

THE

Future

is here...

Institutional Chapter of

ICs-SemiIndia

● Date - 24th & 25th July ●



The name "ICs-SEMICONINDIA2024(Institutional Chapter)" was used to describe a specific Institutional Chapter associated with the broader ICs-SEMICONINDIA2024 Institutional Chapter. This usage is intended to highlight the event's focus on Integrated Circuits (ICs) within the context of the SEMICONDUCTOR INDIA 2024 INTERNATIONAL CONFERENCE. It is distinct from the trademark "SEMICON" owned by SEMI and does not imply any official endorsement or affiliation with SEMI.



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COLLEGE OF MANAGEMENT
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"Semiconductor is not just an industry but it opens a door filled with boundless potential."



Shree Narendra Damodardas Modi
Prime Minister of India



*"Embark on a journey of innovation and collaboration at
"ICs-SEMICONDUCTOR INDIA 2024 (Institutional Chapter)",
where India's economy rises to new
heights with cutting-edge technology."*

*Shree Yogesh Mohan Gupta
Chief Patron*



*"ICs-SEMICONDUCTOR INDIA 2024 (Institutional Chapter)",
innovation takes center stage as we
pave the way for a brighter, technologically advanced future."*

*Dr Mayank Aggarwal
Patron*



"ICs-SEMICONDUCTOR INDIA 2024 (Institutional Chapter)"
Accelerating Innovation, Collaboration, and
Strengthening Economy of India Building an Innovation Ecosystem

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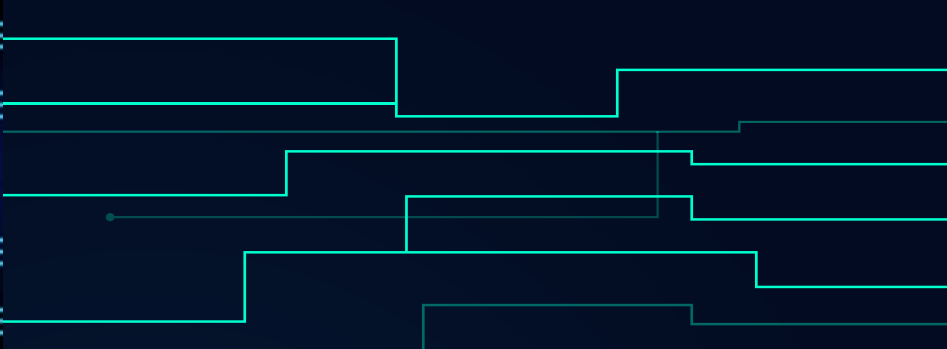
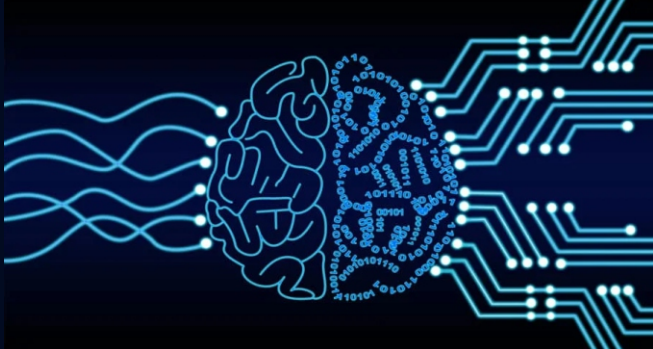
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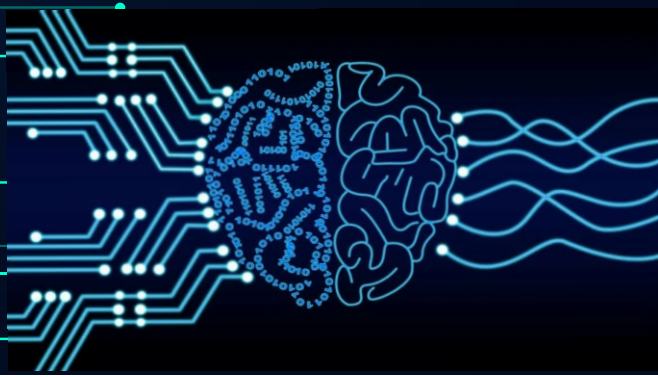


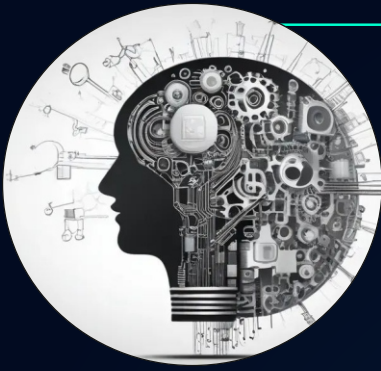
The inception of IIMT College of Management, Greater Noida, approved by All India Council for Technical Education (AICTE) New Delhi & affiliated with Chaudhary Charan Singh University, Meerut, Uttar Pradesh, dates back to 2006. Since its establishment, the college has been dedicated to moulding young students into skilled professionals capable of navigating the ever-evolving corporate landscape. The future of India's semiconductor industry is set to soar to unprecedented heights at "ICs-SEMICONDUCTOR INDIA 2024 (Institutional Chapter)". Organized by IIMT College of Management in collaboration with the prestigious Indian Council of Social Science Research (ICSSR), under the Ministry of Education, Government of India, this international conference stands as a beacon of innovation, collaboration, and economic empowerment.

The semiconductor industry stands at the forefront of technological innovation, driving advancements across a myriad of sectors from electronics to healthcare, and from transportation to communication. Recognizing its pivotal role, this seminar aims to explore how the development of the semiconductor industry can accelerate innovation and foster economic growth.

With a focus on India's burgeoning semiconductor landscape, the seminar will delve into key strategies and initiatives that can propel the industry forward. Through a series of engaging sessions, industry experts, policymakers, and researchers will discuss the latest trends, challenges, and opportunities within the semiconductor ecosystem. The International Conference on "ICs-SEMICONDUCTOR INDIA 2024 (Institutional Chapter)" is a premier event aimed at fostering innovation, collaboration, and economic growth in the semiconductor industry of India. Organized by IIMT College of Management in association with the Indian Council of Social Science Research (MoE), this conference brings together experts, scholars, industry leaders, policymakers, and innovators from around the world.

- *Innovation Ecosystems: Examining the crucial elements that form a thriving semiconductor innovation ecosystem, from research and development to commercialization and market adoption.*
- *Collaborative Partnerships: Exploring the role of partnerships between industry players, academia, and government bodies in driving innovation, fostering knowledge exchange, and creating new avenues for growth.*
- *Emerging Technologies: Spotlighting the latest advancements in semiconductor technologies such as AI chips, IoT devices, and quantum computing, and their transformative impact on industries.*
- *Policy Frameworks: Addressing the need for supportive regulatory frameworks, incentives, and policies to attract investments, nurture startups, and promote local manufacturing in the semiconductor sector.*
- *Skill Development and Talent Pipeline: Discussing strategies for building a skilled workforce equipped with the latest technological know-how, essential for sustaining industry growth.*
- *Global Perspectives: Drawing insights from international case studies and experiences, understanding best practices, and exploring avenues for global collaboration and market expansion.*





Conference Themes

1. **Building an Innovation Ecosystem:**

*Research and Development in Semiconductor Technologies
Technology Transfer and Commercialization Strategies
Incubation Centers and Startup Ecosystems in Semiconductors*

2. **Collaborative Partnerships for Growth:**

*Public-Private Partnerships in Semiconductor Research
Industry-Academia Collaboration for Skill Development
International Collaborations and Joint Ventures in Semiconductor Manufacturing*

3. **Emerging Technologies in Semiconductors:**

*Artificial Intelligence and Machine Learning in Semiconductor Design
Internet of Things (IoT) and Embedded Systems Development
Quantum Computing and its Implications for Future Semiconductor Technologies*

4. **Policy Frameworks for Industry Development:**

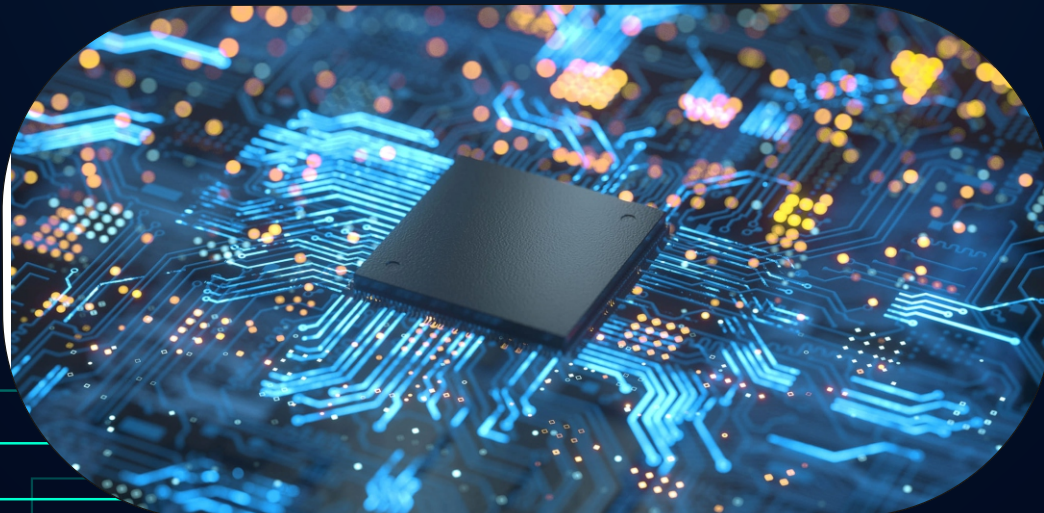
*Government Incentives for Semiconductor Manufacturing
Regulatory Environment for Semiconductor Research and Development
Intellectual Property Rights Protection in the Semiconductor Sector*

5. **Skill Development and Talent Pipeline:**

*Training Programs for Semiconductor Industry Professionals
Addressing the Skills Gap in Semiconductor Design and Manufacturing
Women in Semiconductors Encouraging Diversity and Inclusion*

6. **Global Perspectives and Market Expansion:**

*Market Trends and Opportunities in the Global Semiconductor Industry
Export Promotion and International Market Access for Indian Semiconductor Companies
Lessons from Successful Semiconductor Clusters Around the World*





Conference Subtopics: Technology Perspectives

1. *Research and Development Initiatives in Semiconductor Technologies:*
Latest Trends in Semiconductor Research
Innovations in Semiconductor Materials and Devices
Nanotechnology Applications in Semiconductor Industry
2. *Building a Robust Semiconductor Ecosystem:*
Role of Industry-Academia Collaboration
Incubation Centers and Startup Support in Semiconductor Domain
Government Policies and Incentives for Semiconductor Manufacturing
3. *Advancements in Semiconductor Manufacturing:*
Next-Generation Lithography Technologies
Semiconductor Packaging and Assembly Techniques
Cleanroom Technologies and Environmental Impact
4. *Artificial Intelligence (AI) and Machine Learning (ML) in Semiconductors:*
AI Chips and Edge Computing
ML Algorithms for Semiconductor Design Optimization
Applications of AI/ML in Semiconductor Testing and Quality Control
5. *Internet of Things (IoT) and Semiconductor Industry:*
IoT Sensor Technologies and Integration with Semiconductors
IoT Platforms and Semiconductor Compatibility
IoT Security Challenges and Semiconductor Solutions
6. *Quantum Computing and Semiconductor Industry:*
Quantum Processors and Quantum Computing Chips
Challenges in Quantum Semiconductor Fabrication
Quantum Algorithms and Applications for Semiconductors
7. *Emerging Semiconductor Technologies:*
Gallium Nitride (GaN) and Silicon Carbide (SiC) Power Electronics
Flexible and Organic Electronics
Neuromorphic Computing and Brain-Inspired Chips
8. *Semiconductor Applications in Key Industries:*
Automotive Industry and Semiconductor Innovations
Healthcare Technologies Enabled by Semiconductors
Communication and 5G: Semiconductor Infrastructure





9. Global Semiconductor Market Trends:

*Market Analysis and Forecast for Semiconductor Industry
Impact of Geopolitical Factors on Semiconductor Supply Chains
Emerging Markets and Opportunities for Semiconductor Growth*

10. Skills and Workforce Development in Semiconductor Industry:

*Training Programs for Semiconductor Professionals
Addressing the Skills Gap in Semiconductor Engineering
Diversity and Inclusion in Semiconductor Workforce*

11. Environmental Sustainability in Semiconductor Manufacturing:

*Green Semiconductor Technologies
Waste Reduction and Recycling Initiatives
Energy Efficiency in Semiconductor Fabrication*

12. Startups and Innovation Hubs in Semiconductor Domain:

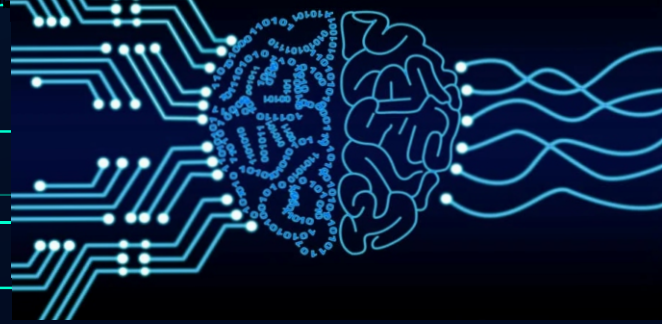
*Success Stories of Semiconductor Startups
Venture Capital and Funding Trends in Semiconductor Industry
Role of Incubators and Accelerators in Semiconductor Innovation*

13. Security and Cyber Resilience in Semiconductor Devices:

*Hardware Security Solutions
Secure Elements and Trusted Platforms
Cybersecurity Challenges for IoT Devices and Semiconductors*

14. Future Prospects and Roadmap for Indian Semiconductor Industry:

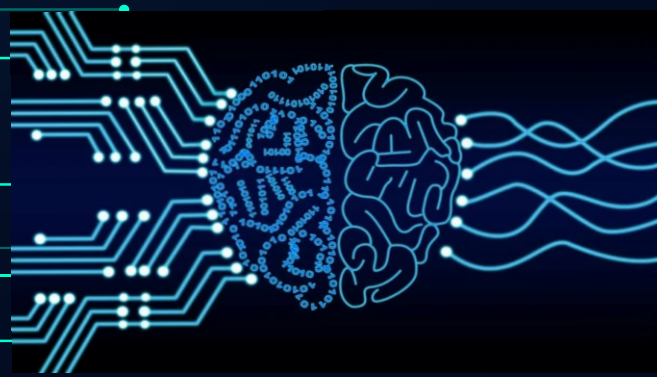
*Vision 2030: India's Semiconductor Growth Strategy
Indigenous Semiconductor Design and Manufacturing Initiatives
Collaboration Opportunities with Global Semiconductor Players*





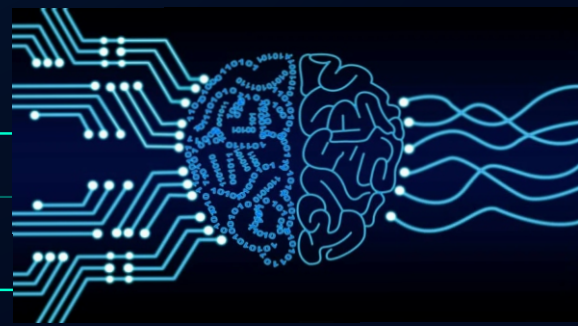
Conference Subtopics: Economy Perspectives

1. *India's Semiconductor Industry in the Global Market:*
Market Position and Competitive Landscape of Indian Semiconductor Companies
Export Trends and Market Penetration Strategies
Opportunities for Indian Companies in Global Semiconductor Supply Chains
2. *Economic Impact of Semiconductor Industry in India:*
Contribution to GDP and Employment Generation
Foreign Direct Investment (FDI) Trends in Semiconductor Sector
Value Chain Analysis: Semiconductor Manufacturing to End-User Applications
3. *Government Initiatives for Semiconductor Industry Growth:*
National Policy on Electronics and Semiconductor Manufacturing
Make in India: Incentives and Programs for Semiconductor Companies
Ease of Doing Business Reforms and Impact on Semiconductor Sector
4. *Semiconductor Industry Clusters and Economic Zones:*
Semiconductor Manufacturing Clusters in India
Special Economic Zones (SEZs) for Semiconductor Companies
Cluster-Based Development Models and Lessons from Global Success Stories





5. *Semiconductor Industry as a Driver of Innovation-led Growth:*
 - Innovation Index and Technology Readiness in Indian Semiconductor Sector*
 - Role of Semiconductors in Key Emerging Technologies (AI, IoT, Quantum Computing)*
 - Impact on Other Industries: Automotive, Healthcare, Defense, etc.*
6. *Investment Opportunities and Financing Models:*
 - Venture Capital Trends in Semiconductor Startups*
 - Public-Private Partnerships (PPP) for Semiconductor R&D and Manufacturing*
 - Role of Financial Institutions and Banks in Semiconductor Sector Funding*
7. *Semiconductor Industry and India's Digital Transformation:*
 - Digital India Mission and Semiconductor Infrastructure Development*
 - Smart Cities and IoT Implementation: Semiconductor Solutions*
 - Rural Electrification and Semiconductor Technologies for Rural Development*
8. *Intellectual Property Rights (IPR) and Technology Transfer:*
 - IPR Protection Measures for Semiconductor Designs and Innovations*
 - Technology Transfer Models from Global Semiconductor Giants*
 - Licensing and Collaboration Opportunities for Indian Semiconductor Companies*
9. *Bilateral Trade Agreements and Partnerships:*
 - India's Semiconductor Trade Balance with Key Countries/Regions*
 - Bilateral Agreements for Technology Transfer and Research Collaboration*
 - Free Trade Agreements (FTAs) Impact on Semiconductor Imports and Exports*
10. *Semiconductor Industry Resilience and Economic Recovery:*
 - Semiconductor Demand Trends Post-Pandemic: Opportunities and Challenges*
 - Supply Chain Disruptions and Strategies for Economic Resilience*
 - Semiconductors as a Critical Industry for India's Post-COVID Economic Recovery*
11. *Sustainable Development Goals (SDGs) and Semiconductor Industry:*
 - Sustainable Semiconductor Manufacturing Practices*
 - Green Energy Solutions for Semiconductor Facilities*
 - Contribution of Semiconductors to Climate Action and Environmental Sustainability*
12. *Global Economic Trends and Impact on Indian Semiconductor Industry:*
 - Geopolitical Factors Shaping Semiconductor Trade and Investments*
 - Economic Shifts: Rise of Asia as a Semiconductor Manufacturing Hub*
 - Supply Chain Diversification Strategies in a Post-Pandemic World*





Conference Objectives:

*Explore the latest trends and advancements in semiconductor technologies.
Discuss research and development initiatives driving innovation in the industry.
Foster collaboration between academia, industry, and government sectors.
Examine the role of semiconductors in strengthening India's economy.
Build a vibrant innovation ecosystem for sustainable growth.*

Conference Highlights:

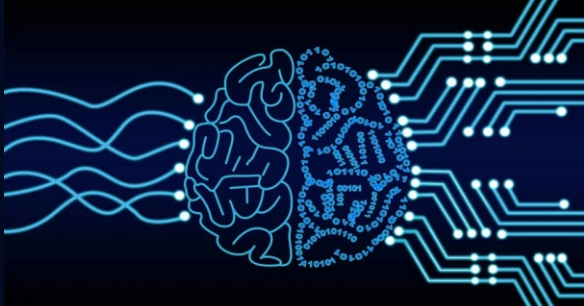
*Keynote Sessions: Insights from industry leaders and experts on the future of semiconductors.
Panel Discussions: Engage in discussions on policy frameworks, industry challenges, and emerging opportunities.
Research Presentations: Showcase of cutting-edge research and innovations in semiconductor technologies.
Networking Opportunities: Connect with peers, potential collaborators, and industry professionals.*

"ICs-SEMICONDUCTOR INDIA 2024 (Institutional Chapter)", organized by IIMT College of Management in collaboration with the Indian Council of Social Science Research (ICSSR), Ministry of Education, Government of India, invites researchers, scholars, industry professionals, and innovators to submit their research papers for presentation at the international conference.

- *Semiconductor Technologies: Trends and Innovations*
- *Industry-Academia Collaboration for Technological Advancements*
- *Government Policies and Incentives for Semiconductor Growth*
- *Semiconductor Manufacturing and Supply Chain Optimization*
- *Artificial Intelligence and Machine Learning in Semiconductor Industry*
- *Internet of Things (IoT) Applications with Semiconductors*
- *Quantum Computing and Semiconductor Technologies*
- *Sustainable Practices in Semiconductor Manufacturing*
- *Startups and Entrepreneurship in Semiconductor Ecosystem*
- *Economic Impact and Market Trends in Semiconductor Industry*

In Association with





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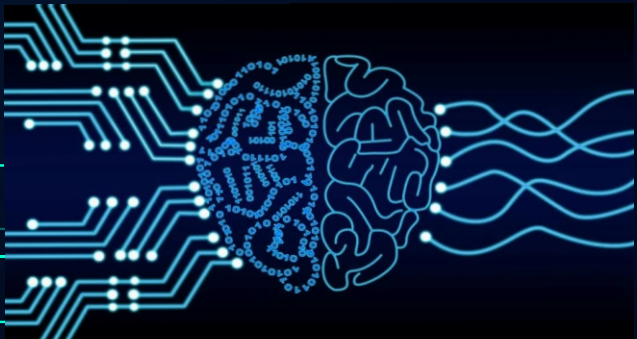
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Date: 24 & 25 July 2024

Session-wise program Schedule

Venue: Krishna / CV Raman Auditorium

IIMT College of Management

Plot No. 19 & 20, Knowledge Park-III Greater Noida, Uttar Pradesh, India

Day 1: Inaugural Session

09:00 AM - 09:30 AM: Registration and Welcome Coffee

09:30 AM - 10:00 AM: Inaugural Address

10:00 AM - 10:30 AM: Keynote Address: "India's Semiconductor Vision"

Session 1: Building an Innovation Ecosystem

11:00 AM - 12:30 PM: Panel Discussion: "Research and Development Initiatives in Semiconductor Technologies"

Session 2: Collaborative Partnerships for Growth

12:30 PM - 01:30 PM: Presentation: "Public-Private Partnerships in Semiconductor Research"

Session 3: Emerging Technologies in Semiconductors

02:30 PM - 04:00 PM: International Paper Presentations

Day 2: Special Sessions and Workshops

09:30 AM - 11:00 AM: Workshop: "Intellectual Property Rights Protection in the Semiconductor Sector"

Session 4: Policy Frameworks for Industry Development

11:00 AM - 12:30 PM: Panel Discussion: "Government Incentives and Regulatory Environment for Semiconductors"

Session 5: Skill Development and Talent Pipeline

12:30 PM - 01:30 PM: Presentation: "Training Programs for Semiconductor Industry Professionals"

Session 6: Global Perspectives and Market Expansion

02:30 PM - 04:00 PM: International Panel Discussion: "Market Trends and Opportunities in the Global Semiconductor Industry"

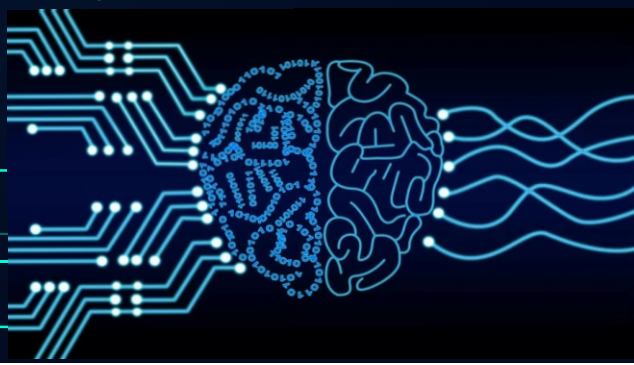
04:00 PM - 04:30 PM: Closing Remarks and Vote of Thanks

Note:

This is a tentative program and subject to change.

Additional speakers and panelists may be invited based on availability and relevance.

Paper presenters' affiliations are provided as per the information available at the time of proposal.





Instructions for Authors & Submission Guidelines:

- *Papers must be original and should not have been published elsewhere.*
- *Authors are requested to submit full papers (not exceeding 6 pages) in IEEE format.*
- *All submissions must be in English and submitted in PDF format.*
- *Use IEEE conference template for formatting.*
- *Include title, abstract, keywords, introduction, methodology, results, conclusion, and references.*
- *Ensure all figures, tables, and equations are numbered and cited in the text.*
- *Submit your paper through the conference submission portal.*
- *Include author(s) name, affiliation, contact details, and brief biography.*
- *All submissions will undergo a double-blind peer review process.*
- *Authors will be notified of the acceptance status and any required revisions.*
- *Paper Submission Deadline: 15 June 2024*
- *Notification of Acceptance: 25 June 2024*
- *Abstractive Briefing Submission: 10 June 2024*
- *Accepted papers will be included in the conference proceedings.*
- *Selected papers will be invited for publication in indexed journals.*

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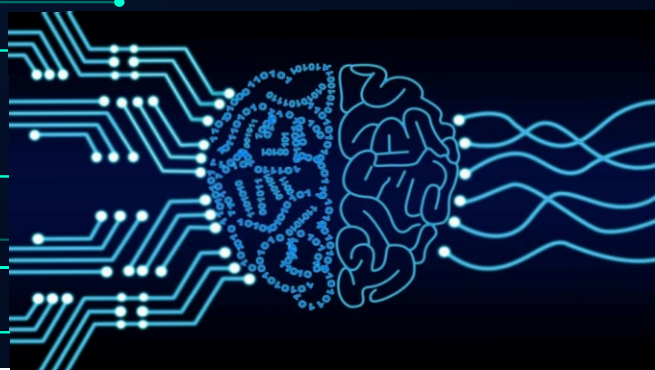
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Mail us at: headrndiimtcm_gn@iimtindia.net*





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Ministry of
Electronics & Information Technology
Government of India

my
GOV
मेरी सरकार



**CHIP MANUFACTURING IS NOT
JUST AN INDUSTRY, IT OPENS THE
DOOR TO DEVELOPMENT, WHICH IS
FULL OF LIMITLESS POSSIBILITIES.**

This sector is not only going to create new
employment opportunities in India, but also
big progress in the field of Technological
Advancements

PM मोदी

PM Modi in 'India's Techade: Chips for Viksit Bharat' program
13 March 2024





*"As the Conference Chair of
"ICs-SEMICONDUCTOR INDIA 2024 (Institutional Chapter)", I am thrilled to invite
you to a dynamic platform where Innovation meets collaboration. Join us in
shaping India's semiconductor landscape, accelerating economic growth,
and building an ecosystem of endless possibilities. Let's embark on this
transformative journey together at
"ICs-SEMICONDUCTOR INDIA 2024 (Institutional Chapter)"*

*Dr Abhinna Baxi Bhatnagar
Director*



Venue: C.V. Raman Auditorium
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