Resume DANYA PRADEEP KUMAR

PERSONAL INFORMATION

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RESEARCH INTERESTS

Signal Processing, Image Processing, Numeric Modelling, Nuclear Medicine Imaging, Magnetic Resonance Imaging, Ultrasound Imaging, Clinical Radiology, Retinal Imaging, Optical Coherence Tomography.

EDUCATION

- University of Arizona, Tucson, US
  PhD (Major: Electrical and Computer Engineering, Minor: Biomedical Engineering)
  CGPA: 4.00/4.00 *Aug 2017–May 2021 (Expected)*

- Sri Jaya Chamarajendra College of Engineering, Mysuru, India
  Master of Technology (Major: Biomedical Signal Processing and Instrumentation)
  CGPA: 9.80/10 (First in class of 17 students, Won **Gold medal**)
  Sept 2015–Aug 2017

  Project Title: Detection of Retinal Macular Edema from Optical Coherence Tomographic (OCT) Images

- GSSS Institute of Engineering and Technology for Women, Mysuru, India
  Bachelor of Engineering (Major: Electronics and Communication)
  Aggregate : 76.45% (Top 10 percentile) *Sept 2011–July 2015*

  Project Title: Optimization of the Product Testing Process
  Industry Sponsor: Skanray Technologies, Healthcare Division, Mysuru.

RESEARCH PAPERS

JOURNAL PUBLICATIONS

- P. Danya and Sheela N Rao 'Retinal Macular Edema Detection Using Optical Coherence Tomography Images', *IOSR Journal of VLSI and Signal Processing (IOSR-JVSP)* Volume 7, Issue 2, Ver. I (Mar. - Apr. 2017), PP 47-52.

- P. Danya and Sheela N Rao 'Optical Coherence Tomography to Detect Macular Edema: A Comprehensive Approach', *International Journal of Engineering Research and Technology (IJERT) NLPGPS – 2017 Conference Proceedings*, Special Issue – 2017, PP 70-75

- Joseph, S. S., & Danya, P. (2015). BSNs: A Special Approach to Monitor Heart Rate. *International Journal of Latest Technology in Engineering, Management & Applied Science*, International standards publication, 57-62. Accessible at http://www.ijltemas.in/digital-library/volume-iii-issue-x

CONFERENCE PROCEEDINGS

- P. Danya and Sheela N Rao 'Optical Coherence Tomography to Detect Macular Edema: A Comprehensive Approach', *National Level PG Project Symposium on Electronics, Communication and Computer Science in association with International Journal of Engineering Research and Technology*. Held at GSSS Institute of Engineering and Technology for Women, Mysuru on 27th May,2017.
  (Won **Best Paper Award**)

- Danya P, Nisha D, Deepika S, Aimen Fathima & Aruna Devi, Optimization of the Product Testing Process, *Project symposium,* Dept. of ECE - GSSSIETW, Mysuru, 29thApr,2015.
  (Won **Best Paper Award**)

WORK AND INTERNSHIPS

- Sarver Heart Center, University of Arizona
  Team: R&D Duration: *Fall 2017 -*
  Role: Graduate Assistant
  Summary of Work: Measurement of beat-rate and mechanical strain values of cardiomyocyte cells grown on synthetic graft material and study of the corresponding responses to different drugs in varied concentrations using Image and Video Processing.

- Healthcare Technology Innovation Center (HTIC-IITM), Indian Institute of Technology, Madras
  Team: R&D Duration: *July- Sept 2016*
  Role: Project Intern
  Summary of Work: A part of testing and validation processes carried out on an LFIA (Lateral Flow Immuno-Assay) diagnostic equipment. The non-uniform illumination of the test-strip, the interference of stray light during the process of camera focusing and variation of image intensity over time and with increase in temperature are some of the aspects addressed.

RELEVANT COURSES UNDERTAKEN

- Signals and Systems
- Digital Signal Processing
- Speech Signal Processing
- Medical Imaging Systems
- Medical Image Processing
- Logic Design
- Analog Communication
- Digital Communication
- Wireless Communication
- Multimedia Communication
- Digital Switching Systems
- Information Theory & Coding
- Network Security
- Microcontrollers
- Microprocessors
- Linear Algebra
- Clinical Instrumentation and Medical Physiology (I & II)
- Speech Signal Processing
- Pattern Recognition
- Advanced Biomedical Signal Processing
- BioMEMS and Nanotechnology
- Biometrics and Applications
- Numeric Modelling of Physics and Biological Systems

SERVICE TO COLLEGE

- Student secretary of the student forum of Electronics & Communication Engineering (2014-2015)
- Student co-ordinator for the student forum of Electronics & Communication Engineering (2012-2014)

SOFTWARE SKILLS

MATLAB, Python, R, C, C++, Ride, Xilinx, Assembly Language Programming, Microwind

REFERENCES

- Dr Jen Watson Koevary
  Research Assistant Professor,
  Sarver Heart Center,
  Biomedical Engineering,
  University of Arizona, Tucson
  Email: jwatson1@email.arizona.edu

- Dr Steven Goldman
  Cardiologist,
  Sarver Heart Center,
  University of Arizona
  Email: goldmans@shc.arizona.edu

- Dr Jordan Lancaster
  Assistant Research Scientist,
  Sarver Heart Center,
  University of Arizona, Tucson
  Email: lancaste@email.arizona.edu

- Dr V Udayashankara
  Professor and Head,
  Dept. of Instrumentation Technology,
  Sri Jaya Chamarajendra College of Engineering, Mysuru, India
  Email: v_udayashankara@sjce.ac.in