular Ad-HOC Networks: Survey and challenges	193
7		Pritthish Chattopadhyay	An efficient approach for multiple Face Detection and Recognition	221
8		S. Divya Meena	ADABOOST cascade classifier for Classification and Identification of wild animals using Movidius Neural Compute Stick	152
9		Pydikalva Padmavathi	Performance Analysis of Modified High Gain Boost converter for PV-fed LED Lighting Applications	164
10		Abraham Sudharson Ponraj	Genetic Algorithm for Effective Fall Detection with Wrist Wearable Device	178
11		T.D.K Upeksha Chathurai	Rehabilitation robotics for Arthritis	INP593
12		Deepak Raj. D.S	Continuous Integration, security and deployment pipeline automation for application software system	INP598

Day 3: Skype presentation: Session 6: 08.30 Hrs– 10.20Hrs (Indian Time = Local time + 9hrs 30 minutes)

Venue: Hine Hall - Room 139

Session Chair: M. A. Jayasri, Vellore Institute of Technology, Vellore, India

S. No	Time (US-Time)	Name of the Presenter	Title	Easy Chair ID
1		Sam Navin	A New Land Use Land Cover Change Detection approach using K-means clustering and Maximum Likelihood Classification: The case study of Javadi Hills, Tiruvannamalai, Tamil Nadu, India	74
2		P. Punithavathi	Gaussian Random Projection based Linear Discriminant Analysis for Cancelable Biometric Recognition	250
3	08.30– 10.20Hrs	Sarojini S	Detection For Domain Generation Algorithm (DGA) Based Botnet Domain Name With Deep Learning Methods	176
4		S. Parvathi	DVFS based power mitigation in regular mesh NoC	98
5		Malathi V.	Classification of Diseases in Paddy using Deep Convolution Neural Network	207

6		Swapna P S	A Novel Genetic Resource Allocation Algorithm for Symmetrical Services in OFDMA Systems	63
7		Nithin M	Design of Beyond Millimeter Wave Voltage Controlled Oscillator in 22nm Bulk CMOS technology	84
8		Sri Vidya Seella	Design and Analysis of High Step Up Dc-Dc Converter With High Gain Cell for PV System	107
9		Swapnil Agrahari	Micro-algal based biofuel production using low-cost nano-biocatalysts	261
10		Muruga Lal Jeyan J V	Computational and Experimental Study on Variable Area Ducts for Various Flow Conditions - A Comparative Study	240
11		Reena Tandon	Bianchi Type V Universe and Bulk Viscous Models with Time Dependent Gravitational Constant and Cosmological Constant in General Relativity	256

10.20 Hrs - 10.30 Hrs Tea Break (10 minutes), Venue: Lobby-Hine Hall Auditorium

Day 3: 10.30 Hrs to 11.10 Hrs - Keynote Lectures (40 minutes)

Venue: Hine Hall - Room 132 Chair: Anand A. Samuel, Vellore Institute of Technology, India	Venue: Hine Hall - Room 137 Chair: V. S. Kanchana Baskaran, Vellore Institute of Technology, Chennai, India	Venue: Hine Hall - Room 139 Chair: Ramesh Babu P, Vellore Institute of Technology, Vellore, India
10.30 Hrs - 11.10 Hrs: Keynote -16 Murali Krishnamurthi, Northern Illinois University, USA Keynote on – Promoting Integrity in Interdisciplinary Research	10.30 Hrs - 11.10 Hrs: Keynote -17 Thomas Webstar, Northeastern University, USA Keynote on – Goodbye Hospitals and Hello Implantable Sensors	10.30 Hrs - 11.10 Hrs: Keynote -18 Venkataramanan Balakrishnan, Case Western Reserve University, USA Keynote on – Realigning core activities in academic institutions in support of transdisciplinary research

Day 3: 11.10Hrs to 12.00 Hrs Symposium (50 minutes)

Venue: Hine Hall - Room 132	Venue: Hine Hall - Room 137	Venue: Hine Hall - Room 139	Venue: Hine Hall Auditorium
Symposium 13	Symposium 14	Symposium 15	Symposium 16
11.10 Hrs. to 12.00 Hrs Theme: Regenerative Engineering Chair: Lakshmi S. Nair, Connecticut Convergence Institute, University of Connecticut Health, USA	11.10 Hrs. to 12.00 Hrs Theme: Entrepreneurship and Sustainable Social Impact Chair: VG. Sridhar, Vellore Institute of Technology, Chennai, India	11.10 Hrs. to 12.00 Hrs Theme: Intelligent Wireless Communication Networks Chair: V. Berlin Hency, Vellore Institute of Technology, Chennai, India	11.10 Hrs. to 12.00 Hrs Theme - Computer Vision and Image Processing Applications Chair: L. Agilandeeswari, Vellore Institute of Technology, Vellore, India

Day 3: Symposium – 13: Venue: Hine Hall - Room 132, 11.10 Hrs. – 12.00 Hrs (50 minutes)

Theme: Regenerative Engineering
Chair: Lakshmi S. Nair, Connecticut Convergence Institute, University of Connecticut Health, USA
Co-Chair: Geetha Manivasagam, Vellore Institute of Technology, Vellore, India

S. No	Time	Name of the Presenter	Title	Easy Chair ID	Type of presentation
1	11.10 - 11.25	Mathew T. Mathew	New Directions in safer hip implants: Linking Bio-Engineering and Regenerative medicine	INP521	Invited
2	11.25 – 11.40	Meng Deng	Cell-instructive Biomaterials for Musculoskeletal Soft Tissue Regenerative Engineering	231	Invited
3	11.40 - 11.55	Ketul C. Popat	Micro/Nano-engineering of material surfaces for tissue engineering and regenerative medicine	INP551	Invited
4	11.55 – 12.10	Sunil Krishnan	Gold Nanoparticles as Radiation Sensitizers - Where Do We Go from Here?	INP610	Invited

Day 3: Symposium – 14: Venue: Hine Hall - Room 137, 11 .10 Hrs. – 12.25 Hrs (75 minutes)

Theme: Entrepreneurship and Sustainable Social Impact

Chair: V. G. Sridhar, Vellore Institute of Technology, Chennai, India
Co-Chair: Sathish Rajamani, Four Clover Technology Solution, USA

S. No	Time	Name of the Presenter	Title	Easy Chair ID	Type of presentation
1	11.10 - 11.35	Marcos Hashimoto	Exaptation in Management: Beyond Technological Innovations	INP603	Invited
2	11.35 - 11.45	V. G. Sridhar	Students Contribution to the Society through Disruptive Innovation and Social Enterprise	INP606	Regular
3	11.45 – 11.55	Sathish Rajamani	Four Clover Technology Solution	INP602	Regular
4	11.55 - 12.05	G N Sumathi	Knowledge Management amidst the Information Abundance in Medical Field	INP601	Regular
5	12.05 – 12.15	Ravi Yanamandala	Entrepreneurship	INP600	Regular
6	12.15 – 12.25	Aondoyla Kuhe	Assessment of energy consumption in parboiled rice milling Industry – a case study	3	Regular
7	12.25 – 12.35	Prakash Sadasivam	Clover Technology Solutions	INP	Regular

Day 3: Symposium – 15: Venue: Hine Hall - Room 139, 11.10 Hrs. – 12.15 Hrs (65 minutes)

Theme: Intelligent Wireless Communication Networks

Chair: V. Berlin Hency, Vellore Institute of Technology, Chennai, India

S. No	Time	Name of the Presenter	Title	Easy Chair ID	Type of presentation
1	11.10 - 11.35	Sanjay Kher	An overview of distributed fiber optic sensors for industrial applications	INP543	Invited
2	11.35 – 11.45	Senthil Athiban. M	FPGA Implementation of Throughput Enhanced NOC Architecture	83	Regular
3	11.45 - 11.55	Ishan Yash	IoV Hybrid Architecture – Inter-Vehicular Communication and Data Transmission	103	Regular
4	11.55 – 12.05	Rubia Ramesh Kumar	IoT Based Condition Monitoring and Automatic Control of Rotating Machines	79	Regular
5	12.05 - 12.15	V. Berlin Hency	Improved Throughput Performance Of Qos-Based Scheduling Scheme In 802.11 WLANs	58	Regular

Day 3: Symposium – 16: Venue: Hine Hall Auditorium, 11.10 Hrs. – 12.15 Hrs (65 minutes)

Theme - Computer Vision and Image Processing Applications

Chair: L. Agilandeeswari, Vellore Institute of Technology, Vellore, India

S. No	Time	Name of the Presenter	Title	Easy Chair ID	Type of presentation
1	11.10 - 11.20	C Vanmathi	A Segmentation approach of fused Multispectral and Panchromatic Images using Quick Shift Algorithm and Brovey Transform	17	Regular
2	11.20 - 11.30	Mayank Srivastava	Regularized Deblurring Using Directional Prior with Sparse Representation	215	Regular
3	11.30 – 11.40	Namratha Gonuguntla	Data Mining Technology and Techniques in Medical Science Field	70	Regular
4	11.40 – 12.05	Bokoro, Pitshou	On the future of Surge Protection in the fourth Industrial revolution (4IR) era	INP611	Invited
5	12.05 - 12.15	Sasikumar Mohan	Impact behavior of hybrid Jute/Epoxi composites at different conditions	31	Regular

12.15 Hrs - 13.00Hrs Lunch, Venue: Lobby - Hine Hall Auditorium

Day 3: 13.00 Hrs to 13.40 Hrs - Keynote Lectures (40 minutes)

Venue: Hine Hall - Room 132 Chair: V. Pragasam, Vellore Institute of Technology, India	Venue: Hine Hall - Room 137 Chair: A. Mary Saral, Vellore Institute of Technology, India	Venue: Hine Hall - Room 139 Chair: Amit Baburao Mahindrakar, Vellore Institute of Technology, India
13.00 Hrs to 13.40 Hrs: Keynote -19 Yusuf Khan, University of Connecticut, USA Keynote on – Regenerative Engineering-based Strategies for Bone Repair	13.00 Hrs to 13.40 Hrs: Keynote -20 Hiroyasu Yamaguchi, Osaka University, Japan Keynote on – Functionalization of Supramolecular Complexes by Hybridization of Transition Metal Complexes with Biomolecules	13.00 Hrs to 13.40 Hrs : Keynote -21 Ramana Pidaparti, University of Georgia, Athens, GA, USA Keynote on – Airway Lung Inflammation and Aging through Computational Informatics

Day 3: 13.40Hrs to 14.40 Hrs Symposium (60 minutes)

Venue: Hine Hall - Room 132	Venue: Hine Hall - Room 137	Venue: Hine Hall - Room 139	Venue: Hine Hall - Auditorium
Symposium 17	Symposium 18	Symposium 19	Symposium 20
13.40Hrs to 14.50 Hrs Theme: Artificial Intelligence (AI) and Cloud Computing Chair: R Sujatha, Vellore Institute of Technology, Chennai, India	13.40Hrs to 14.50 Hrs Theme: Wireless Networking and Internet of Things Chair: P. Vetrivelan, Vellore Institute of Technology, Chennai, India	13.40Hrs to 14.50 Hrs Theme: Low Power VLSI Design for Reliable Systems Chair: V. S. Kanchana Baskaran, Vellore Institute of Technology, Chennai, India	13.40Hrs to 14.50 Hrs Theme: Computational Science and Engineering Chair: R.Thirumalaivasan, Vellore Institute of Technology, India

Day 3: Symposium – 17: Venue: Hine Hall - Room 132, 13.40Hrs to 14.50 Hrs (70 minutes)

Theme: Artificial Intelligence (AI) and Cloud Computing

Chair: R Sujatha, Vellore Institute of Technology, Chennai, India

Co-Chair: Andre Keller, University of Paris, France

S. No	Time	Name of the Presenter	Title	Easy Chair ID	Type of presentation
1	13.40-14.05	Andre Keller	Immunity-Based Neural Networks to Machine Learning for Complex Prediction Problems	INP583	Invited
2	14.05-14.15	Plasin Francis Dias	Entropy Based Target Identification in Synthetic Aperture Radar Polarimetry	67	Regular
3	14.15-14.25	Alaida H M and R. Sakthivel	Efficient VLSI Architecture for Odor Recognition with A Spiking Neural Network	28	Regular
4	14.25-14.35	Garvit Gupta	Smart Shopping System Using Lightweight IoT Protocol	99	Regular
5	14.35-14.45	Weina Fu, Shuai Liu and Chunxiao Xu	Big Tourism Data for customer demand prediction of Hotel in Scenic Spot	246	Regular

Day 3: Symposium – 18: Venue: Hine Hall - Room 137, 13.40Hrs to 14.50 Hrs (70 minutes)

Theme: Wireless Networking and Internet of Things
Chair: P. Vetrivelan, Vellore Institute of Technology, Chennai, India

S. No	Time	Name of the Presenter	Title	Easy Chair ID	Type of presentation
1	13.40 – 13.50	Parmar Harshdeepsinh	Machine Vision Based Autonomous Green AgriBot	116	Regular
2	13.50 - 14.00	Bhuvana Suganthi D	Improved Caching and Trust based Reliable Mobile Communication in Distributed Environment	150	Regular
3	14.00 - 14.10	Masooma Aliraza Suleman	Soft computing Approach for Fault Detection in Power Transmission Lines	264	Regular
4	14.10 - 14.20	Karthy Thiagarajan	Optimal Solution Generation of Single Objective Fuzzy Travelling Salesman Problem Using Genetic Algorithm Through Modified Fuzzy	15	Regular

S. No	Time	Name of the Presenter	Title	Easy Chair ID	Type of presentation
			Transitive Closure		
5	14.20 – 14.30	B.J. Balamurugan	Zumkeller Labeling of Complete Graphs	189	Regular
6	14.30 - 14.40	Pranav Vaidya	An Energy Efficient Register File Architecture for VLIW Streaming Processors on FPGA	35	Regular
7	14.40 –14.50	Linknath Surya Balasubramanian	Microblaze-Based Coprocessor for Data Stream Management System	42	Regular

Day 3: Symposium – 19: Venue: Hine Hall - Room 139, 13.40Hrs to 14.50 Hrs (70 minutes)

Theme: Low Power VLSI Design for Reliable Systems

Chair: V. S. Kanchana Baskaran, Vellore Institute of Technology, Chennai, India

S. No	Time	Name of the Presenter	Title	Easy Chair ID	Type of presentation
1	13.40 – 13.50	P.Augusta Sophy Beulet	Low Power Implementation of Ternary Content Addressable Memory (TCAM)	160	Regular
2	13.50 – 14.00	Sunkara Pavani	Heuristic Prediction of Crop Yield Using Machine Learning Technique	155	Regular
3	14.00 – 14.10	Kannan Muniandi & Sridevi	Lung Segmentation and iterative weighted averaging smoothing technique on chest CT images	56	Regular
4	14.10 – 14.20	Farhan Rahman	Enhancement of A5/1 Stream Cipher with non-linear function using MOSFET	129	Regular
5	14.20 – 14.30	Kanchana Bhaaskaran V S	Design of Energy Efficient Carry Lookhead Adder using novel CSIPGL Adibatic Logic Circuit	156	Regular
6	14.30 -.14.40	Latha R	Patient history-driven framework for healthcare analytics	143	Regular
7	14.40 – 14.50	Shilpi Agarwal	Role of the conserved systems Cysteine -139 on the thermal stability and cell proliferation activity of the human fibroblast growth factor (hFGF1)	INP588	Regular

Day 3: Symposium – 20: Venue: Hine Hall - Auditorium, 13.40Hrs to 14.50 Hrs (70 minutes)

Theme: Computational Science and Engineering

Chair: R.Thirumalaivasan, Vellore Institute of Technology, India

S. No	Time	Name of the Presenter	Title	Easy Chair ID	Type of presentation
1	13.40 – 13.50	Carmela Padilla, Lingxi Li, Brian King and Yaobin Chen	Modeling and Simulation of Lane Keeping Support Systems Using Hybrid Petri Nets	108	Regular
2	13.50 – 14.00	Niraj Dahal and Steven Rovnyak	Method of Missing Data Handling in One Shot Response based Power System Control	127	Regular
3	14.00 – 14.10	Sharmishtha Shyamal and David S Durica	Transcriptomic analysis of crustacean molting gland (Y-organ) regulation via the mTOR signaling pathway	254	Regular
4	14.10 – 14.20	Sathish Kumar. K	Detection of tumor objects from MRI brain images using thresholding segmentation	153	Regular
5	14.20 – 14.30	John Lee, Youssef Souryal, Dongsoo Kim, Kyubyung Kang And Dan Koo	Building a Private LoRaWAN Platform	111	Regular
6	14.30 - 14.40	Keyur Mehta, Anushka Patil, Snehal Vyawahare And Rajeev Raje	A System to Compute the Safest Path for Commuters	147	Regular
7	14.40 – 14.50	Narayanan Kamala	Gain Scheduled Multivariable control of a Continuous Stirred Tank Reactor	113	Regular

Venue: Hine Hall Auditorium Chair: Jacob Raglend I, Vellore Institute of Technology, Vellore, India	Venue: Hine Hall – Room 132 Chair : Aswani kumar Cherukuri , Vellore Institute of Technology, Vellore, India
14.50 Hrs to 15.30 Hrs: Keynote -22 Xie Jian, Indiana University-Purdue University Indianapolis, USA Keynote on – A pathway for solving the global warming: use of clean and renewable energy	14.50 Hrs to 15.30 Hrs: Keynote -23 Mohamed EI-Sharkawy, Indiana University-Purdue University Indianapolis, USA Keynote on - Internet of Things Collaboratory at IUPUI

15:30 Hrs to 16:00 Hrs	**Valedictory:** Venue: Hine Hall Auditorium

16: 00 Hrs – High Tea, Venue : Lobby-Hine Hall Auditorium

End of Indiana Summit 2019