**Dr. Satyanand Singh**

**Assistant Professor and HOS of School of Electrical & Electronics Engineering,**

**Fiji National University, Fiji**

**Area of Specialization: Digital Signal Processing**

**Web page to current employment:** [**https://www.fnu.ac.fj/about-fnu/campus-info-maps/directory-all/?profile=916**](https://www.fnu.ac.fj/about-fnu/campus-info-maps/directory-all/?profile=916)

**Web page to Professional network:**

 **Google Scholar:**

 **Linkedin:** **https://www.linkedin.com/in/dr-satyanand-singh-83437014/**

**ResearchGate:** [Satya Nand (researchgate.net)](https://www.researchgate.net/profile/Satya-Nand)

ORCID- [Satyanand Singh (0000-0002-7707-031X) (orcid.org)](https://orcid.org/my-orcid?orcid=0000-0002-7707-031X)

**Achievement:**

* Recipient of Full scholarship (All India ranking of 1164) for my Master of Engineering (M.E) and Ph.D. program from India’s reputed universities.
* Best Paper Award

**Academic leadership as a senior university service**

* Member of College Research Committee (CEST).
* Chair person of School Research Committee (SEEE).
* Member of School Exam Board (SEEE).
* CEST Capstone Design Project Coordinator.

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| 1. **Patent**
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| **Number** | **Publication Date** | **Applicants** | **Title of Invention** | **Awarding Authority** |
| 2020102249 | 29-10-2020 | 1.Nachiyappan S**2. Satyanand Singh**3. Suresh K, Sreerama 4. Murthy K5. Vengatesan K6.Pragya Singh7.Bhagyalakshmi L8. Sanjay Kumar Suman9.Sundar Rajan M 10.Ganesh E. N | WATER CONSUMPTION CONTROL SYSTEM FOR IRRIGATION BASED ON IoT | Australian Patent Office(http://pericles.ipaustralia.gov.au/ols/auspat/applicationDetails.do?applicationNo=2020102249) |
| 202041026203 | 10-07-2020Part 1 ISSUE NO.28/2020 | 1.M.Kishore Abhishek2.R. Partheepan**3.Satyanand Singh**4.L. Bhagyalakshmi 5.Asadi Srinivasulu 6.S.N. Kumar | AMPHIBIOUS ROBOT FOR PLASTIC REMOVAL FROM WATER BODIES | Government of India(https://ipindiaservices.gov.in/publicsearch) |
| 202041026034 | 03-07-2020Part 1ISSUE NO. 27/2020 | 1.L. Bhagyalakshmi2.Sanjay Kumar Suman3.S. Mohanalakshmi**4. Satyanand Singh**5. Mrs. S. Gnanapriya6.D. Gururaj | DESIGN FOR AUTOMATIC SANITIZER SPRAY MACHINE FOR CURRENCY | Government of India(https://ipindiaservices.gov.in/publicsearch) |
| 202041022955 | 12-06-2020Part 1ISSUE NO. 24/2020 | 1.Dr. Sanjay Kumar Suman2.Dr. L. Bhagyalakshmi**3.Dr. Satyanand Singh**4.Dr. S. Mohanalakshmi5. Mrs. S. Gnanapriya6.D. Gururaj | A NOVEL APPROACH FOR MAINTENANCE AND PREDICTION OF HEALTH OF PERSONS USING MACHINE LEARNING | Government of India(https://ipindiaservices.gov.in/publicsearch) |

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| 1. **Research Publications in Peer reviewed journals**
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| 1. S. Singh, “Environmental Energy Harvesting Techniques to Power Standalone IoT-Equipped Sensor and Its Application in 5G Communication,” Emerging Science Journal, Vol. 4, Special Issue "IoT, IoV, and Blockchain", (2020, 2021), pp. 116-126, 2021.
2. S. Singh, “Minimal Redundancy Linear Array and Uniform Linear Arrays Beamforming Applications in 5G Smart Devices,” Emerging Science Journal, Vol. 4, Special Issue "IoT, IoV, and Blockchain", (2020, 2021), pp. 70-84,2021.
3. **S. Singh**, P. Singh, “Kernel Based Speaker Specific Feature Extraction and Its Applications in iTaukei Cross Language Speaker Recognition,” **Telkomnika , TELKOMNIK, Vol. 18, No. 5, pp. 2488-2497, 2020.**
4. L. Bhagyalakshmi, Sanjay Kumar Suman,, S. Mohanalakshmi**, Satyanand Singh**, “IMPROVING SPECTRAL EFFICIENCY AND COVERAGE CAPACITY OF 5G NETWORKS” Advances in Mathematics: Scientific Journal, Vol. 9, No. 6, pp. 3387–3397, 2020.
5. **S. Singh**, P. Singh, “Speaker Specific Feature based Clustering and Its Applications in Language Independent Forensic Speaker Recognition,” **International Journal of Electrical and Computer Engineering, Vol 10, No 4, pp. 3508-3518, 2020.**
6. **S. Singh,** P. Singh, “High level speaker specific features modeling in automatic speaker recognition system,” **International Journal of Electrical and Computer Engineering, Vol.10, No, 2, pp. 1859-1867, 2020.**
7. **S.Singh**. “Bayesian i-vector Modeling and Its Application in Automatic Speaker Recognition Systems” **International Journal of Electrical and Computer Engineering, Vol, 9, No. 5, pp. 1800-1807, 2019.**
8. Janki , Mansour. H. Assaf; Utkal Mehta and **S. Singh**, “Verification of Data Sparsification Technique in Smart Grid Communication” **WSEAS TRANSACTIONS on COMMUNICATIONS, Vol. 18, pp. 57-65, 2019.**
9. **S.Singh.** “High Level Speaker Specific Features as an Efficiency Enhancing Parameters in Speaker Recognition System” **International Journal of Electrical and Computer Engineering, Vol, 9, No. 4, pp. 2443-2450, 2019.**
10. S.Singh. “The Role of Speech Technology in Biometrics, Forensics and Man-Machine Interface” **International Journal of Electrical and Computer Engineering, Vol. 9, No. 1, pp.281-288, 2019.**
11. **S.Singh**, “Speaker Recognition by Gaussian Filter Based Feature Extraction and Proposed Fuzzy Vector Quantization Modeling Technique” **International Journal of Applied Engineering Research ISSN: 0973-4562.**
12. **S.Singh**, “Evaluation of Sparsification algorithm and Its Application in Speaker Recognition System” **International Journal of Applied Engineering Research, Vol. 13, No. 17, pp. 13015-13021, 2018.**
13. S.Singh, “Forensic and Automatic Speaker Recognition System” **International Journal of Electrical and Computer Engineering, Vol. 8, No. 5, pp. 2804-2811, 2018.**
14. **S.Singh,** “Support Vector Machine Based Approaches For Real Time Automatic Speaker Recognition System” **International Journal of Applied Engineering Research ISSN: 0973-4562 Volume 13, Number 10, pp. 8561-8567, 2018.**
15. **S.Singh**, Assaf Mansour H, Abhay Kumar and Nitin Agrawal “Speaker Specific Phone Sequence and Support Vector Machines Telephonic Based Speaker Recognition System”  **International Journal of Applied Engineering Research ISSN 0973-4562 Volume 12, Number 19, pp. 8026-8033, 2017.**
16. **S.Singh**, Assaf Mansour H, Abhay Kumar and Nitin Agrawal, “Speaker Recognition System for Limited Speech Data Using High-Level Speaker Specific Features and Support Vector Machines,” **International Journal of Applied Engineering Research (IJAER), ISSN: 0973-4562, Vol. 12, Number 19, pp. 8026-8033, 2017.**
17. **S.Singh** and Mansour H. Assaf “A Perfect Balance of Sparsity and Acoustic hole in Speech Signal and Its Application in Speaker Recognition System” **Middle-East Journal of Scientific Research.** **ISSN 1990-9233, Vol. 24, No.11, pp. 3527-3541, 2016.**
18. **S. Singh**, Abhay Kumar, David Raju Kolluri, “Efficient Modelling Technique based Speaker Recognition under Limited Speech Data”, **International Journal of Image, Graphics and Signal Processing(IJIGSP), ISSN: 2074-9074, Vol.8, No.11, pp.41-48, 2016.**
19. **S.Singh**, Mansour. H. Assaf and Abhay Kumar, “A Novel Algorithm of Sparse Representations for Speech Compression/Enhancement and Its Application in Speaker Recognition System,” **International Journal of Computational and Applied Mathematics. ISSN 1819-4966, Volume 11, Number 1 , pp. 89-104, 2016.**
20. **S.Singh** and Ajeet Singh “Accuracy Comparison using Different Modeling Techniques under Limited Speech Data of Speaker Recognition Systems” **Global Journal of Science Frontier Research: F Mathematics and Decision Sciences**, ISSN: 0975-5896, Volume 16, Issue 2, Version 1.0, pp.1-17, 2016.
21. **S.Singh** and Dr. E.G. Rajan “Application Of Different Filters In Mel Frequency Cepstral Coefficients Feature Extraction And Fuzzy Vector Quantization Approach In Speaker Recognition” **International Journal of Engineering Research & Technology, Vol. 2 Issue 6, June – 2013.**
22. **S.Singh** and Dr. E.G. Rajan “MFCC VQ Based Speaker Recognition and Its Accuracy Affecting Factors” **International Journal of Computer Application.Vol 21, No 6, pp 1-6, May-2011.**
23. **S.Singh** and Dr. E.G. Rajan, “Vector Quantization Approach for Speaker Recognition Using MFCC and Inverted MFCC” **International Journal of Computer Application, Vol 17, No 1, pp 1-7, March-2011.**
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| 1. **Research paper communicated for publication**
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| 1. **S. Singh,** SajaiVir Singh, Dinesh Yadav, Prof. Ghanshyam Singh, “Discrete Interferences Optimum Beamformer in Correlated Signal and Interfering Noise,” **IET Microwaves, Antennas & Propagation, ISSN: 1751-8725.**
2. Olanrewaju M. Oyewola, Tchilabalo E. Patchali, Olusegun O. Ajide, **S. Singh**, Olaniran J. Matthew, “A comparative Study of Global Solar Radiation Predictions in Fiji Islands Based on Empirical Models” **Engineering Science and Technology, an International Journal, ISSN: 2215-0986.**
3. **S. Singh**, Olanrewaju M. Oyewola, “Theoretical Framework with Minimal Redundancy Linear Array and Uniform Linear Arrays in Future 5G Smart Devices for Machine-to-Machine Talk” **Engineering Science and Technology, an International Journal, ISSN: 2215-0986.**
4. **S. Singh** “In the year 2030 Integrated data exchange efficient sources of environmental energy harvesting for IoT-equipped M2M talk sensor in a smart city scenario” **International Journal of Technology (IJTech) ISSN: 2086-9614.**
5. **S. Singh** “Next to 5G Ultra-Fast Mobile Communication Networks for the Smart Devices-Based Machine to Machine Talk” **International Journal of Technology (IJTech) ISSN: 2086-9614.**
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| 1. **Research paper presented in international conferences**
 |
| 1. S.Singh, Mansour H. Assaf, Sunil R.Das, Emil M. Petriu, and Voicu Groza, “Short Duration Voice Data Speaker Recognition System Using Novel Fuzzy Vector Quantization Algorithms”, 2016 IEEE International Instrumentation and Measurement Technology Conference, May 23-26, 2016, Taipei, Taiwan.
2. Prashanthi, S. Singh, Dr. E.G. Rajan and Pat Krishanan “Sparsification of Voice Data Using Discrete Rajan Transform and its Applications in Speaker Recognition” IEEE International Conference on Systems, Man, and CyberneticsOctober 5-8, 2014, San Diego, CA, USA, ISSN: 08843627, 8843627.
3. S.Singh and S. Tripathy “Performance of Adaptive Multiuser Detection in DS/CDMA Receiver” The Libyan Arab International Conferences on Electrical and Electronics Engineering 2009.
4. S.Singh, S. Tripathy and Dr. E.G Rajan “A Comparative Study of Speaker Identification Methods Based on Feature Extraction by MFCC and LPCC, Modeling by VQ and GMM” The Libyan Arab International Conferences on Electrical and Electronics Engineering 2009.
5. Participated 3rd National Conference of Telemedicine Society of India 12th IsfTeH International Conference, Chennai, Nov, 2008.
6. S.Singh,Dr. E.G Rajan, P.Sivakumar, M.Bhoopathy and V.Subha “ Text Dependent Speaker Recognition System in Presence Monitoring ” International conference Systemic, Cybernatics and Informatics ICSCI -2008 under the Aegis of Pentagram Research Centre Hyderabad, pp 550-554.
7. S.Singh, Abhay Kumar and M.Bhoopathy “ Design of Adaptive Speaker Identification System using LPC Coefficients” International conference Systemic, Cybernatics and Informatics ICSCI -2007 under the Aegis of Pentagram Research Centre Hyderabad, pp 781-785.
8. S.Singh “A Vector Quantization approach Using MFCC for Speaker Recognition” International conference Systemic, Cybernetics and Informatics ICSCI -2007 under the Aegis of Pentagram Research Centre Hyderabad, pp 786-790.
9. S.Singh, K. Saurabh and S. Suman “Space-Time Transmit Diversity in Spatially Correlated Frequency- Selecting Fading Channels in Mobile Communication” International conference Systemic, Cybernetics and Informatics ICSCI -2006 under the Aegis of Pentagram Research Centre Hyderabad on January, pp 950-954.
10. S.Singh (2005) “ Adaptive DC/CDMA Receiver in Mobile Communication” MATLAB SIMULINK Tech Expo 2005 organized by Crenes Software International Limited & The MathWork Inc. on the 29th September 2005 at Bangalore.
 |
| 1. **Research paper presented in national conferences**
 |
| 1. S.Ghosh, **S.Singh** **“Dual-Band Patch Antenna for Mobile Satellite System**” Vol 18th National Convention of Mechatronics Engineering 09-10 Nov 2002 pp 391- 400.
2. **S. Singh** “Adaptive DS/CDMA Receiver for Multiuser Detection in Mobile Communication” Recent Advances in Power, Signal Processing and Control, 16-17 November 2004, pp 303- 2004.
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| 1. **SHORT TERM TRAINING**
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| 1. Virtual University for Small States of the Commonwealth (VUSSC) “**Blue Economy Sustainability, Innovation and our Ocean”** from June 8 – July 12, 2020, Hosted by the James Michel Blue Economy Research Institute, University of Seychelles and the Commonwealth Learning.
2. Blended Learning Practice “**Jointly by the Commonwealth of Learning and Athabasca University”,** Canada from 19 April to 16 May 2020
3. Flip the Switch: In-person connections in a virtual world by Danke Cline-Thomas, Olivia Dassler, Jen Reed, Andy Wiggans, Jul 6, 2020.
4. Designing Novel Antenna Topology and Optimizing Geometry with ANSYS HFSS by Michael Griesi, Lead Electromagnetics Engineer, PADT, Inc, Jul 6, 2020.
5. Any Questions? How Listening Sparks Innovation Leon Segal, Ph.D. & Scott Underwood, Jul 6, 2020.
6. **UNESCO’s Ethics Teachers Training Course** (ETTC) hosted by Fiji National University on 14-18 October 2019
7. **PhD Supervision Skill Training** “Skill Training Programme for Doctoral Thesis Supervision at Fiji National University” 25th -27th June, 2018 at the National Training & Productive Centre (NTPC), Nabua.
8. Participated FACULTY DEVELOPMENT PROGRAM ON EMBEDDED SYSTEMS DESIGN sponsored by AICTE, New Delhi from 31-05-10 to 12-06-10.
9. Attended CHANGE MANAGEMNT workshop organized by SATYAM COMPUTERS 06-04-09 to 11-04-09.
10. Participated in short term course on “SUPPLY CHAIN MANAGEMENT” conducted by SATYAM GLOBEL LIFENET 04-06-07 to 09-06-07.
11. Participated in the short term course on “EFFECTIVE CLASS ROOM MANAGEMENT FOR ENGINEERING COLLEGE TEACHERS” conducted in Easwari Engineering College during 9th & 10th January 2004.
12. Participated    in    the    short    course    QUALITY   IMPROVEMENT   PROGRAMME     on “INSTRUCTIONAL DESIGN AND DELIVERY” conducted by Technical Teachers’ Training Institute, Govt. of India, MHRD, at Easwari Engineering College during November 3 – 7, 2003.
13. Course on FPGA Design, under Xilinx University programme, Conducted by Indian Institute of Technology (IIT) – Bombay, India. Duration: 30th September 2003 to 1st October 2003.
14. Undergone training in Digital Signal Processing (DSP) on ADI – 219x Processor in Visual DSP environment at Analog Device LAB, Dept. of Electrical Science, Indian Institute of Technology (IIT) – Madras, India. Duration: 16th January 2002 to 23rd March 2002.
15. ISTE-sponsored winter school STTP on Architecture, Programming and Application Of Digital Signal Processors organized by dept of ECE, Regional Engineering College, Tiruchy (RECT). Duration: 2nd December 2002 to 13th December 2002.
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| 1. **LECTURE DELIVERED**
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| 1. Delivered a webinar as a resource person for 250 participants “**Role of Industrial Revolution 4.0 in Electronics Service Industries”** organized by Raja Balwant Singh Engineering Technical Campus, Bichpuri, Agra, India on 28th June, 2020.
2. Delivered a webinar “**The role of Industrial revolution 4 in service industries**” in a Faculty Development Program organized by BHARAT Institute of Engineering and Technology (Approved by AICTE, affiliated to JNTUH, NBA Accredited, NAC Accredited) Mangalpally, Ibrahimpatnam, Hyderabad, Telangana – 501510, Date: 22nd June 2020 to 26th June 2020.
3. Delivered a webinar **"Capstone Design Project Assessment and its Learning Outcomes”** organized by Rohini College of Engineering Technology, Palkulam Kanyakumari, Tamilnadu on 08th June 2020.
4. Delivered a IEEE webinar as a resource person for 165 participants on **"Capstone Design Project Assessment and its Learning Outcomes”** 06th June 2020.
5. On **“SIMULINK and Its Applications in Signal Processing”** from March 12-14, 2011, Faculty Development Program Organized by Institute of Technology, Ethiopia.
6. On **“Fundamental of MATLAB Toolboxes & Simulink”** from July 01-05, 2009, Faculty Development Program Organized by CMR Engineering College Hyderabad (A.P) – India, sponsored by AICTE, New Delhi.
7. On **“MATLAB & ITS APPLICATIONS”** from August 01-04, 2008, Faculty Development Program, Organized by Aurora’s Scientific Technological and Research Academy ,Hyderabad (A.P) – India, Sponsored by AICTE, New Delhi.
8. On **“Introduction to MATLAB”** from July -01-03, 2008, B.Tech. Student of Third Year ECE Mala Reddy Engineering College, Hyderabad (A.P) – India.
 |
|  **10.REVIEWER OF INTERNATIONAL JOURNALS** |
| 1. International Journal of Computer Application (IJCA), New York, USA.
2. Australian Journal of Electrical & Electronics Engineering (AJEEE), Australia.
3. IET Image Processing, United Kingdom.
4. International Journal of Image and Graphic (IJIG), World Scientific Publication, New Jersey.
5. International Journal of Pattern Recognition and Artificial Intelligence (IJPRAI), World Scientific Publication, New Jersey.
6. International Journal of Speech and Language Processing, Pune, Navi Mumbai.
7. International journal of Circuits, Systems & Signal Processing, Boston.
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| **11.R&D AND IMPLEMENTATION PROJECT CARRIED OUT** |
| **INSTITUTE** | **ROLE/COAST** | **TEAM SIZE** | **PROJECT SUMMARY** |
|  **Development of a Model of Fiji’s Sea Surface Temperature (CFT), Coral Bleaching (CB) and Ciguatera Fish Poisoning (CFP)** | **$7000** | **4** | This project main aim to reveal the distribution and growth of dinoflagellate communities appear to be influenced by reef disturbances due to abrupt changes of natural environment from increased frequency and intensity of cyclones, storm surges, heavy rains, marine heat waves, shipwrecks, mining, sewage pollution and coral bleaching that gradually change environmental factors of seawater temperature, salinity, and nutrient concentration. Further studies related to the changes in sea water conditions due to climate change have also been correlated to the increase in seawater temperature and the increased distribution and growth of toxic algae and Gambierdiscus. It has been observed that warmer conditions provide ideal temperature for the rapid growth of dinoflagellates, which in turn increase their likelihood of being grazed by herbivorous fish that bioaccumulates in the food chain, which increases the incidence and prevalence of CFP. Tester et al., (2010) observed that SST of ≥290C during the hottest month in the Caribbean appears to correlate with the high incidence of fish poisoning. |
| **USP Fiji, IAMC-CNR Italy and** **University of Milan La Bicocca  Italy** | **FJD 50,000** | **12** | The project aims to study the underwater acoustics soundscape of Fiji coastal waters in order to characterize acoustically the environment adopting automatic method of analysis. The activities include a plan for a noise monitoring campaign and the definition of the human pollution sources (in particular shipping traffic) in the study area.In consideration of the fact that the use of maritime space is clearly linked to several anthropic activities (fishing, vessel traffic, mining, tourism), the underwater soundscape studies can improve the approach to the management of the marine coastal areas.It has been proved that noise pollution can have profound effects on physiology and ehavior of the marine fauna. Acute or chronic disturbance can have significant consequences on local commercial and subsistence fisheries, as well as on touristic scuba activities.The monitoring plan proposed will allow to build a geographic information system (GIS) based on acoustic database of representative underwater habitats (such as ports and harbours, shipping lines, fishing zones, marine protected areas, touristic resorts, and mining areas) and their relative levels of noise/sound.The realization of GIS acoustic map could represent the first step to observe the zonation and uses of maritime space of Fiji Islands, allowing the local administration building the maritime environmental sustainability plan strictly linked to the cause and economic magnitude.The activities proposed have a multidisciplinary approach and aim to involve cross-school and cross-faculty participations including the institution of a bioacoustics course at the USP and the creation of a Technical Meeting on the potential implementation of Fiji Islands acoustic coastal management. |
| **Pentagram Research Centre, Hyderabad** | **PI** | **4** | Design and Development of the pulmonary function test system based on the speech energy generated by a person. Measuring lung function, specifically the amount (volume) and/or speed (flow) of air that can be inhaled and exhaled. Measuring and calibrating the following with standard Spirometry.* **TLC-** Total lung capacity: the volume in the lungs at maximal inflation
* **TV** Tidal volume: that volume of air moved into or out of the lungs during quiet breathing
* **RV-** Residual volume: the volume of air remaining in the lungs after a maximal exhalation.
* **ERV-** Expiratory reserve volume: the maximal volume of air that can be exhaled from the end-expiratory position
* **IRV-** Inspiratory reserve volume: the maximal volume that can be inhaled from the end-inspiratory level
* **IC-** Inspiratory capacity: the sum of IRV and TV
* **IVC-** Inspiratory vital capacity: the maximum volume of air inhaled from the point of maximum expiration.
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| **VNR Vignana Jyothi Institute of Engineering and Technology- India** | CI/USD 20,000 | 3 | Human errors of drivers and operators contribute to 85% of the crashes. Lack of vigilance has been identified as single most important factor in incidents involving human error. Vigilance decline results in increased absence of response to critical events. There are devices which measure Driver Performance or Driver State (Fatigue) and provide warnings to drivers. But these devices are mostly operating in isolation. The reliability of these devices is debatable when they are functioning in isolation. In the recent past there is lot of research in using multiple technologies and combining the results to provide better warning system. But not many devices are in operational using these combined technologies. We can find different experimental prototypes, but none of them has been commercialized for automotive market. Considering the number of accidents, different traffic scenarios this project aims at developing a device named “Brio”, which can effectively integrate multiple technologies and provide adequate warning to the driver using multiple modalities (visual & voice). Such device has significant social impact and has a potential to be a major contributor for reducing death and injury rates due to vigilance related drivers errors.   |
| **Electrical and Computer Engineering Department, Institute Of Technology, Ethiopia** | PI/USD 25,897 | 4 | Many patients with diseases difficult to diagnose and treat come to hospitals for medical help, and the cost of traveling and accommodation is high for them, especially for those from the poor or remote border areas. As telecommunication become more advanced and increase in speed, various energetic activities have begun to emerge. New telecommunication networks will cause a major revolution in society, and one area, which is expected to be an effective application of new networks, is telemedicine. In general, telemedicine can be defined as the delivery of health care and sharing of medical knowledge over a distance using telecommunication means. Telemedicine provides medical information exchange at a distance, to support medical procedure, with the ultimate goal for improving community health care. In these experiments, integrated functions such as the transmission of medical images, collaboration and video conferencing, and provided superb human interfaces for telemedicine.  As high-speed broadband networks spread, telemedicine support functions and areas where telemedicine services are available will increase. In the medical field, the emergence of a new format for medicine is expected, to include an equalization of opportunities to receive advanced medical treatment, and providing exacting medical care by linking hospitals and clinics. |

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| **12.PROFESSIONAL MEMBERSHIP** |
| **Professional Body** | **Type of Membership** | **Member Number** |
| IEEE | Member | 93219372 |
| The Institution of Engineers, India | Fellowship (F.I.E.)  | F-1282839 |
| International Association for Engineers | Life Time member | 176818 |

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| **13.EXTERNAL EXAMINER FOR MASTER & PhD** |
| **University** | **Examiner** |
| National Institute of Technology, Jaipur, India | PhD |
| Central University, Hyderabad, India | PhD |
| University of the South Pacific, Fiji | Master |
| The ICFAI University, Hyderabad, India | PhD |

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|  **14.Other Relevant Experience** |
| Conference chair | Advances in Engineering, Science and Technology” (ICAEST-1), FNU |
| Chaired a National Level Conference | Chaired a National Level Tech Quest 2k10. Invitation Letter attached |
| Fiji National University HR Recruitment Module | Successfully completed HR Recruitment Module |