

# **Dr. Poornima G R**

BE, M.Tech., Ph.D [MIETE, MIEI, MISTE, IEEE, MMATMAJ]

Professor and Dean-Academics, SVCE, Bengaluru

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## **Biography**

Dr. Poornima G R has 19 years of experience in teaching and 08 years of experience in research. She received her BE in Electronics & Communication Engineering from S J C Institute of Technology, M.Tech., in Electronics from BMS College of Engineering and completed her doctorate from R V College of Engineering under Visvesvaraya Technological University, Belagavi. Her area of interest includes Low Power VLSI, HEVC, H.264/AVC Decoder, Network Abstraction Layer, Embedded System, IoT, Artificial Intelligence, and Machine learning.

To her credit prolifically published around 29 papers in national / international journals and conferences. She has filed and published 2 patents. She had received grant from Global Vacuum Products, Soch Solar, KSCST, DST, GoK under various schemes.

She is a Life member of IETE, IEI, ISTE, MMATMAJ and member of IEEE.

She has published Herbing series for FCOS, Microcontroller, Sunstar Exam scanner for Network Analysis, Engineering Electromagnetics.

Her Consultancy service includes Soch Solar Ltd, Global Vacuum Products.

She acted as Chattisgarh SPIU identified NBA mock visit expert at Jagadapur, resource person for AICTE sponsored STTP, resource person for SJCIT, Shashib College, and Govt. Engg. College,

Jury for Nation level ‘Smart India Hackathon, 2019’ Software Edition held on 2nd and 3rd March 2019 and Advisory Board member at SJCIT since from 2016-17 onwards till date.

## **Research Interests**

- Low Power VLSI
- HEVC and H.264/AVC CODEC
- Network Abstraction Layer
- Embedded systems
- IoT
- Artificial Intelligence and Machine learning

## **Selected Publications**

- [1]. Narayanappa C K, Poornima G R, Basavaraj V Hiremath, “Estimation of the ambit of breast cancer with a modified ResNet analysis using machine learning approach”, I3CAC 2021 ,June 07-08, accepted by Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering

### **Journal and Conference Publications:**

- [2].G R Poornima, S C Prasanna Kumar, "Efficient H.264 Decoder architecture using External Memory and Pipelining," IJEECS, Vol. 12, No. 3, pp. 995~1002, December 2018.ISSN: 2502-4752, DOI: 10.11591/ijeecs.v12.i3. (Scopus Indexed)
- [3].G R Poornima, S C Prasanna Kumar, "4x4 Luminance Intra Prediction modes for H.264/AVC," published in IJEECS, Vol. 6, Issue 7, July 2017.ISSN 2348-117X
- [4].G R Poornima, S C Prasanna Kumar, Ramachandran S, "In-Loop Filter for H.264/AVC Encoder," published <https://ieeexplore.ieee.org/document/8256974/>, ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE. (Scopus Indexed).
- [5].G R Poornima, S C Prasanna Kumar, S Ramachandran, C K Narayanappa, "Functional Module Design For H.264 Video Decoder," Proc. International conference on Networks, Information and Communication (ICNIC 2014), Elsevier, August 2014. ISBN: 9789351072 – 591 / 607. (Scopus Indexed).
- [6].G R Poornima, S C Prasanna Kumar, Ramachandran S, "In-Loop Filter for H.264/AVC Encoder," presented in 2nd IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 19–20 May 2017 at SVCE, Bangalore, ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE.
- [7].G R Poornima, S C Prasanna Kumar, "4X4 Luminance Intra Prediction modes for H.264/AVC," presented at 3rd international conference at Chhattisgarh on 29th July 2017.
- [8].G R Poornima, S C Prasanna Kumar, S Ramachandran, C K Narayanappa, "Functional Module Design For H.264 Video Decoder," Proc. International conference on Networks, Information and Communication(ICNIC 2014), SVCE, Bangalore, India, July–August 2014.

### **Journal Publications:**

- [1].G R Poornima et al., "**Automatic Photovoltaic Water Pumping System**",2nd ICRIEAT-Dec. 21,22-2017  
Journal: Indian J.Sci.Res.17 (2): 673-676,2018, ISBN: 978-93-86647-85-6,ISSN: 2250-0138(online)
- [2].G R Poornima et al., "**Automatic Air Traffic Controlling system using GSM**",2nd ICRIEAT-Dec. 21,22-2017,ISBN: 978-93-86647-85-6, ISSN: 2250-0138(online)

### **IEEE Journal Publications:**

- [1].G. R. Poornima, J. L. Avinash, S. Palle, S. Santosh Kumar, K. N. Sunil Kumar and P. Rajendra Prasad, "Image Processing Based Human Pursuing Robot," 2020 International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT), Bangalore, India, 2020, pp. 408-412, doi: 10.1109/RTEICT49044.2020.9315662.
- [2].R. Gatti, J. L. Avinash, N. Nataraja, G. R. Poornima, S. Santosh Kumar and K. Sunil Kumar, "**Design and Implementation of Vision Module for Visually Impaired People**," 2020 International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT), Bangalore, India, 2020, pp. 373-377, doi: 10.1109/RTEICT49044.2020.9315645.
- [3].P. Rajendra Prasad, J. L. Avinash, G. B. Arjun Kumar, G. R. Poornima, S. Santosh Kumar and K. Sunil Kumar, "**IoT based Smart Water Quality Monitoring and Flow**

- Control System,"** 2020 International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT), Bangalore, India, 2020, pp. 358-362, doi: 10.1109/RTEICT49044.2020.9315670.
- [4].J. L. Avinash, K. N. Sunil Kumar, G. B. Arjun Kumar, G. R. Poornima, R. Gatti and S. Santosh Kumar, "**A Wireless Sensor Network Based Precision Agriculture,"** 2020 International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT), Bangalore, India, 2020, pp. 413-417, doi: 10.1109/RTEICT49044.2020.9315578.
- [5].G. R. Poornima, V. Harish, S. Karthik, B. S. Nagesh kumar and S. Varun Kumar, "**Vehicle Headlight Automation with Smart Energy Management System,"** 2019 4th International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT), Bangalore, India, 2019, pp. 396-399, doi: 10.1109/RTEICT46194.2019.9016890.
- [6].Paper Entitled "An **efficient mobile sink path selection approach for WSNs**" published in IEEE explorer 978-1-5090-0774-5/16/\$31.00© 2016 IEEE,DOI: [10.1109/RTEICT.2016.7807802](https://doi.org/10.1109/RTEICT.2016.7807802), January 2017, Article number 7807802, Pages 151-155.
- [7].Paper Entitled "**Implementation of P-I-D Temperature Control For Vacuum Ovens**" published <https://ieeexplore.ieee.org/document/8256974/>, ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE.
- [8].Paper entitled "**Surveillance Radio Detection and Ranging with Thermal Imaging Camera,**" published <https://ieeexplore.ieee.org/document/8256974/>,ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE.
- [9].Paper entitled "**Mobile Solar Aerator**" published <https://ieeexplore.ieee.org/document/8256974/>, ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE.
- [10]. Paper entitled "**Security Issues in Cloud Computing and its Counter measure,**" published <https://ieeexplore.ieee.org/document/8256974/>,ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE.
- [11]. Paper entitled "**ways for protection against Various attacks in the internet,**" published <https://ieeexplore.ieee.org/document/8256974/>,ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE.

#### **International Conference Publications:**

- [1].G R Poornima et al., "**Automatic Photovoltaic Water Pumping System**",*2nd ICRIEAT-Dec. 21,22-2017*  
Journal: Indian J.Sci.Res.17 (2): 673-676,2018, ISBN: 978-93-86647-85-6,ISSN: 2250-0138(online)
- [2].G R Poornima et al., "**Automatic Air Traffic Controlling system using GSM**",*2nd ICRIEAT-Dec. 21,22-2017,ISBN: 978-93-86647-85-6, ISSN: 2250-0138(online)*

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- [1].G. R. Poornima, J. L. Avinash, S. Palle, S. Santosh Kumar, K. N. Sunil Kumar and P. Rajendra Prasad, "Image Processing Based Human Pursuing Robot," 2020 International

- Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT), Bangalore, India, 2020, pp. 408-412, doi: 10.1109/RTEICT49044.2020.9315662.
- [2]. R. Gatti, J. L. Avinash, N. Nataraja, G. R. Poornima, S. Santosh Kumar and K. Sunil Kumar, "**Design and Implementation of Vision Module for Visually Impaired People**," 2020 International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT), Bangalore, India, 2020, pp. 373-377, doi: 10.1109/RTEICT49044.2020.9315645.
- [3]. P. Rajendra Prasad, J. L. Avinash, G. B. Arjun Kumar, G. R. Poornima, S. Santosh Kumar and K. Sunil Kumar, "**IoT based Smart Water Quality Monitoring and Flow Control System**," 2020 International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT), Bangalore, India, 2020, pp. 358-362, doi: 10.1109/RTEICT49044.2020.9315670.
- [4]. J. L. Avinash, K. N. Sunil Kumar, G. B. Arjun Kumar, G. R. Poornima, R. Gatti and S. Santosh Kumar, "**A Wireless Sensor Network Based Precision Agriculture**," 2020 International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT), Bangalore, India, 2020, pp. 413-417, doi: 10.1109/RTEICT49044.2020.9315578.
- [5]. G. R. Poornima, V. Harish, S. Karthik, B. S. Nagesh kumar and S. Varun Kumar, "**Vehicle Headlight Automation with Smart Energy Management System**," 2019 4th International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT), Bangalore, India, 2019, pp. 396-399, doi: 10.1109/RTEICT46194.2019.9016890
- [6]. Poornima G R et al., "**Location Identification and Locking Mechanism for theft vehicle using GSM and GPS**," 4<sup>th</sup> IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 19– 20 May 2019 at SVCE, Bangalore, ISBN: 978-1-5386-2440-1/18/\$31.00 ©2019 IEEE.
- [7]. Poornima G R et al ., "**QoS Aware Load Balancing in Cognitive Wireless Sensor Networks using Machine Learning Concepts**," presented in 3<sup>rd</sup> IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 18 – 19 May 2018 at SVCE, Bangalore, ISBN: 978-1-5386-2440-1/18/\$31.00 ©2018 IEEE.
- [8]. Poornima G R et al ., "**Performance Analysis of Doubly-Fed Induction Generator Based Wind Power System**" presented in 3<sup>rd</sup> IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 18 – 19 May 2018 at SVCE, Bangalore, ISBN: 978-1-5386-2440-1/18/\$31.00 ©2018 IEEE.
- [9]. Poornima G R et al ., "**Solar Photovoltaic Powered Smart Garbage Monitoring System Using GSM/GPS**" presented in 3<sup>rd</sup> IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 18 – 19 May 2018 at SVCE, Bangalore, ISBN: 978-1-5386-2440-1/18/\$31.00 ©2018 IEEE.
- [10]. Poornima G R et al., "**Arduino Based Automated Sericulture System**" presented in 3<sup>rd</sup> IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 18 – 19 May 2018 at SVCE, Bangalore, ISBN: 978-1-5386-2440-1/18/\$31.00 ©2018 IEEE.

- [11]. Poornima G R et al., “**Automatic Photovoltaic Water Pumping System,**” 2<sup>nd</sup> ICRIEAT-Dec. 21,22-2017, ISBN: 978-93-86647-85-6
- [12]. Paper Entitled “**Implementation of P-I-D Temperature Control For Vacuum Ovens**” presented in 2<sup>nd</sup> IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 19 – 20May 2017at SVCE, Bangalore,ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE.
- [13]. Paper entitled “**In-Loop Filter for H.264/AVC Encoder**” presented in 2<sup>nd</sup> IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 19 – 20 May 2017 at SVCE, Bangalore,ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE.
- [14]. Paper entitled “**Surveivallance Radio Detection and Ranging with Therma Imaging Camera**”presented in 2<sup>nd</sup> IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 19 – 20 May 2017 at SVCE, Bangalore,ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE.
- [15]. Paper entitled “**Mobile SolarAerator**”presented in 2<sup>nd</sup> IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 19 – 20 May 2017 at SVCE, Bangalore,ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE.
- [16]. Paper entitled “**Security Issues in Cloud Computing and itsCounter measure**”presented in 2<sup>nd</sup> IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 19 – 20 May 2017 at SVCE, Bangalore,ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE.
- [17]. Paper entitled “**Ways for protection against Various attacks in the internet**”presented in 2<sup>nd</sup> IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 19 – 20 May 2017 at SVCE, Bangalore,ISBN: 978-1-5090-3774-9/17/\$31.00 © 2017 IEEE.
- [18]. Paper Entitled “**4X4 Luminance Intra Prediction modes for H.264/AVC**” presented at 3rd International Conference on New Frontiers of Engineering, Science, Management and Humanities (ICNFESMH-2017) at Chhattisgarh on 29th July 2017. ISBN: 978-81-934083-9-1.
- [19]. Paper Entitled “ **An efficient mobile sink path selection approach for WSNs**” published in IEEE explorer 978-1-5090-0774-5/16/\$31.00© 2016 IEEE
- [20]. Paper Entitled “ **An efficient mobile sink path selection approach for WSNs**” presented in 2016 IEEE International conference on Recent trends in Electronics, Information & Communication Technology, 20 – 21 May 2016 at SVCE, Bangalore.
- [21]. Paper entitled “**Deblocking Filter Algorithm for Video and Image Compression**” presented in the International Conference on Networks, Information and Communication ICNIC-May 18-20, 2015 ,at SVCE, Bangalore.
- [22]. Paper entitled “**Implementation of Efficient Residual Loss less coding for H.264-AVC**” presented in the International Conference on Networks, Information and Communication ICNIC-May 18-20, 2015, at SVCE, Bangalore.
- [23]. Paper entitled “**Wireless Sensor to prevent unauthorized entry in the critical Military Borders**” presented in the International Conference on Networks, Information and Communication ICNIC-May 18-20, 2015, at SVCE, Bangalore.

- [24]. Paper entitled “**Microcontroller based automatic plant irrigation system**”, presented in the International Conference on Networks, Information and Communication ICNIC-May 18-20, 2015,at SVCE, Bangalore.
- [25]. Paper entitled “**Artificial Intelligence robotically assisted compact surgery**”, presented and won I prize in the Udyukta `15, on March 25<sup>th</sup> and 26<sup>th</sup> 2015 at SVCE, Bangalore.
- [26]. Paper entitled “**Functional Module Design for H.264 Video Decoder**”, presented in the International Conference on Networks, Information and Communication ICNIC-July 2014 ,at SVCE, Bangalore  
**ISBN: 9789351072591**
- [27]. Paper entitled “**Border Security using WSN** ”, presented in the International Conference on Networks, Information and Communication ICNIC-July 2014 ,at SVCE, Bangalore,  
**ISBN: 9789351072591**
- [28]. Paper entitled “**Baseband multiprocessor design using RFID tags** “ presented in the International Conference on VLSI, Communication, Advanced devices, Signals & systems And Networking, VCASAN-July 2013 ,at BNMIT, Bangalore

**National Conference papers:**

1. Paper entitled “**Energy efficient outdoor light Monitoring and Control Architecture using embedded system**” presented in Manthana-18 held on 10<sup>th</sup> May 2018 at SJCIT, Chickballapur.
2. Paper entitled “**Separation of overlapping Latent Fingerprints**” presented in Manthana-18 held on 10th May 2018 at SJCIT, Chickballapur