

# Jagdeep Rahul

Department of Electronics and Communication Engineering, Rajiv Gandhi University,  
Doimukh, Itanagar, India, Phone: +91-9451779948, email: [jagdeep.rahul@rgu.ac.in](mailto:jagdeep.rahul@rgu.ac.in)

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- Highly self-motivated faculty with demonstrated research expertise in ECG signal analysis and strong interpersonal skills.
- Experimental techniques: Pre-processing, Discrete time signal processing, statistical signal processing, wavelet analysis, feature extraction, and pattern recognition.
- Rich experience in modeling and computer simulation using MATLAB and Verilog HDL.
- Computer skills: Linux/Windows, LaTeX, and C.

## EDUCATION

- **Rajiv Gandhi University, Itanagar, India**  
Ph.D. Computer Science and Engineering (Digital Signal Processing), 19 April 2021.
- **ABV- Indian Institute of Information Technology and Management, Gwalior, India (CGPA=7.87/10)**  
M. Tech. Computer Science and Engineering (Specialisation in VLSI), June 2012.
- **Bundelkhand University, Jhansi, India (Percentage=69.85%)**  
B.Tech. Electronics and Communication Engineering, July 2009.

## RESEARCH INTEREST

- Biosignal Processing
- Discrete time signal processing
- Machine learning
- Deep learning

## RESEARCH EXPERIENCE

**Rajiv Gandhi University, Itanagar, India**

**Ph.D. Candidate**, August, 2017- 19<sup>th</sup> April 2021

**Thesis Title:** Design and Development of Classifier for Cardiac Disorder Detection

## TEACHING EXPERIENCE

**Rajiv Gandhi University, Department of Electronics and Communication Engineering,  
Itanagar, India**

Assistant Professor (July 2015 to present)

Major Courses:

- Advanced Digital System Design
- MOS-VLSI Circuit Design
- VLSI Testing and Testability
- Advanced Digital Signal Processing
- Biomedical Signal Processing

**Lovely Professional University, Department of Electronics and Electrical Engineering,  
Jalandhar, India.**

Assistant Professor (August 2012 to November 2014)

Major Courses:

- Basics of Electrical and Electronics Engineering
- Microprocessors
- Control System Design
- CAD for VLSI
- Digital System Design

## PUBLICATIONS

### Peer-reviewed refereed Journals

1. **Jagdeep Rahul**, Rahul, Jagdeep, et al. "An improved cardiac arrhythmia classification using an RR interval-based approach." *Biocybernetics and Biomedical Engineering* 41.2 (2021): 656-666. (SCIE = **4.314 IF**)
2. **Jagdeep Rahul**, Lakhan Dev Sharma and Vijay Kumar Bohat .” Short Duration Vectorcardiogram based Inferior Myocardial Infarction Detection: Class and Subject-oriented Approach”. *Biomedical Engineering / Biomedizinische Technik* (2021). (SCIE = **1.411 IF**)
3. **Jagdeep Rahul**, Marpe Sora, and Lakhan Dev Sharma. "Dynamic thresholding based efficient QRS complex detection with low computational overhead." *Biomedical Signal Processing and Control* 67 (2021): 102519. (SCIE = **3.88 IF**)
4. **Jagdeep Rahul**, Marpe Sora, and Lakhan Dev Sharma. "A Novel and Lightweight P, QRS, and T Peaks Detector Using Adaptive Thresholding and Template Waveform." *Computers in Biology and Medicine* 132(2021): 104307. (SCI = **4.589 IF**)

5. **Jagdeep Rahul**, Marpe Sora, and Lakhan Dev Sharma. "Exploratory data analysis based efficient QRS-complex detection technique with minimal computational load." *Physical and Engineering Sciences in Medicine* 43.3 (2020): 1049-1067. (SCIE = 1.43 IF).
6. **Jagdeep Rahul**, and Lakhan Dev Sharma. "Artificial Intelligence-based Approach for Atrial Fibrillation Detection using Normalised and Short-Duration Time-Frequency ECG". *Biomedical Signal Processing and Control*. (Revision Submitted) (SCIE = 3.88 IF)
7. **Jagdeep Rahul**, and Lakhan Dev Sharma. "An Enhanced T-wave Delineation Method using Phasor Transform in the Electrocardiogram". *Biomedical Physics & Engineering Express* (2021). (Scopus/ESCI)
8. **Jagdeep Rahul**, and Marpe Sora. "Powerline interference removal technique using digital notch filter in ECG". *Advances and applications in mathematical sciences*. 20 (7) (2021). 1269-1277. (ESCI)
9. **Jagdeep Rahul**, and Marpe Sora. "A novel adaptive window based technique for T wave detection and delineation in the ECG." *Bio-Algorithms and Med-Systems* 16.1 (2020). (Scopus).
10. **Jagdeep Rahul**, Marpe Sora, and Lakhan Dev Sharma. "An overview on biomedical signal analysis." *Int J Recent Technol Eng* 7 (2019): 206-9. (Scopus)
11. Kurmendra, **Jagdeep Rahul**, and Rajesh Kumar. "Micro-cantilevered MEMS biosensor for detection of malaria protozoan parasites." *Journal of Computational Applied Mechanics* 50.1 (2019): 99-107. (Scopus)
12. Saib, Sumit Singh, **Jagdeep Rahul** et al. "Impact of HfO<sub>2</sub> in Graded Channel dual insulator double gate MOSFET." *Journal of Computational and Theoretical Nanoscience* 12.6 (2015): 950-953. (Scopus)

### Publications in Conferences

1. **Jagdeep Rahul**, et al. "Performance evaluation of junctionless vertical double gate MOSFET." *2012 International Conference on Devices, Circuits and Systems (ICDCS)*. IEEE, 2012.
2. Shekhar Yadav, **Jagdeep Rahul** et al. "TCAD assessment of nonconventional dual insulator double gate MOSFET." *2012 International Conference on Devices, Circuits and Systems (ICDCS)*. IEEE, 2012.
3. **Jagdeep Rahul**, and Marpe Sora. "Premature Ventricular Contractions Classification using Machine Learning Approach." *2020 International Conference on Smart Electronics and Communication (ICOSEC)*. IEEE, 2020.
4. **Jagdeep Rahul**, Marpe Sora, and LakhanDev Sharma. "Baseline correction of ECG using regression estimation method." *2019 4th International Conference on Internet of Things: Smart Innovation and Usages (IoT-SIU)*. IEEE, 2019.

I hereby certify that all information provided above is true to the best of my knowledge

Date: - 05.07.2021

Place: - RGU, Doimukh

**(JAGDEEP RAHUL)**