


Silver Jubilee Year Celebrations

Distinguished Lecture

Advancements in Power Electronics with Wide Bank Gap Device

 02 June 2026 | Tuesday

 10:00 AM – 01:00 PM

 Tejas Seminar Hall



Dr. S. Arungalai Vendan

Professor
Department of Electronics and Communication Engineering
Dayananda Sagar University, Bangalore

Organising Committee

Dr. Vinoth Kumar K
Professor and Associate Head – R&D

Dr. Revathi V
Dean R&D

Dr. Manjunatha
Principal

Organised by
Department of Research and Development



Revathi V
Dean
Department of Research and Development
NEW HORIZON COLLEGE OF ENGINEERING
New Horizon Knowledge Park, Bellandur Main Road,
Near Marathalli, Bengaluru – 560 103



Department of Research and Development



Event Report

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|------------|---|----------------|
| Title | Distinguished Lecture on Advancements in Power Electronics with Wide Band Gap Device | |
| Department | Research and Development | |
| Date | From: 02.06.2026 | To: 02.06.2026 |
| Time | From: 10:00 AM | To: 12:30 PM |

Introduction

As part of the Silver Jubilee Celebrations of New Horizon College of Engineering, Bengaluru, the Department of Research and Development organized a Distinguished Lecture on “Advancements in Power Electronics with Wide Band Gap Devices” on 02 June 2026 (Tuesday) from 10:00 AM to 12:30 PM at Tejas Seminar Hall. The programme was conducted in offline mode and witnessed enthusiastic participation from faculty members, researchers, and students from various departments. This programme is technically sponsored by IEEE PELS SBC of NHCE and IEEE PELS Bangalore Section Chapter.

The distinguished speaker for the event was Dr. S. Arungalai Vendan, Professor, Department of Electronics and Communication Engineering, Dayananda Sagar University, Bengaluru. The lecture focused on the recent advancements and emerging trends in power electronics enabled by Wide Band Gap (WBG) semiconductor devices such as Silicon Carbide (SiC) and Gallium Nitride (GaN).

During the session, the resource person highlighted the fundamental characteristics of WBG devices, their advantages over conventional silicon-based devices, and their significant role in improving efficiency, switching speed, thermal performance, and power density in modern power electronic systems. The lecture also covered applications of WBG devices in electric vehicles, renewable energy systems, smart grids, industrial automation, aerospace systems, and high-frequency power converters.

The speaker shared valuable insights into current research challenges, industrial requirements, and future opportunities in the field of power electronics. Real-world case studies and recent technological developments were presented, enabling participants to gain a deeper understanding of the practical implementation and commercial potential of WBG technologies.

The interactive session that followed the lecture provided participants with an opportunity to engage with the expert, clarify technical concepts, and discuss emerging research directions. The session received an

overwhelming response, reflecting the growing interest in advanced power electronic technologies among the academic community.

The programme concluded with a vote of thanks, expressing gratitude to the distinguished speaker for sharing his expertise and to the management, faculty members, and participants for their active involvement. The lecture successfully enhanced the knowledge of attendees and contributed to the institution's objective of promoting research, innovation, and industry-relevant learning as part of the Silver Jubilee Celebrations.

Objectives of the Workshop

- To provide participants with an understanding of the latest advancements in power electronics enabled by Wide Band Gap (WBG) semiconductor devices.
- To familiarize faculty members, researchers, and students with the characteristics and advantages of Silicon Carbide (SiC) and Gallium Nitride (GaN) devices.
- To create awareness about the applications of WBG devices in electric vehicles, renewable energy systems, smart grids, and industrial power converters.
- To expose participants to emerging research trends, technological developments, and industry requirements in the field of power electronics.
- To bridge the gap between academic research and industrial practices through expert knowledge sharing.
- To encourage innovation and research activities in advanced power electronic systems and semiconductor technologies.
- To promote interdisciplinary learning and collaboration among students, faculty members, and researchers.
- To enhance the technical competency of participants in designing efficient and sustainable power electronic solutions.
- To inspire young researchers and students to pursue higher studies and research in power electronics and energy systems.
- To contribute to the institution's vision of fostering research excellence and technological advancement as part of the Silver Jubilee Celebrations.

Workshop Highlights

- Highlighted the advantages of Wide Band Gap devices, including higher efficiency, faster switching speeds, improved thermal performance, and enhanced power density.
- Discussed emerging applications in electric vehicles, renewable energy systems, smart grids, industrial automation, aerospace, and high-frequency power converters.
- Provided insights into current research challenges, industrial expectations, and future opportunities in power electronics.
- Included real-world examples and case studies demonstrating the practical implementation of Wide Band Gap technologies.
- Facilitated an interactive question-and-answer session, enabling participants to engage directly with the expert.

- Offered valuable exposure to cutting-edge research and technological innovations in the field of power electronics.
- Encouraged participants to explore research and development opportunities in advanced semiconductor devices and sustainable energy technologies.

Participation

The DL Programme witnessed 69 active participation from faculty members and research scholars across various departments. The interactive sessions encouraged participants to clarify their doubts and engage in discussions.

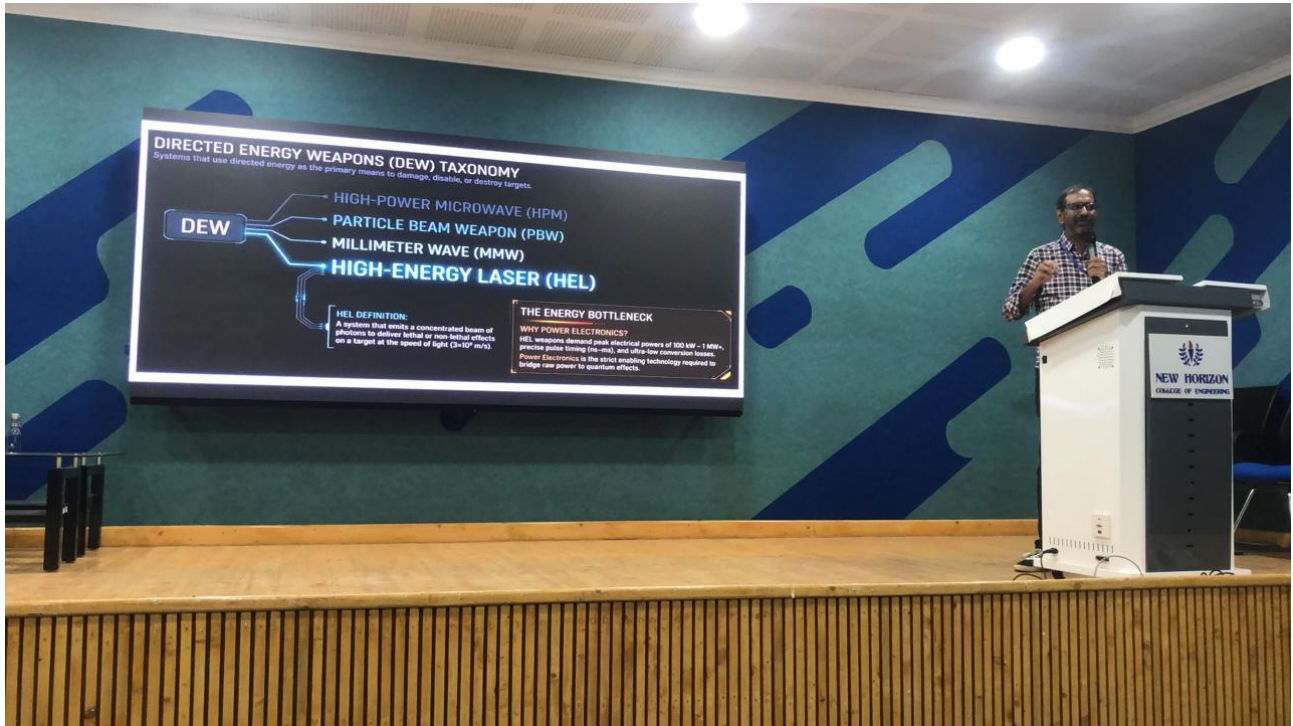
Outcome of the Programme:

- Enhanced awareness of Wide Band Gap semiconductor technologies.
- Improved understanding of advanced power electronic systems and applications.
- Exposure to current research trends and industrial developments.
- Encouraged faculty members and students to pursue research in power electronics and related domains.
- Strengthened academia-industry-research interaction through expert knowledge sharing.

Conclusion

The Distinguished Lecture on “Advancements in Power Electronics with Wide Band Gap Devices” was highly informative and beneficial for faculty members, researchers, and students. The session provided valuable insights into the latest developments in Wide Band Gap semiconductor technologies and their transformative impact on modern power electronic systems. The expert talk enriched the participants' understanding of emerging research opportunities, industrial applications, and future technological trends in the field. The programme successfully fulfilled its objective of promoting knowledge dissemination, research awareness, and academic excellence as part of the Silver Jubilee Celebrations of New Horizon College of Engineering. The enthusiastic participation and active interaction during the session reflected the relevance and significance of the topic in addressing current and future challenges in power electronics. The eminent expert delivered the lecture and his talk has been very well received by the 69 participants. 69 faculty members are benefitted.







NEW HORIZON COLLEGE OF ENGINEERING

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NBA and NAAC with Grade "A"
New Horizon Knowledge Park, Ring Road, Bellandur Post, Bengaluru 560 103

Department of Research and Development

Distinguished Lecture on Advancements in Power Electronics with Wide Bank Gap Device on 02.06.2026



Participant Details (Attendance)

| S.No | Name | Department | Signature |
|------|------------------------|------------|-----------|
| 1. | Vinodkumar M.H. | EEE | |
| 2. | S. BOOBALAN | EEE | |
| 3. | D SATISH KUMAR | EEE | |
| 4. | Dr. Syam Das | EEP | |
| 5. | Bhaskar S | CSE-1 | |
| 6. | Mrs. Padmavathi. C.A | CSE-2 | |
| 7. | Sayani Baisya | CSE-2 | |
| 8. | Pravallika Medhekar | CSE-2 | |
| 9. | D. Lincy Rajana | CSE-2 | |
| 10. | Garima Jorhi | CSE-2 | |
| 11. | M.Usha Rani | CSE-2 | |
| 12. | Ashwini GB | CSE-1 | |
| 13. | Mehda B | CSE-2 | |
| 14. | Vijayaashree HP | CSE-2 | |
| 15. | Mridinayaka | CSE-2 | |
| 16. | M. Thanga Subha Devi | CSE-1 | |
| 17. | Saranya S | CSE-1 | |
| 18. | A. Yashaswi | CSE-1 | |
| 19. | Dr. Soja Rani S | CSE-1 | |
| 20. | Ms. Subhashree Rath | CSE-1 | |
| 21. | Dr. Nirumala M | CSE-1 | |
| 22. | Mohan Kumar. G.R | ME | |
| 23. | Sandesh D Manojchariya | CSE-2 | |
| 24. | Dr. B S patil | CSE-2 | |
| 25. | Dr Kalavani D | ISE | |
| 26. | A. Shalini | ISE | |
| 27. | Rama Dan | ISE | |
| 28. | Dr. Divya-k.v | ISE | |
| 29. | HARISH. R. HANJUNAL | ECE | |

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|-----|----------------------|----------|-------------|
| 30. | T.V.S. Adinarayana | ECE | arg |
| 31. | Dr. A. Sujin Jose | R&D | VSP |
| 32. | Shubhi Brivastana | ISE | Subh |
| 33. | Sweet Subhashree | TSE | SM |
| 34. | Dnyanesh Chakra | CSE-1 | φ |
| 35. | Lavika KM | CSE-1 | φ |
| 36. | Bhavya R | CSE-1 | φ |
| 37. | Sreethi Vinesh | CSE(CDS) | hth |
| 38. | Aswathy J | CSE(DS) | MU |
| 39. | Sandhya B.S | CSE(DS) | SBI |
| 40. | Shefali Sharma | CSE(CDS) | shfali |
| 41. | Swati Selyal | CSE(CDS) | Swati |
| 42. | Shwetha AN | CSE(DS) | φ |
| 43. | A. Narayana Kiran | ECE | At |
| 44. | Kavitha. U | CSE(DS) | Kavitha.u |
| 45. | Anya. K | CSE(CDS) | anya |
| 46. | Sunil S.K | EEE | Sunil |
| 47. | Dr. R. Mohan Das | EEB | RMS |
| 48. | Dr. T. Joshua. D. Py | CSE(CDS) | φ |
| 49. | VINOD KUMAR. S | EEE | Vinod |
| 50. | ANITHA. A | EEE | φ |
| 51. | RAMYA A | EEE | φ |
| 52. | Ch. Kavitha | EEE | ch |
| 53. | Dr. G. Shanmugapriya | CSE(DS) | Gmni |
| 54. | Dr. Sudarshan K. A | ME | Sum |
| 55. | Dr. SRINATH. N. K | ME | Sum |
| 56. | Dr. Revathi V | R&D | Revathi |
| 57. | Dr. D.V. Sreekanth | ME | φ |
| 58. | Dr. VINOTH KUMAR K | R&D | Vinoth |
| 59. | Dr. Hemant Raja T | ME | HP |
| 60. | Hanumanth Jayalaxi | ME | φ |
| 61. | Rajesh G | ECE | φ |
| 62. | Dr. SHIVA PRASAD S | ME | φ |
| 63. | Dr. K. Gopal | MECH | φ |
| 64. | RAVIKUMAR. M | ME | φ |
| 65. | Dr. K. PRAMILARANI | CSE-2 | arg 21/6/26 |
| 66. | Sowmya R | R&D | φ 21/6/26 |
| 67. | Dr. Asishya V | R&D | φ 21/6/26 |
| 68. | Heleth. R | R&D | Heleth |
| 69. | Anmit Das | R&D | Anmit |
| 70. | | | |
| 71. | | | |
| 72. | | | |
| 73. | | | |
| 74. | | | |

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