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1st International Conference on 6G for Future Wireless Networks (6GN)

IC6GFWN – 2026

Organized by

PG - Department of CS, BCA & IT
RAAK Arts and Science College
Perambai, Villupuram – 605110

February 13, 2026

Title : **INTERNATIONAL CONFERENCE ON 6G FOR FUTURE WIRELESS NETWORKS (6GN) IC6GFWN - 2026**

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Edition : **I**

Book Size : **A4 Size**

ISBN : **978-93-6492-560-0**

Publisher : **SK Research Group of Companies,**
Madurai, Tamil Nadu, India.

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142, Periyar Nagar, Madakulam,
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Website: www.skrgcpublication.org / www.skrgcacademy.co.in
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PREFACE

RAAK Arts and Science College (RASC), Perambai, Tamil Nadu is currently affiliated to Annamalai University, Annamalai Nagar, Chidambaram, Tamil Nadu, India. The college was established in the year 2009. Till 2020, it was affiliated to Thiruvalluvar University, Vellore, Tamil Nadu, India. It started with five Under Graduate degree Programs and 180 students.

Today, the college is offering eleven Under Graduate degree Programs and seven Post Graduate Degree Programs. The college has been fostering graduates in Arts, Sciences, Commerce, Business Administration, Social Work, Information Technology and Computer Science. This has resulted in interdisciplinary environment that promotes cross disciplinary learning and research environment to the students. RASC is located in a green campus that has all the necessary infrastructure including laboratories, ICT classrooms, transport facilities etc.

CONFERENCE OVERVIEW

The International Conference on 6G for Future Wireless Networks – IC6GFWN-2026 is designed as a comprehensive academic and research-oriented platform that addresses the evolving landscape of next-generation wireless communication. As global communication systems rapidly transition beyond 5G, the need for intelligent, ultra-reliable, and high-capacity networks has become increasingly critical. IC6GFWN-2026 aims to explore this transformation by bringing together academicians, researchers, industry experts, and students to share knowledge, exchange ideas, and discuss future directions in wireless networking.

The conference focuses on cutting-edge themes such as 6G architecture and vision, artificial intelligence–driven communication systems, terahertz and millimeter-wave technologies, massive machine-type communication, edge and cloud integration, network security, green and sustainable wireless systems, and emerging applications including extended reality, smart cities, autonomous systems, and digital twins. Through keynote addresses, invited talks, and technical paper presentations, participants gain insights into both theoretical advancements and practical challenges shaping future wireless ecosystems.

IC6GFWN-2026 also emphasizes interdisciplinary research and industry–academia collaboration, encouraging participants to develop innovative solutions that bridge research and real-world implementation. By fostering interaction among experienced researchers and young scholars, the conference nurtures a strong research culture and promotes innovation. Overall, IC6GFWN-2026 aspires to contribute meaningfully to the global research community by shaping perspectives, inspiring collaboration, and supporting the development of robust and intelligent future wireless networks.

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GREETINGS

Er. B. Mohamed Farouk

Chairman

RAAK Group of Institutions

Greetings,

It gives me immense pleasure to extend my warm greetings on the occasion of this International Conference organized by the Department of Computer Science and Applications and Department of Information Technology on “6G for Future Wireless Networks”, scheduled on 13th February 2026.

This conference serves as an important platform for academicians, researchers, and industry professionals to share their innovative ideas, present original research, and discuss emerging trends in next-generation wireless communication. The papers compiled in this ISBN Conference Proceedings reflect excellence in research, technical advancement, and relevance to the rapidly evolving field of 6G technologies.

I appreciate the sincere efforts of the organizers, contributors, and participants in

making this academic initiative a success. I believe the conference discussions and this publication will motivate further research and innovation in future wireless networks.

Best Wishes,

Er. B. Mohamed Farouk

Chairman

RAAK Group of Institutions

GREETINGS

Prof. Dr.H.Anwer Basha

Principal

RAAK Group of Institutions

Greetings,

It gives me great pleasure to extend my warm greetings to all delegates, researchers, and participants of the International Conference organized by the Department of Computer Science and Applications and Department of Information Technology on “6G for Future Wireless Networks”, scheduled on 13th February 2026.

This conference provides a significant platform for academicians, industry experts, and young researchers to share their knowledge, present innovative ideas, and discuss emerging trends in next-generation wireless communication technologies. The papers included in this ISBN Conference Proceedings reflect scholarly rigor, technical excellence,

and forward-looking insights that are essential for advancing the field of 6G research.

I wholeheartedly applaud the organizers, contributors, and participants whose dedication has made this academic endeavor a success. I am certain that the insightful discussions and this publication will serve as a catalyst for future research and innovation, shaping the next generation of wireless networks.

Best Wishes,

Prof.Dr.H.Anwer Basha
Principal
RAAK Group of Institutions

GREETINGS

Prof. Dr.G.Senthilnathan

Vice Principal

RAAK Group of Institutions

Greetings,

It is my pleasure to extend warm greetings to all participants, researchers, and delegates of the International Conference organized by the Department of Computer Science and Applications and Department of Information Technology on “6G for Future Wireless Networks”, scheduled on 13th February 2026.

The conference offers an excellent platform for academicians, industry experts, and emerging researchers to exchange knowledge, present original research, and deliberate on recent advancements in next-generation wireless communication technologies. The papers compiled in the ISBN conference proceedings reflect scholarly rigor and technical

excellence, making a significant contribution to the advancement of 6G and future wireless networks.

I sincerely commend the organizers, contributors, and participants for their committed efforts in successfully organizing this academic event. I am confident that the conference deliberations and the resulting publication will stimulate continued research and innovative developments in the field of wireless networks

Best Wishes,

Prof. Dr.G.Senthilnathan

Vice Principal

RAAK Group of Institutions

KEYNOTE SPEAKERS

Dr.R.Jayashree

Department of Computer Science,

Associate Professor,

Dili Institute of Technology.

Dr.K.R.Sundaravaradarajan

Ph.D in Agricultural Economics,

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INTEGRATING RESUNET-BASED SEGMENTATION, RADIOMICS, AND GRAPH NEURAL NETWORKS FOR INTELLIGENT LIVER TUMOR CHARACTERIZATION IN COMPUTED TOMOGRAPHY

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Abstract

One of the main causes of cancer-related deaths in the world is liver cancer, the early diagnosis is important and correct demarcation of the tumour is vital in making accurate clinical decisions. Computed Tomography (CT) imaging is commonly utilized in the diagnosis of liver tumors but it usually encounters the problem of low contrast, noise, and diffuse appearance of tumor and unclear margin which frequently restricts the functionality of traditional image processing and machine learning methods. In order to solve these issues, the paper will introduce a strong and unified framework to combine deep learning-based segmentation, radiomic feature retrieval, and graph neural network (GNN) analysis in the evaluation of liver tumors.

First, CT scan images are processed in a sophisticated pre-processing pipeline that includes noise reduction, intensity-related normalization, and image quality enhancement based on boundaries to enhance the quality of the image and inter-patient variability. Then, two deep learning models, i.e. U-Net and Residual U-Net (ResUNet) are used to segment the liver tumor accurately. The evaluation of the performance of segmentation is calculated by the Dice similarity coefficient on which the proposed ResUNet model demonstrates a better validation Dice score of 0.981, in comparison with the standard U-Net model. After segmentation, radiomic features are derived out of the segmented tumor areas of interest, first-order statistical features and texture-based features based on Gray Level Co-occurrence Matrix (GLCM) analysis.

These characteristics present tumor heterogeneity and structural feature patterns, which cannot be readily identified by visual inspection. To further analyze the patients at the individual level, the resulted radiomic features are represented as the nodes within a graph, and inter-tumoral relationships are trained with the help of a Graph Neural Network. This graph representation allows the efficient study of tumor similarity and provides the evaluation of tumor stage based on the patient.

The evidence of experimental findings proves that the framework suggested has a proper segmentation, it has characterization of features that can be trusted and it has an approach to analyze the graph which proves useful in helping the clinicians diagnose liver cancer and have a plan of treating it. The combination of segmentation, radiomics, and GNN-based learning presents a good avenue of intelligent and personalized liver tumor analysis with use of medical imaging.

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Keywords: Liver Tumor Segmentation, Computed Tomography, U-Net, ResUNet, Radiomics, Graph Neural Networks, Medical Image Analysis, Cancer Diagnosis.

978-93-6492-560-0|