

# QUANTUM INTEREST MONTH 2024/2025

Prepared By :

IEEE COMPUTER SOCIETY GJU TEAM

Presented To :

IEEE GJU ADMIN COMMITTEE TEAM

This proposal is aiming to elevate the Quantum Interest Month initiative **from a society-specific project to a branch-wide endeavor**. By involving all IEEE societies within the branch, the program seeks to highlight quantum computing's transformative potential through collaborative posts, expert webinars, and a hands-on workshop. This expansion reflects the Computer Society's commitment to engage and ensure that the initiative's impact resonates across the entire IEEE GJU community.

# INTRODUCTION: A VISION OF COLLABORATION

Dear Admin Committee Team,

As the IEEE Computer Society at GJU, Over the past few weeks, we have worked tirelessly to conceptualize an initiative that not only reflects our technical aspirations but also embodies the spirit of IEEE as a whole.

When the idea of Quantum Interest Month was born, we envisioned it as more than just a project for our society. We saw its potential to unite all societies under the IEEE GJU Branch, creating a collaborative experience that reflects the strength of our community.

This is why we believe this initiative deserves to be elevated to the branch level.

With your leadership and the active participation of every society, Quantum Interest Month can become a flagship project, showcasing the best of what IEEE at GJU can achieve together.

We are excited to share this detailed proposal and look forward to working side by side with the Admin Committee and all IEEE societies to make this vision a reality.

## IEEE AND THE QUANTUM COMPUTING FIELD

### ABOUT IEEE AND ITS MISSION

The IEEE is the world's largest technical professional organization, driving technological innovation for the benefit of humanity. Through its societies, chapters, and members, IEEE has consistently championed cutting-edge fields, bridging academia, industry, and diverse disciplines.

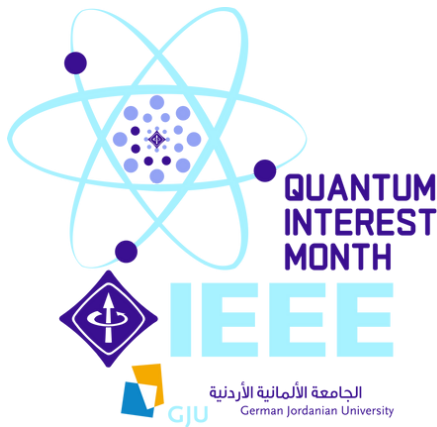
Quantum computing represents one of the most groundbreaking advancements in modern science and technology. Unlike classical computing, quantum computing leverages the principles of superposition, entanglement, and quantum gates to solve problems previously thought unsolvable.

### ITS APPLICATIONS SPAN:

- Healthcare: Drug discovery, protein folding, and medical imaging.
- Finance: Optimization of portfolios and risk analysis.
- Artificial Intelligence: Enhancing machine learning models.
- Cybersecurity: Developing quantum-safe encryption methods.
- Industrial Applications: Solving logistical challenges and improving energy efficiency.

By aligning our branch with this revolutionary field, we position IEEE GJU as a leader of innovation between other branches, empowering students in Jordan to lead the quantum revolution.

# QUANTUM INTEREST MONTH LOGO



## COLORS USED:



#3A0F91



#93A3F5



#A7F2FF

## GJU UNI LOGO:

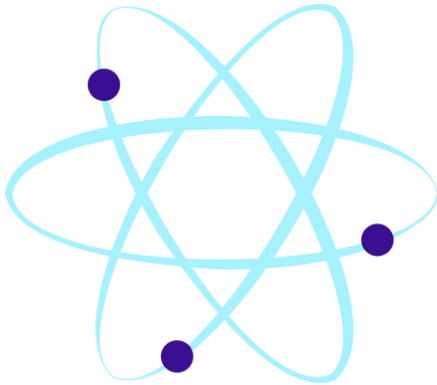


الجامعة الألمانية الأردنية  
German Jordanian University

## The logo encapsulates the project's essence:

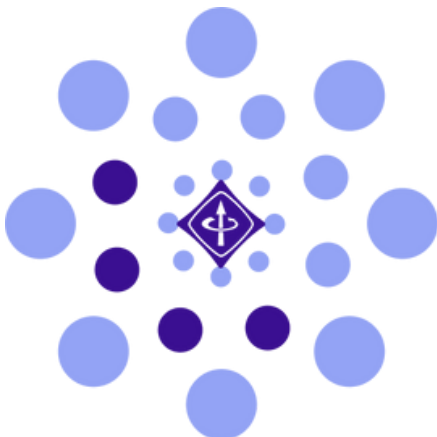
This logo will be the project's identity, uniting all communications, materials, and events under a cohesive design

**About Colors:** They establish a strong visual connection to our global brand.



### 1. The Atom Icon

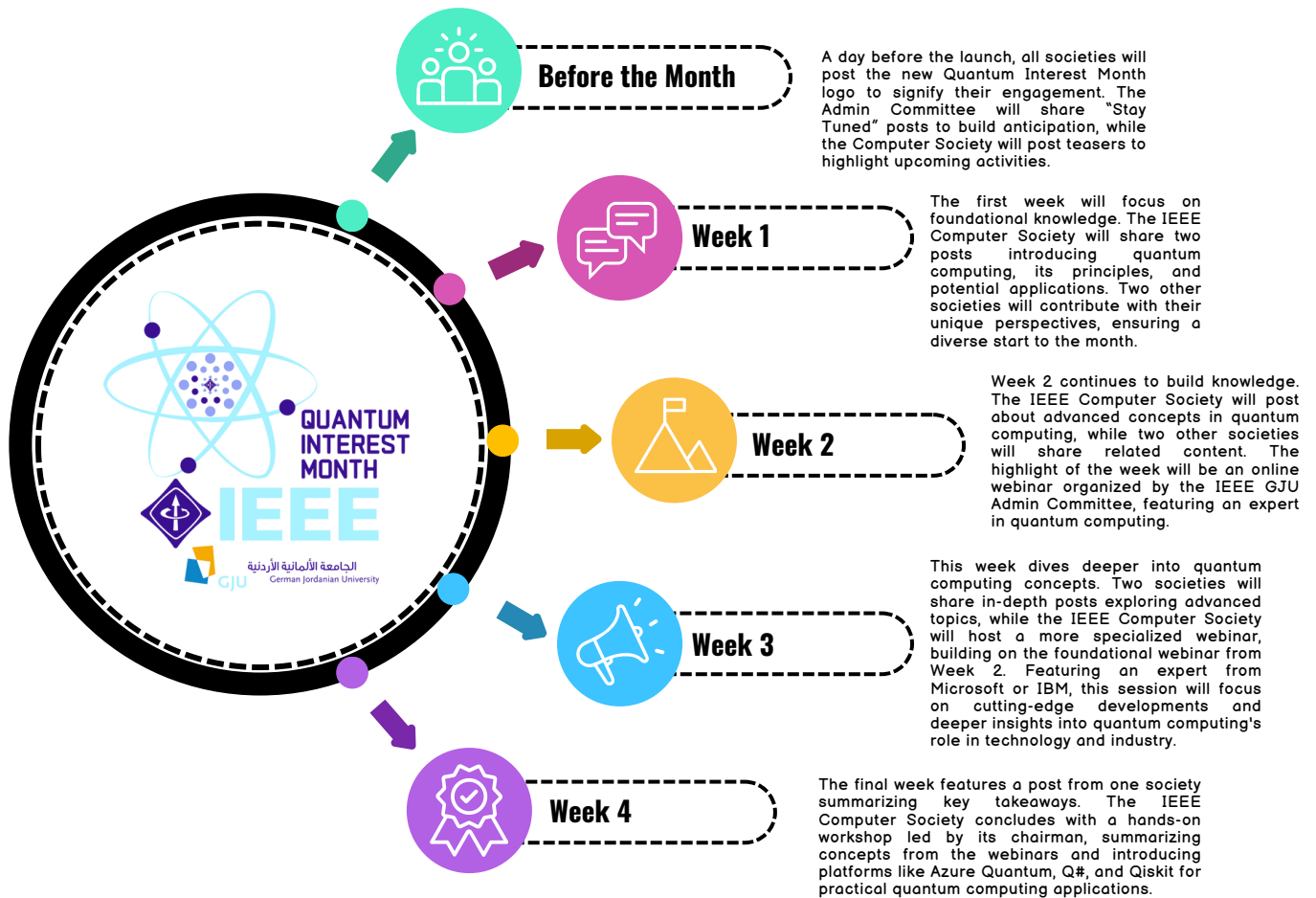
- **Representation:** The atom structure with orbiting electrons symbolizes the fundamental building blocks of matter and reflects the micro and quantum scales we are focusing on during the Quantum Interest Month.
- **Color Palette:** The light blue lines and purple electron nodes create a modern and dynamic feel, representing innovation and cutting-edge technology in quantum science.
- **Significance:** The design aligns with the core quantum mechanics concept that all matter behaves both as particles and waves.



### 2. Central Quantum Core

- **Representation:** The layered circular structure in the center represents the quantum state probabilities, wavefunctions, and superpositions—key phenomena studied in quantum computing and quantum physics.
- **Inner Details:** The IEEE diamond emblem at the center reinforces the initiative's affiliation with the prestigious global organization and its dedication to advancing technology for humanity.
- **Color Gradient:** The use of shades of purple and blue transitioning from the core outward conveys the idea of quantum expansion and exploration of new dimensions.

# ROADMAP FOR QUANTUM INTEREST MONTH



## SOCIETIES ENGAGEMENT

The engagement of all societies within the IEEE GJU Branch is critical for the success and impact of Quantum Interest Month. This initiative is not just about exploring the cutting-edge field of quantum computing and technology; it is also a statement of unity, collaboration, and shared vision within the IEEE GJU community.

We aim here to create a platform where different perspectives and expertise converge, expanding the horizons of what we can achieve together.

The decision again to position this project under the leadership of the IEEE GJU Branch stems from its capacity to serve as a unifying force for all societies, the branch's role as the central body ensures the inclusivity and representation of each society's contributions, allowing us to maximize the project's outreach and depth. This approach transforms Quantum Interest Month into a flagship project that embodies the core values of IEEE.

With this framework, Quantum Interest Month becomes more than an academic initiative; it becomes a symbol of the strength and potential of the IEEE GJU Branch when all societies come together for a shared purpose and this is an important point that we as Computer Society GJU always work to achieve in a serious way.

## IEEE GJU BRANCH



The IEEE GJU Admin Committee is the central body that oversees and coordinates all IEEE-related activities at the German Jordanian University. Its role is to ensure seamless collaboration among the various IEEE societies, foster innovation, and drive initiatives that align with IEEE's global mission of advancing technology for humanity. The Admin Committee is instrumental in managing the strategic direction of events and ensuring all societies are supported and aligned with the IEEE GJU goals.

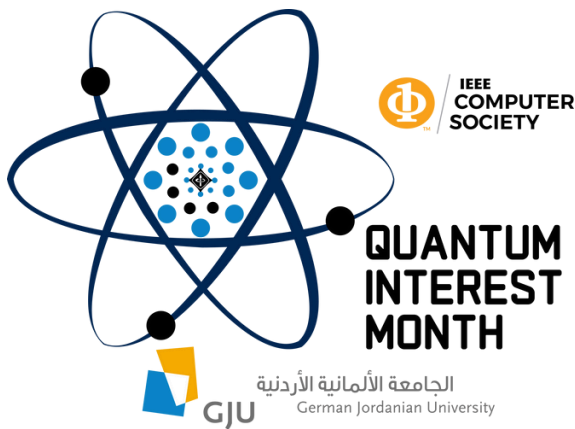
### Role in Quantum Interest Month

- **Coordination and Leadership:** The Admin Committee will oversee the entire Quantum Interest Month initiative, ensuring smooth execution across all participating societies and activities.
- **Promotion:** The Admin Committee will create and share posts to build excitement before the event, including "Stay Tuned" posts to raise awareness.
- **Webinar Organization:** As part of Week 2, the Admin Committee will organize a webinar featuring an expert in quantum computing, serving as a foundational learning experience for participants.
- **Support for Societies:** The Admin Committee will assist each society in fulfilling its contributions and ensuring all activities align with the overarching goals of Quantum Interest Month.

### Key Activities

- Posting "Stay Tuned" updates to build anticipation
- Organizing and promoting the Week 2 webinar with a quantum expert
- Ensuring effective collaboration and communication between all participating societies
- Overseeing the execution of the entire Quantum Interest Month, ensuring timely and high-quality content from all societies

# IEEE COMPUTER SOCIETY GJU



The IEEE Computer Society is a global leader in advancing the theory, practice, and application of computer science and engineering. At the German Jordanian University, the Computer Society provides students with opportunities to engage with emerging technologies, enhance their skills, and explore various fields of computing. By offering technical workshops, webinars, and collaborative projects, the society plays a vital role in shaping the future of computing at GJU.

## Role in Quantum Interest Month

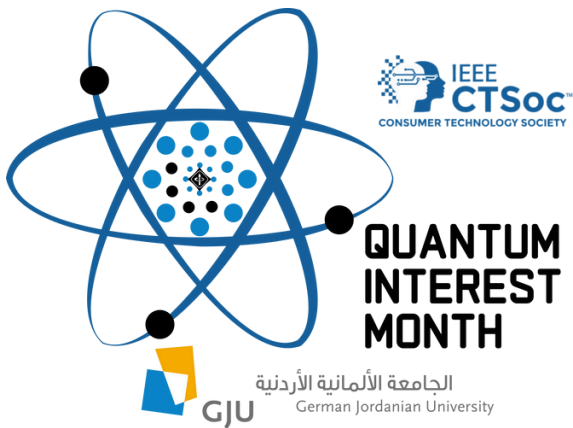
- **Foundational Content Creation:** In Week 1 and 2, the Computer Society will create two posts that introduce the basics of quantum computing and its potential applications, from the society's media process, one post will be a research summary and the other is about a tech pioneer in the field of quantum computing.
- **Content Sharing and Engagement:** In Week 3, the Society will share a post, and from the media process it will be a tech news, also collaborate with other societies and support the Admin Committee in promoting the initiative.
- **Advanced Content:** In Week 3 also, the Computer Society will host an in-depth webinar with an expert from Microsoft or IBM, diving into advanced quantum computing concepts.
- **Hands-On Workshop:** In Week 4, the society will conduct a practical workshop summarizing the concepts covered in the webinars. This session will offer hands-on experience with quantum computing platforms such as Azure Quantum, Q# programming language, and Qiskit (IBM Software and Platform).
- **Collaboration:** The Computer Society will work closely with other IEEE societies and the Admin Committee to ensure the success of Quantum Interest Month, creating a unified and impactful experience for all participants.

## Key Activities

- **Week 1:** Posting foundational content on quantum computing. (2 Posts)
- **Week 2:** Sharing a post on a specific quantum news and collaborating with other societies. (1 Post)
- **Week 3:** Hosting an advanced webinar with an expert from Microsoft or IBM.
- **Week 4:** Conducting a practical workshop on quantum computing using Azure Quantum, Q#, and Qiskit, the workshop will be given by the society's chair.



# IEEE CONSUMER TECHNOLOGY GJU



The IEEE Consumer Technology Society (CTS) focuses on the advancements and innovations in consumer electronics and technology. It bridges the gap between engineering and real-world applications, offering students a chance to explore how technology shapes the modern consumer experience. The CTS at GJU plays a key role in understanding the development within the consumer tech field, through projects, events, and collaborations that highlight emerging trends and future of consumer products.

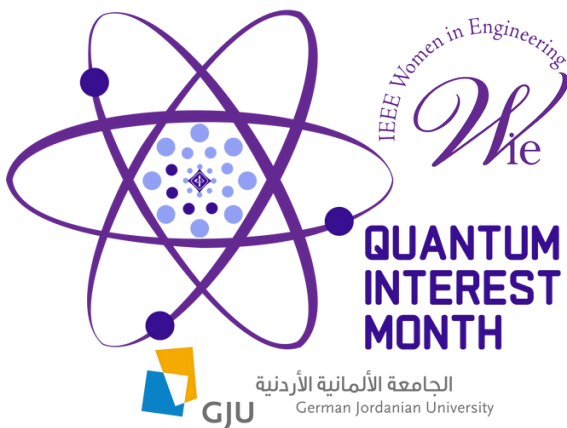
## Role in Quantum Interest Month

- **Content Sharing:** In Week 1, CTS will contribute by sharing a post that highlights the potential of quantum computing in the consumer technology field. This will showcase how quantum advancements can transform industries, such as personal devices, security systems, and AI-driven consumer products.
- **Collaboration and Engagement:** In Week 2, CTS will share content that focuses on the intersection of consumer technology and quantum computing, further emphasizing how quantum tech could revolutionize future consumer products. CTS will also engage with other societies to promote the overall initiative.
- **Support for Events:** In Week 3 and Week 4, CTS will support the webinars and the workshop organized by the IEEE Computer Society, helping to promote the events and engaging with the audience during these knowledge-sharing sessions.

## Key Activities

- **Week 1:** A post about the role of quantum computing in consumer technology.
- **Week 2:** Sharing content about the potential integration of quantum computing into consumer products. (Content to share not a post to make)
- **Week 3 and Week 4:** Supporting webinars and the workshop by promoting events and engaging with the community.

# IEEE WOMEN IN ENGINEERING GJU



IEEE Women in Engineering (WIE) is a global community of women engineers and technologists, dedicated to inspiring and empowering women to achieve their highest potential in engineering and technology. At GJU, WIE provides a platform for female students to connect, grow, and contribute to the field. Through events, mentorship, and outreach, WIE encourages gender diversity and promotes innovation and leadership within the engineering community.

## Role in Quantum Interest Month

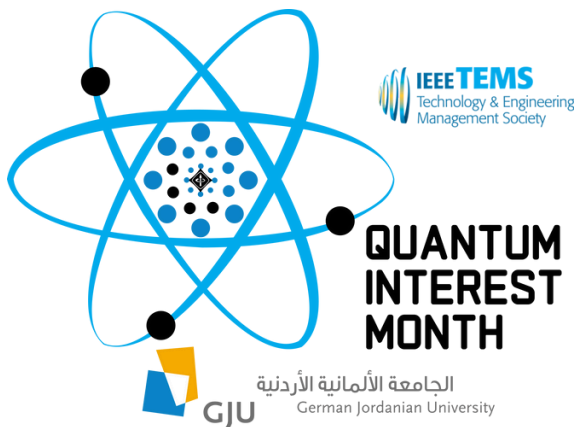
- **Content Sharing:** In Week 2, WIE will share a Post highlighting the achievements and contributions of a female scientist in quantum computing, inspiring women to pursue careers in this innovative field.
- **Engagement and Collaboration:** In Week 1, WIE will share content that explores how women in engineering can actively contribute to shaping the future of quantum computing, encouraging greater female participation in this advanced field. WIE will also collaborate with other societies to ensure maximum reach and engagement.
- **Support for Events:** In Week 3 and Week 4, WIE will assist in promoting the webinars and the workshop by sharing information about these events, highlighting their significance and encouraging participation from female students in quantum-related topics.

## Key Activities

- **Week 1:** Sharing content on how women can shape the future of quantum computing. (Content to share not a post to make)
- **Week 2:** A post about a female scientist in quantum computing, inspiring women to pursue careers in this innovative field.
- **Week 3 and Week 4:** Supporting the webinars and workshop by promoting and engaging with the community.



# IEEE TECHNOLOGY AND ENGINEERING MANAGEMENT GJU



The IEEE Technology and Engineering Management Society (TEMS) focuses on the strategic, managerial, and leadership aspects of technology and engineering projects. It emphasizes the integration of technical expertise with management principles to drive innovation and lead successful technological ventures. At GJU, TEMS plays a role in preparing students for leadership roles in the tech industry, and how to manage engineering projects, teams, and technological initiatives effectively.

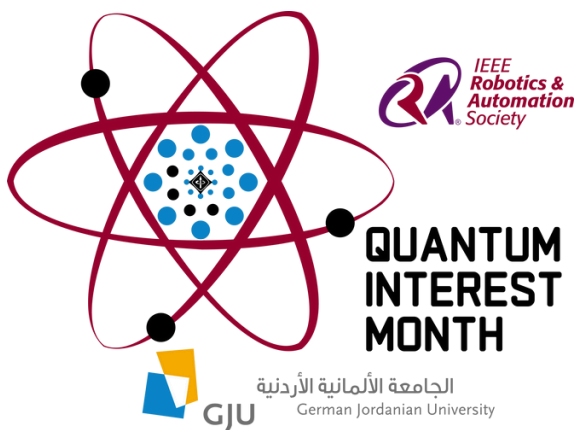
## Role in Quantum Interest Month

- **Content Sharing:** In Week 2, TEMS will share a post highlighting the impact of quantum computing on the future of technology management, focusing on how businesses and industries will need to adapt to the integration of quantum advancements.
- **Strategic Perspectives:** In Week 1, TEMS will share content discussing the challenges and opportunities for managing quantum computing projects, and how the field will affect technology leadership and strategy.
- **Engagement in Events:** TEMS will assist in promoting the webinars and workshops by emphasizing the importance of quantum computing in the business and technology management landscape, encouraging participation from students interested in leadership roles in the tech industry.

## Key Activities

- **Week 1:** Sharing on managing quantum computing projects and integrating quantum tech into business. (Content to share not a post to make)
- **Week 2:** A Post about the role of quantum computing in technology and engineering management.
- **Week 3 and Week 4:** Supporting the webinars and workshop by promoting the events and discussing the management side of quantum computing.

# IEEE ROBOTICS AND AUTOMATION GJU



The IEEE Robotics and Automation Society (RAS) is dedicated to advancing the science and practice of robotics and automation. RAS connects professionals, students, and researchers with the latest developments in robotics, automation technologies, and their applications across a wide range of industries. At GJU, RAS serves as a platform for students to explore robotics, learn about automation systems, and get involved in hands-on projects that bridge the gap between theory and real-world applications.

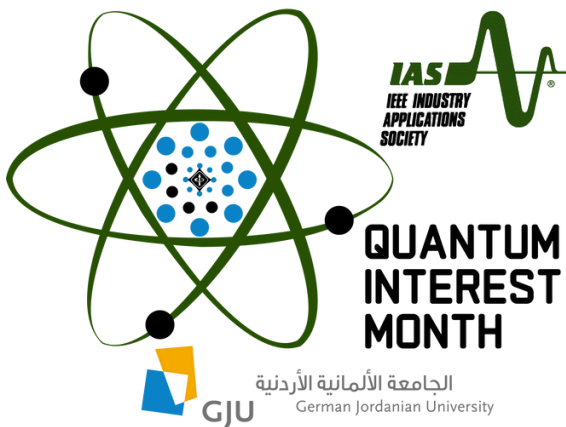
## Role in Quantum Interest Month

- **Content Sharing:** In Week 1, RAS will contribute by sharing a post discussing the intersection of quantum computing and robotics. This will explore how quantum advancements can significantly enhance robotics systems, particularly in the areas of machine learning, optimization, and computational power.
- **Engagement and Collaboration:** In Week 2, RAS will share content on how quantum computing could accelerate the development of intelligent and autonomous systems. This will highlight the potential for quantum-enhanced robotic technologies and automation.
- **Support for Events:** In Week 3 and Week 4, RAS will collaborate with the branch in promoting the webinars and workshop, specifically focusing on the impact of quantum computing on the future of robotics and automation systems. RAS will also encourage students with an interest in robotics to attend and engage with the content.

## Key Activities

- **Week 1:** A Post about the role of quantum computing in robotics and automation
- **Week 2:** insights on the potential of quantum computing to accelerate robotics and automation systems (Content to share not a post to make)
- **Week 3 and Week 4:** Supporting the webinars and workshops by promoting the events and discussing quantum's impact on robotics

## IEEE INDUSTRY APPLICATIONS SOCIETY GJU



The IEEE Industrial Applications Society (IAS) focuses on the development, deployment, and optimization of engineering technologies for industrial applications. IAS connects professionals in sectors such as manufacturing, power, and automation to advance technologies that improve industrial processes, efficiency, and sustainability. At GJU, IAS offers students the opportunity to explore the practical applications of engineering concepts in industrial settings, with a focus on innovation and optimization.

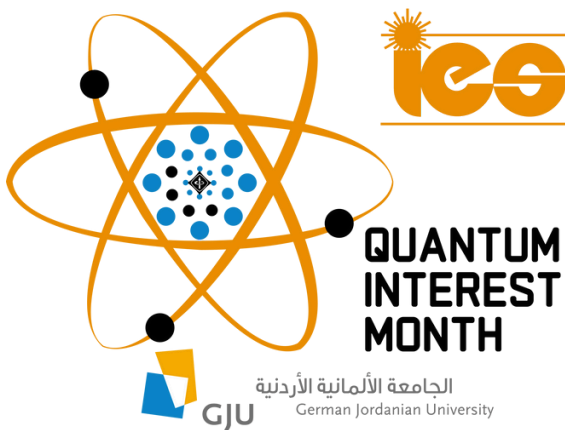
### Role in Quantum Interest Month

- **Content Sharing:** In Week 1 and 2, IAS will share content discussing how quantum computing can enhance industrial processes, particularly in manufacturing, logistics, and process optimization. This will explore how quantum algorithms could offer solutions to complex optimization problems faced by industries today.
- **In Week 3,** IAS will contribute a post discussing the role of quantum computing in optimizing industrial processes. The post will emphasize how quantum algorithms can enhance efficiency and innovation in manufacturing, energy management, and industrial automation, etc.
- **Support for Events:** In Week 4, IAS will work alongside the branch to promote the webinars and workshop, focusing on how quantum computing can drive efficiency and innovation in the industrial sector. IAS will also encourage participation from students with an interest in industrial applications and engineering systems.

### Key Activities

- **Week 1 and 2:** Sharing insights on quantum computing's role in energy management and supply chain optimization (for example). (Content to share not a post to make)
- **Week 3:** A Post about how quantum computing can optimize industrial processes and manufacturing.
- **Week 3 and Week 4:** Supporting the webinars and workshop by promoting and discussing quantum's impact on industrial applications.

# IEEE INDUSTRIAL ELECTRONICS SOCIETY GJU



The IEEE Industrial Electronics Society (IES) focuses on the advancement of electronics and electrical technologies in industrial applications. The society brings together professionals, engineers, and students to explore cutting-edge developments in areas like automation, robotics, power systems, and control systems. At GJU, IES enables students to engage with practical applications of electronics and technology in industrial environments, fostering innovation and efficiency in engineering solutions.

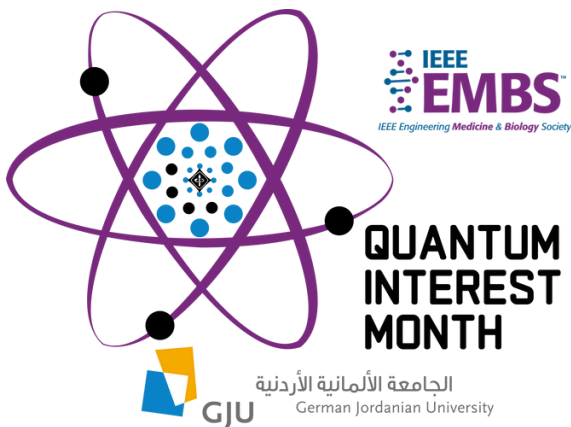
## Role in Quantum Interest Month

- **Content Sharing:** In Week 1 and 2, IES will share content discussing the impact of quantum computing on industrial electronics, particularly in areas like control systems, automation, and real-time data processing. This post will highlight how quantum computing could enhance the performance of industrial electronic systems.
- **Integration in Electronics:** In Week 3, IES will contribute with a post exploring quantum computing's impact on industrial electronics. This post will focus on its potential to revolutionize smart systems, electronic devices, and the integration of quantum technologies in industrial electronics applications.
- **Support for Events:** In Week 4, IES will collaborate with the branch in promoting the webinars and workshop, focusing on how quantum computing can optimize industrial electronics and enhance automation and control systems. IES will encourage students from the electronics and electrical engineering fields to attend and learn more.

## Key Activities

- **Week 1 and 2:** Sharing insights into the role of quantum computing in transforming power electronics and control systems. (Content to share not a post to make)
- **Week 3:** A post about how quantum computing can impact industrial electronics, control systems, and automation.
- **Week 3 and Week 4:** Supporting the webinars and workshop by promoting the events and discussing the integration of quantum computing in industrial electronics.

# IEEE ENGINEERING IN MEDICINE AND BIOLOGY GJU



The IEEE Engineering in Medicine and Biology Society (EMBS) is a leading global society focused on the integration of engineering principles with biological and medical sciences. The society fosters collaboration between engineers, clinicians, and researchers to develop innovative healthcare technologies. At GJU, EMBS aims to promote interdisciplinary learning and research in biomedical engineering, offering students a platform to explore the evolving field of medical technologies.

## Role in Quantum Interest Month

- **Content Sharing:** In Week 4, EMBS will share a post discussing how quantum computing can revolutionize the healthcare industry, specifically in areas such as medical imaging, data processing, and personalized medicine. The post will emphasize the importance of quantum technologies in advancing biomedical applications.
- **Collaboration and Insight:** In Week 1 or 2 or 3, EMBS will share content focused on the potential of quantum computing to improve drug discovery, diagnostics, and treatment simulations (example). This will highlight the interdisciplinary nature of quantum computing and its potential to drive breakthroughs in the medical field.
- **Support for Events:** In Week 4, EMBS will collaborate with the branch in promoting the webinars and workshop, particularly focusing on how quantum computing can benefit the healthcare industry. EMBS will also engage with students from biomedical and health-related fields in the uni (BE, PCE, Nursing) to encourage their participation.

## Key Activities

- **Week 4:** A post about the impact of quantum computing on medical technologies and healthcare.
- **Week 1 or 2 or 3:** Sharing insights into the potential of quantum computing in drug discovery, diagnostics, and personalized medicine (for example). (Content to share not a post to make)
- **Week 3 and Week 4:** Supporting the webinars and workshop, promoting and discussing the implications of quantum technologies in the medical field

# TIMELINE FOR QUANTUM INTEREST MONTH

## Week 1: 1st – 7th February

- **1st – 7th February**
  - **Computer Society:** Post about the significance of quantum computing. (Research Summary).
  - **CTS:** Post about the impact of quantum computing on consumer technology.
  - **RAS:** Post about the role of quantum computing in robotics and automation.
- **Admin Committee:** Ensure all societies share their new logos for the Quantum Interest Month.

## Week 2: 8th – 14th February

- **8th – 14th February**
  - **Computer Society:** Post about a quantum computing scientist and why the field is crucial for the future. (Tech Pioneer)
  - **WIE:** Post about a scientist woman in quantum computing and STEM fields.
  - **TEMS:** Post about how quantum computing will revolutionize the tech and engineering sectors.
- **10th February**
  - **Webinar:** About Exploring Quantum Computing and its applications (Hosted by IEEE GJU Branch, with an expert).

## Week 3: 15th – 21st February

- **15th – 21st February**
  - **Computer Society:** Post diving deeper into quantum computing and applications in the present. (Tech News)
  - **IAS:** Post about the implications of quantum computing for electrical and industrial systems.
  - **IES:** Post about quantum computing's effect on industrial electronics and optimization.
- **17th February**
  - **Webinar:** "Deep Dive into Quantum Computing" (Hosted by IEEE Computer Society GJU, with an expert from Microsoft or IBM).

## Week 4: 22nd – 28th February

- **22nd February**
  - **Computer Society and the IEEE Branch:** Post about the upcoming Quantum Computing Workshop and how it will summarize the theoretical content of the webinars with an applied material.
  - **EMBS:** Post about quantum computing's potential impact on healthcare and biomedical fields.
- **24th February**
  - **Quantum Computing Workshop**
    - **Host:** IEEE Computer Society (Given by the Chair)
    - **Content:** Summarizing the webinars and offering hands-on practice with platforms like Azure Quantum, Q#, etc.
- **28th February**
  - **Admin Committee:** Final post thanking all societies for their engagement and promoting future activities.