**PROFILE**

NAME : **Dr. J. AJAYAN MTech., Ph.D.,**

Date of Birth : 31.05.1986

Sex : Male

Nationality : Indian

Religion : Christian (Catholic)

Address : Ajayavilasam, Kuzhivila, Payattuvila. P. O, 695501,

Trivandrum, Kerala

Mobile Number : 8870407746

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**Academic History**

**PhD in Electronics And Communication Engineering (2013-2017)**

Highly commended,

(Specialisation in microelectronics and nanotechnology)

Karunya University, Coimbatore, India

**Master of Technology (MTech) (2010-2012)**

First class with Distinction (88%),

(Specialisation in VLSI DESIGN)

Karunya University, Coimbatore, India

**Bachelor of Technology (BTech) (2005-2009)**

First Class (65%),

Electronics and Communication Engineering, Kerala University, Trivandrum, India

**Higher Secondary Education (2001-2003)**

First class with Distinction (80%),

Government Boys Higher Secondary School, Neyyattinkara, Trivandrum, India

**SSLC (2001 March)**

First class with Distinction (90%),

Government Model High School, Venganoor, Trivandrum, India.

**Software Exposure**

TCAD, TANNER, HSPICE, PSPICE, LTSPICE, NGSPICE, MICROWIND, XILINX, MULTISIM

**Employment Record (Total Experience 9 years)**

**Infant Jesus College of Engineering and Technology (Anna University, Tirunelveli)**

Type of Employment – Assistant Professor

Department of Electronics and Communication Engineering

Experience- 1 Year (2012 June to May 2013)

**Manakula Vinayagar Institute of Technology (Pondicherry University, Pondicherry)**

Type of Employment – Assistant Professor

Department of Electronics and Communication Engineering

Experience- 2 Year 6 Months (2013 June to December 2015)

**Holy Grace Academy of Engineering (Calicut University, Thrissure)**

Type of Employment – Assistant Professor

Department of Electronics and Communication Engineering

Experience- 1 Year and 6 months (2016 January to May 2016)

**SNS College of Technology (Anna University, Coimbatore,)**

Type of Employment – Senior Assistant Professor

Department of Electronics and Communication Engineering

Experience- 3 Years and 6 Months (From 12th June 2017 to 19th December)

**SR UNIVERSITY, (Warangal)**

Type of Employment – Associate Professor

Department of Electronics and Communication Engineering

Experience- From 4th January 2021 to till date

**Administrative Experience**

Position – **IEEE ELECTRON DEVICES SOCIETY (EDS) COIMBATORE CHAPTER CHAIR**

Place – **ELECTRON DEVICES SOCIETY (EDS) COIMBATORE**

Period - 2020 February to 2021 March

Position – **Assistant Controller of Examinations (Exam Cell)**

Place – Infant Jesus College of Engineering and Technology, Anna University, Tirunelveli

Period - 2012 June to 2013 May

Position – **Deputy Warden**

Place – Men’s Hostel, Manakula Vinayagar Institute of Technology, Pondicherry University,

Pondicherry

Period - 2013 June to 2015 February

Position – **NBA/NAAC Coordinator**

Place – SNS College of Technology

Period - 2017 June to 2021 December

Position – **HOD Coordinator**

Place – SNS College of technology

Period - 2017 June to 2021 December

**Awards and Achievements**

1. First Rank in the SSLC Examination from Government Model High School, Trivandrum
2. Second Rank in the IIIrd semester MTech Examination from Karunya University, Coimbatore
3. Best faculty award from Holy Grace Academy of Engineering in the year 2016
4. Distinction in Higher Secondary School Examination
5. Received “**Best Young Researcher in Nanoelectronic Semiconductor Devices**” Award from International Journal for Research Under Literal Access at GRANDEUR HALL of Hotel Breeze Residency, Trichy, Tamilnadu on 12.11.2018.
6. **Anna University Supervisor ship (3240003)**

**UG/PG/PHD Projects Guided**

UG Projects Guided – 20 (Electronics and Communication Engineering)

PG Projects Guided – 10 (Electronics and Communication Engineering)

PHD Scholars -4 (Mr. Mohan Kumar P-19142697240 & Mr. Jagadesh M-20144691198, Mrs. E.   
 Ramya and Mr. Lakshmana Nainar Sundar)

**Area of Interest**

* CMOS VLSI design
* Solid state devices
* Microelectronics and Nanotechnology

**BOOKS/BOOK CHAPTERS WRITTEN**

**Books**

1. **J. Ajayan and D. Nirmal,** Book titled **“Handbook for III-V High Electron Mobility Transistor Technologies”, ISBN: 1138625272, 9781138625273, CRC PRESS, Taylor & Francis, May 2019.** [**https://www.routledge.com/Handbook-for-III-V-High-Electron-Mobility-Transistor-Technologies/Nirmal-Ajayan/p/book/9780367729240**](https://www.routledge.com/Handbook-for-III-V-High-Electron-Mobility-Transistor-Technologies/Nirmal-Ajayan/p/book/9780367729240)
2. **J. Ajayan, D. Nirmal and Patrick Fay, Book titled “**Semiconductor Devices and Technologies for Future Ultra Low Power Electronics**”, ISBN: 9781032061610, CRC PRESS, Taylor & Francis, December 2021.**

[**https://www.routledge.com/Semiconductor-Devices-and-Technologies-for-Future-Ultra-Low-Power-Electronics/Nirmal-Ajayan-Fay/p/book/9781032061610**](https://www.routledge.com/Semiconductor-Devices-and-Technologies-for-Future-Ultra-Low-Power-Electronics/Nirmal-Ajayan-Fay/p/book/9781032061610)

**3.** Laxman Raju Thoutam, Shubham Tayal and **J. Ajayan,** Book titled **“Emerging Materials-   
 Design, Characterization and Applications”, Springer, Under Process.**

**Book Chapters**

1. **J. Ajayan** and D. Nirmal, “[InP-Based High-Electron-Mobility Transistors for High-Frequency Applications](javascript:void(0))”, **Nanoelectronics: Devices, Circuits and Systems, ELSEVIER**, Publication date 2018/10/19, **eBook ISBN:** 9780128133545 **Paperback ISBN:** 9780128133538, Chapter-3. <https://doi.org/10.1016/B978-0-12-813353-8.00012-9>.
2. **J. Ajayan** and D. Nirmal, “Modeling of Double Gate MOSFETs”, Chapter-6, **Nanoscale Devices: Physics, Modeling, and Their Application, CRC PRESS, Taylor & Francis.** **eBook ISBN: 9781351670227,** Publication date 16 November 2018**.**
3. **J. Ajayan** and D. Nirmal, “A Fundamental Overview of High Electron Mobility Transistor and its Applications”, Chapter-13, **Nanoscale Devices: Physics, Modeling, and Their Application, CRC PRESS, Taylor & Francis. eBook ISBN: 9781351670227,** Publication date 16 November 2018.
4. **J. Ajayan and D. Nirmal,** III-V Compound Semiconductor Transistors-From Planar to Nanowire Structures**,** Chapter-19**, Book: “VLSI and Post-CMOS Devices, Circuits and Modelling”, IET Digital Library.** ISBN: **1785618199, 9781785618192.**
5. **J. Ajayan and D. Nirmal,** III-V Nanoscale Quantum Well Field Effect Transistors for Future High Performance and Low Power Logic Applications**, Book: Nanoscale VLSI** **Devices, Circuits and Applications, Springer, DOI:** <https://doi.org/10.1007/978-981-15-7937-0_7>, **Print ISBN:** 978-981-15-7936-3.
6. **J. Ajayan,** P. Prakasam, P.Mohankumar, An Overview of Green Energy Management Systems, **Book: Advances in Greener Energy Technologies, Springer, DOI:** [**https://doi.org/10.1007/978-981-15-4246-6\_34**](https://doi.org/10.1007/978-981-15-4246-6_34)**,** Print ISBN: 978-981-15-4245-9, **16 May 2020.**
7. M.Saravanan, **J.Ajayan,** Sathish R Jondhale and P.Mohankumar**,** An Overview of Energy Harvesting Techniques for Future Internet of Things Applications, **Book: Internet of Things in Smart Technologies for Sustainable Urban Development, Springer. DOI:** [**https://doi.org/10.1007/978-3-030-34328-6\_7**](https://doi.org/10.1007/978-3-030-34328-6_7)**,** Print ISBN: 978-3-030-34327-9, 30 April 2020.
8. R.Ramesh, Arkaprava Bhattacharyya, Adhithan Pon, D. Nirmal, **J. Ajayan,** Phosphorene based Intelligent Nanosensor for Wearable Electronics Applications, **Book: Handbook of Nanomaterials for Sensing Applications, Elsevier.** **ISBN:** 9780128207833, <https://doi.org/10.1016/B978-0-12-820783-3.00012-9>.
9. A. Mohanbabu, M. Saravanan, **J. Ajayan,** S. Baskaran, Design and development of AlGaN/GaN HEMT for biosensing applications for detection of cancers, tumors, and kidney malfunctioning, **Book: Electronic Devices, Circuits, and Systems for Biomedical Applications Challenges and Intelligent Approach.** **Elsevier, ISBN:** 978-0-323-85172-5, <https://doi.org/10.1016/B978-0-323-85172-5.00001-0>.
10. D. Nirmal and **J. Ajayan,** Negative Capacitance Field Effect Transistors for Future Low Power Electronics, **Book: Contemporary Research In Nanoelectronics: Materials, Devices, Circuits And Systems,** **Springer,** Under Review.
11. M. Saravanan, P. Eswaran, **J. Ajayan,** P. Mohankumar, Nanosensors For Automotive Applications, Book: **Software Engineering for Automotive Systems: Principles and Application, CRC Press, Taylor & Francis,** Under Review.
12. M.Saravanan, J.Ajayan, R. Maheswar, P. Mohankumar, An Overview Of Architecture & Applications Of IoT Based Health Care System, Book: **Smart Healthcare Systems: Applications, Services, and Challenges**, IEEE-Wiley, Under Review.
13. **J. Ajayan**, D. Nirmal, P. Mohankumar and Shubham Tayal, An Overview of Nanowire Field Effect Transistors For Future Nanoscale Integrated Circuits, Book: **Nanoelectronics for Next-generation Integrated Circuits,** **CRC Press, Taylor & Francis,** Under Review.
14. **J. Ajayan**, Shubham Tayal, Sandip Bhattacharya and L. M. I Leo Joseph, The Role of Computational Intelligence in Material Science: An Overview, Book: **Computational Technologies in Materials Science: CRC Press, Taylor & Francis, eBook ISBN9781003121954,** [**https://doi.org/10.1201/9781003121954-6**](https://doi.org/10.1201/9781003121954-6).

**PATENTS PUBLISHED/FILED**

1. M. Saravanan and **J. Ajayan,** Method For Minimizing The Specific Absorption Values Of The Multi-Homed Heterogeneous Wireless Devices, **Patent Granted on 14.10.2020, Innovation Patent, Australian Government,** Term of patent: 8 years from 15.09.2020. **Patent Number: 2020102248.** [**http://pericles.ipaustralia.gov.au/ols/auspat/quickSearch.do?queryString=2020102248&resultsPerPage**](http://pericles.ipaustralia.gov.au/ols/auspat/quickSearch.do?queryString=2020102248&resultsPerPage)**=**
2. M. Saravanan and **J. Ajayan, Drone based 3D printing with enhanced speed by varying the material dispensing, Patent Granted on 28.10.2020, Innovation Patent, Australian Government,** Term of patent: 8 years from 27.09.2020. **Patent Number: 2020102449.**

[**http://pericles.ipaustralia.gov.au/ols/auspat/quickSearch.do?queryString=2020102449&resultsPerPage=**](http://pericles.ipaustralia.gov.au/ols/auspat/quickSearch.do?queryString=2020102449&resultsPerPage=)

1. Ramprabhu. R and **J. Ajayan, Wireless charger using WiFi signals, 22/102019, Design Number: 322833-001.**
2. D. Balaji, **J. Ajayan** and M. Saravanan**, “Flying Vehicle Abetted Network Communication Tower”, Filed on 12/07/2021, Application Number: 202141031112, Published on 23/07/2021.**

**RESEARCH PUBLICATIONS IN INTERNATIONAL JOURNALS**

**2015**

1. **J. Ajayan** and D. Nirmal, **“**A Review of InP/InAlAs\InGaAs Based Transistors For High Frequency Applications**”, *Superlattices and Microstructures*, Elsevier,** Vol. 86, No.10, October, 2015, P. 1-19, **(Impact factor: 2.658).**

**2016**

1. J. Charles Pravin, D. Nirmal, P. Prajoon, and **J. Ajayan**, “Implementation of nanoscale circuits using dual metal gate engineered nanowire MOSFET with high-k dielectrics for low power applications. ***Physica E: Low Dimensional Syst. and Nanostructures***, **Elsevier,** Vol. 83, P. 95-100, 2016, **(Impact factor: 3.382).**
2. **J. Ajayan** and D. Nirmal, **“**20nm T-Gate Composite channel Enhancement-Mode Metamorphic HEMT on GaAs Substrates For Future THz Applications**”, *Journal of Computational Electronics*, Springer,** Vol. 15. No. 4, P. 1291-1296,December, 2016, **(Impact factor: 1.807).**
3. **J. Ajayan** and D. Nirmal, **“**20 nm High Performance Enhancement Mode InP HEMT With Heavily Doped S/D Regions For Future THz Applications**”, *Superlattices and Microstructures*, Elsevier,** Vol. 100, P. 526-534, December, 2016, **(Impact factor: 2.658).**

**2017**

1. **J. Ajayan** and D. Nirmal**, “**20nm Enhancement Mode Metamorphic GaAs HEMT With Highly Doped InGaAs Source/Drain Regions For High Frequency Applications**”, *International Journal of Electronics***, **Taylor & Franciz Group,** Vol. 104, No. 3, P. 504-512, March, 2017, **(Impact factor:1.336).**
2. **J. Ajayan** and D. Nirmal, **“**22 nm In0.75Ga0.25As Channel Based HEMTs on InP/GaAs Substrates For Future THz Applications**”, *Journal of Semiconductors*, IOP Science, Scopus indexed,** Vol. 38, No. 4, P. 044001, April, 2017**.**
3. **J. Ajayan** and D. Nirmal,P. Prajoon, J. Charles Pravin, **“**Analysis of Nanometer-Scale InGaAs/InAs/InGaAs composite Channel MOSFETs Using High-K Dielectrics For High Speed Applications” **International Journal of Electronics and Communications, Elsevier,** Vol. 79, P. 151-157, September, 2017, **(Impact factor: 3.183).**
4. J. Charles Pravin, D. Nirmal, P. Prajoon, N. Mohan Kumar and **J. Ajayan**, “Investigation of 6T SRAM memory circuit using high-k dielectrics based nano scale junctionless transistor” ***Superlattices and Microstructures*, Elsevier,** Vol. 104, P. 470-476, April, 2017, **(Impact factor: 2.658).**
5. **J. Ajayan,** T. D. Subash and Dheena Kurian,“20 nm High Performance Novel MOSHEMT on InP Substrate For Future High Speed Low Power Applications”, ***Superlattices and Microstructures*, Elsevier,** Vol. 109, P. 183-193, September, 2017, **(Impact factor: 2.658).**
6. P. Murugapandian, S. Ravimaran, J. William, **J. Ajayan** and D. Nirmal,“DC and Microwave Characteristics of 20 nm T-gate InAlN/GaN High Electron Mobility Transistor For High Power RF Applications”, ***Superlattices and Microstructures*, Elsevier,** Vol. 109, P. 725-734, September, 2017, **(Impact factor: 2.658).**

**2018**

1. **J. Ajayan,** D. Nirmal, T. Ravichandran, P. Mohankumar, P. Prajoon, L. Arivazhagan and Chandan Kumar Sarkar, “InP high electron mobility transistors for submillimetre wave and terahertz frequency applications: A review”, **International Journal of Electronics and Communications, Elsevier,** Vol. 94, P. 199-214, September, 2018, **(Impact factor: 3.183).**
2. **J. Ajayan,** T. Ravichandran, P. Mohankumar, P. Prajoon, J. Charles Pravin and D. Nirmal, **“**Investigation of DC-RF and Breakdown Behaviour in Lg = 20 nm Novel Asymmetric GaAs MHEMTs for Future Submillimetre Wave Applications” **International Journal of Electronics and Communications, Elsevier,** Vol. 84, P. 387-393, February, 2018, **(Impact factor: 3.183).**
3. **J. Ajayan,** T. Ravichandran, P. Prajoon, J. Charles Pravin and D. Nirmal, **“**Investigation of Breakdown Performance in Lg = 20 nm Novel Asymmetric InP HEMTs for Future High Speed High Power Applications”, ***Journal of Computational Electronics*, Springer,** Vol. 17. No. 1, P. 265-272,March, 2018, **(Impact factor: 1.807).**
4. D. Nirmal, L. Arivazhagan, A. Fletcher, **J. Ajayan**, and P. Prajoon, “Current Collapse Modeling in AlGaN/GaN HEMT Using Small Signal Equivalent Circuit for High Power Application” ***Superlattices and Microstructures*, Elsevier,** Vol. 113, P. 810-820, 2018, **(Impact factor: 2.658).**
5. P. Prajoon, M. Anuja Menokey, J. Charles Pravin, **J. Ajayan,** S. Rajesh and D. Nirmal, “Investigation of Efficiency Enhancement in InGaN MQW LED with Compositionally Step Graded GaN/InAlN/GaN Multi-Layer Barrier”, ***Superlattices and Microstructures*, Elsevier,** Vol. 116, P. 71-78, 2018, **(Impact factor: 2.658).**
6. **J. Ajayan**, T. Ravichandran, P. Mohankumar, P. Prajoon, J. Charles Pravin, and D. Nirmal, “Investigation of DC and RF Performance of Novel MOSHEMT on Silicon Substrate for Future Submillimetre Wave Applications”, **Semiconductors, Springer,** Vol. 52, No. 16, P. 1991-1997, December, 2018, **(Impact factor: 0.674).**

**2019**

1. A.S.Augustine Fletcher, D.Nirmal, **J.Ajayan,** L.Arivazhagan, “Analysis of AlGaN/GaN HEMT using Discrete Field plate technique for High Power and High Frequency Applications” **International Journal of Electronics and Communications, Elsevier,** Vol. 99, P. 325-330, February, 2019, **(Impact factor: 3.183)**.
2. **J. Ajayan**, D. Nirmal, P. Mohankumar, L. Arivazhagan, M. Saravanan, and S. Saravanan, “LG = 20 nm High Performance GaAs Substrate Based Metamorphic MOSHEMT for Next Generation High Speed Low Power Applications”, Journal of Nanoelectronics and Optoelectronics, ASP, Vol. 14, No. 8, P. 1133-1142, August, 2019, (Impact factor: 0.961).
3. **J. Ajayan,** T. Ravichandran, P. Mohankumar, P. Prajoon, J. Charles Pravin & D. Nirmal, “Investigation of RF and DC Performance of E-Mode In0.80Ga0.20As/InAs/In0.80Ga0.20as Channel based DG-HEMTs for Future Submillimetre Wave and THz Applications”, **IETE Journal of Research**, **Taylor & Franciz Group**, Vol. 67, No. 3, P. 366-376, December, 2021, (**Impact factor: 2.333**).

1. [P.Mohankumar](https://www.sciencedirect.com/science/article/pii/S0263224119302970" \l "!), [**J.Ajayan**](https://www.sciencedirect.com/science/article/pii/S0263224119302970#!)**,** [R.Yasodharan](https://www.sciencedirect.com/science/article/pii/S0263224119302970#!), [P.Devendran](https://www.sciencedirect.com/science/article/pii/S0263224119302970#!), [R.Sambasivam](https://www.sciencedirect.com/science/article/pii/S0263224119302970#!), “A review of micromachined sensors for automotive applications”, [**Measurement**](https://www.sciencedirect.com/science/journal/02632241)**, Elsevier,** Vol. 140. P. 305-322, July, 2019, (**Impact factor: 3.927**).
2. [L.Arivazhagan](https://www.sciencedirect.com/science/article/pii/S1434841119306557#!), [D.Nirmal](https://www.sciencedirect.com/science/article/pii/S1434841119306557#!), [D.Godfrey](https://www.sciencedirect.com/science/article/pii/S1434841119306557#!), [**J.Ajayan**](https://www.sciencedirect.com/science/article/pii/S1434841119306557#!)**,** [P.Prajoon](https://www.sciencedirect.com/science/article/pii/S1434841119306557#!), [A.S.Augustine Fletcher](https://www.sciencedirect.com/science/article/pii/S1434841119306557#!), [A.Amir Anton Jone](https://www.sciencedirect.com/science/article/pii/S1434841119306557#!), [J.S.Raj Kumar](https://www.sciencedirect.com/science/article/pii/S1434841119306557#!), “Improved RF and DC performance in AlGaN/GaN HEMT by P-type doping in GaN buffer for millimetre-wave applications”, **International Journal of Electronics and Communications, Elsevier,** Vol. 108, P. 189-194, August, 2019, **(Impact factor: 3.183)**.
3. **Ajayan,** D. Nirmal, P. Mohankumar, Dheena Kuriyan, A.S. Augustine Fletcher, L. Arivazhagan, B. Santhosh Kumar, “GaAs metamorphic high electron mobility transistors for future deepspace-biomedical-millitary and communication system applications:A review”, **Microelectronics Journal, Elsevier,** Vol. 92, P. 104604-1-18, October 2019, **(Impact factor: 1.607)**.
4. **J Ajayan,** D Nirmal, Dheena Kurian, P Mohankumar, L Arivazhagan, AS Augustine Fletcher, TD Subash, M Saravanan, “Investigation of impact of gate underlap/overlap on the analog/RF performance of composite channel double gate MOSFETs”, **Journal of Vacuum Science & Technology B, Nanotechnology and Microelectronics: Materials, Processing, Measurement, and Phenomena,** **American Vacuum Society,** Vol. 37, No. 6, P. 062201, November 2019, **(Impact factor: 1.416)**.
5. M Manikandan, D Nirmal, J Ajayan, P Mohankumar, P Prajoon, L Arivazhagan, “A review of blue light emitting diodes for future solid state lighting and visible light communication applications”, **Superlattices and Microstructures,** **Elsevier,** Vol. 136, P. 106294, December 2019, **(Impact factor: 2.658)**.

**2020**

1. **J. Ajayan,** D. Nirmal, P. Mohankumar, L. Arivazhagan, “Investigation of Impact of Passivation Materials on the DC/RF Performances of InP-HEMTs for Terahertz Sensing and Imaging”, Silicon, Springer, Vol. 12, P. 1225–1230, April, 2020, **(Impact factor: 2.670)**.
2. **J.Ajayan****,** D.Nirmal, P.Mohankumar, M.Saravanan,M.Jagadesh,L.Arivazhagan, “A review of photovoltaic performance of organic/inorganic solar cells for future renewable and sustainable energy technologies”, **Superlattices and Microstructures,** **Elsevier,** Vol. 143, P. 106549, July 2020, **(Impact factor: 2.658)**.
3. AS Augustine Fletcher, D Nirmal, L Arivazhagan, **J. Ajayan,** Arathy Varghese, “Enhancement of Johnson figure of merit in III‐V HEMT combined with discrete field plate and AlGaN blocking layer”, **International Journal of RF and Microwave Computer‐Aided Engineering, Wiley,** Vol. 30, No. 2, P. e22040, February 2020, **(Impact factor: 1.694)**.
4. R Yasodharan, AP Senthilkumar, **J Ajayan,** R Sivabalakrishnan, “Investigation and Influence of layer composition of tandem perovskite solar cells for applications in future renewable and Sustainable energy”, **Optik, Elsevier,** Vol. 212, No. 6, 164723, June 2020, **(Impact factor: 2.443)**.
5. P. Prakasam, Md. Shohel Sayeed & **J. Ajayan,** “Guest editorials: P2P computing for 5G, beyond 5G (B5G) networks and internet-of-everything (IoE)”, **Peer-to-Peer Networking and Applications, Springer, September, 2020, DOI:**[**https://doi.org/10.1007/s12083-020-01001-5**](https://doi.org/10.1007/s12083-020-01001-5)**, (Impact factor: 3.307)**.
6. L. Arivazhagan, D. Nirmal, Subhash Chander, **J. Ajayan,** D. Godfrey, J. S. Rajkumar and S. Bhagya Lakshmi **“**Variable thermal resistance model of GaN‑on‑SiC with substrate scalability”, ***Journal of Computational Electronics*, Springer,** Vol. 19. No. 1, P. 1546–1554,August, 2020, **(Impact factor: 1.807).**
7. M. Manikandan, D. Nirmal, **J. Ajayan,** L. Arivazhagan, P. Prajoon and G. Dhivyasri, Numerical investigation of traps and optical response in III-V nitride quantum LED, Optical and Quantum Electronics, Springer, Vol. 52. P. 513, December, 2020, (**Impact factor: 2.084**).

**2021**

1. P. Mohankumar, **J. Ajayan,** T. Mohanraj, R. Yasodharan, “Recent developments in biosensors for healthcare and biomedical applications: A review”, [**Measurement**](https://www.sciencedirect.com/science/journal/02632241)**, Elsevier,** Vol. 167. P. 108293, January, 2021, (**Impact factor: 3.927**).
2. A. S. Augustine Fletcher, D. Nirmal, **J. Ajayan** & L. Arivazhagan“An Intensive Study on Assorted Substrates Suitable for High JFOM AlGaN/GaN HEMT”, Silicon, Springer, Vol. 13, P. 1591–1598, 2021, **(Impact factor: 2.670)**.
3. L Arivazhagan, D Nirmal, P Pavan Kumar Reddy, **J Ajayan,** D Godfrey, P Prajoon, Ashok Ray “A Numerical Investigation of Heat Suppression in HEMT for Power Electronics Application”, Silicon, Springer, Vol. 13, P. 3039–3046, September, 2021, **(Impact factor: 2.670)**.
4. P Murugapandiyan, Tanvir Hasan, V Rajya Lakshmi, MOHD Wasim, **J Ajayan,** N Ramkumar, D Nirmal, Breakdown voltage enhancement of gate field plate Al0.295Ga0.705N/GaN HEMTs, **International Journal of Electronics, Taylor & Francis,** Vol. 108. P. 1273-1287, August, 2021, (**Impact factor: 1.336**).
5. P Murugapandiyan, D Nirmal, **J Ajayan,** Arathy Varghese, N Ramkumar, “Investigation of Influence of SiN and SiO2 Passivation in Gate Field Plate Double Heterojunction Al0.3Ga0.7N/GaN/Al0.04Ga0.96N High Electron Mobility Transistors”, Silicon, Springer, Vol. 12, P. 1225–1230, January, 2021, **(Impact factor: 2.670)**.
6. **J. Ajayan**, D.Nirmal, Ribu Mathew, Dheena Kurian P.Mohankumar, L.Arivazhagan, D.Ajitha, “A critical review of design and fabrication challenges in InP HEMTs for future terahertz frequency applications”, **Materials Science in Semiconductor Processing**, Elsevier, Vol. 128, P. 105753, June 2021. (**Impact factor: 3.927**).
7. R. Sridevi, J. Charles Pravin, A. Ramesh Babu, **J. Ajayan,** “Lowering the Schottky Barrier Height by Titanium Contact for High-Drain Current in Mono-layer MoS2 Transistor”, Journal of Electronic Materials, Springer, Vol. 50, P. 3295–3301, March 2021. (**Impact factor: 1.938**).
8. A. Karthikeyan, P. Prakasam, S. Karthik, **J. Ajayan** & S. Sai Gokul, “Automata Theory-based Energy Efficient Area Algorithm for an Optimal Solution in Wireless Sensor Networks”, **Wireless Personal Communications, Springer**, Vol. 120, P. 1125–1143, September 2021. (**Impact factor: 1.671**).
9. Husna Hamza. K, D.Nirmal, A.S.Augustine Fletcher, L.Arivazhagan, **J.Ajayan,** Ramkumar Natarajan, Highly Scaled Graded Channel GaN HEMT with Peak Drain Current of 2.48 A/mm, **International Journal of Electronics and Communications, Elsevier,** Vol. 136, P. 153774, July, 2021, **(Impact factor: 3.183)**.
10. Shubham Tayal, **J. Ajayan,** L. M. I. Leo Joseph, J. Tarunkumar, D. Nirmal, Biswajit Jena & Ashutosh Nandi, “A Comprehensive Investigation of Vertically Stacked Silicon Nanosheet Field Effect Transistors: an Analog/RF Perspective”, Silicon, Springer, Vol. 12, P. 1225–1230, May, 2021, **(Impact factor: 2.670)**.
11. **J.Ajayan**, D.Nirmal, Shubham Tayal, Sandip Bhattacharya, L.Arivazhagan, A.S.  
    Augustine Fletcher, P.Murugapandiyan D.Ajitha, “Nanosheet field effect transistors-A next generation device to keep Moore's law alive: An intensive study”, Microelectronics Journal, Vol. 114, P. 105141, August 2021. **(Impact factor: 1.607)**.
12. J. S. Raj Kumar, D. Nirmal, Manish Kumar Hooda, Surinder Singh, **J. Ajayan** & L. Arivazhagan, “Intensive Study of Field-Plated AlGaN/GaN HEMT on Silicon Substrate for High Power RF Applications”, Silicon, Springer, Vol. 12, P. 1225–1230, June, 2021, **(Impact factor: 2.670)**.
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4. **J. Ajayan,** Faiza Abdulkabeer, “A review on High Electron Mobility Transistors”, ***Journal of Semiconductor Devices and Circuits,*** ISSN: 2455-3379, Vol. 3, No. 2, PP. 1-10, 2016.
5. Kavya Balakrishnan, **J. Ajayan**, “Study of Dual Modulus Prescaler for Frequency Synthesizer”, ***Journal of Microelectronics and Solid State Devices***, ISSN: 2455-3336, Vol. 3, No. 2, PP. 16-22, 2016.
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11. R. Ramprabhu, S. R. Surya Prasannah, T. Roshan Benny, M. Surya, V. Saran Kumar, **J. Ajayan,** “A Review of Flexible Energy Storage Devices”, **International Journal of Creative Research Thoughts (IJCRT),** ISSN: 2320-2882, Vol. 6, No. 2, April 2018.
12. R. Shri Pradha, K. A. Ranjitha, G. Vaishnavi, J. Ajayan, “Comparison of Static and Dynamic Carry look Ahead Adders”, **International Journal of Creative Research Thoughts (IJCRT),** ISSN: 2320-2882, Vol. 6, No. 2, April 2018.
13. T. Ravichandran**, J. Ajayan,** S. Monishraj, S. Naveena, M. Ramkumar, “High Speed Low-Power XOR and XNOR Gates for Future Digital Integrated Circuits”, **International Journal For Research & Development In Technology**, ISSN: 2349-3585, Vol. 10, No. 4, October 2018.
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15. **J. Ajayan,** I.Rinisha Prem Priya, “Design of Approximate Multiplier For High Speed Application”, Journal of Emerging Technologies and Innovative Research (JETIR), February 2019, Volume 6, Issue 2, (ISSN-2349-5162).
16. I.Rinisha Prem Priya,  **J. Ajayan,** “Design Of Approximate Multiplier With Tradeoff In Power And Area”, International Journal of Engineering Development and Research, Volume 7, Issue 2, P. 122-125, ISSN: 2321-9939, May 2019.
17. **Ajayan J,** Sanjay K, Sangeetha Govindan, Sabareeshun V, Reena K, “Automated Honeycomb Composite Structure Repair System”, International Journal for Scientific Research & Development| (IJSRD), Volume 7, Issue 12, P. 669-672, ISSN: 2321-0613, February 2020.
18. B.Santhosh Kumar, T.Daniya, **J.Ajayan,** “Breast Cancer Prediction Using Machine Learning Algorithms”, **International Journal of Advanced Science and Technology**, ISSN: 2005-4238, Vol. 29, No. 3, P. 7819 – 7828, March 2020.
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21. M. Saravanan, EswaranParthasarathy, **J. Ajayan,** A.Sripathy, “Design And Implementation Of Smart Petrol Filling Station Using IoT”, Elementary Education Online, Vol. 20, Issue 1, pp.2365-2371, 2021.

**RESEARCH PUBLICATIONS IN INTERNATIONAL CONFERENCES**

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2. **J. Ajayan**, T. D. Subash, T. Gnanasekaran, N. Mohankumar, “Study of 25nm Symmetric Extended Source/Drain Schottky Tunneling Transistors”, 2013 **IEEE** International Conference on Emerging Trends in Computing, Communication and Nanotechnology ( ICE-CCN 2013), PP. 8-12, ISBN: 978-1-4673-5036-5/13/$31.00 © 2013 IEEE, organized by Infant Jesus College of Engineering and Technology, March-25, 26, 2013.
3. **J. Ajayan,** T. D. Subash, T. Gnanasekaran, N. Mohankumar, “Study of Effects of High-k Dielectrics in Schottky Tunneling Source MOSFETs”, **IEEE** International Multi-conference on Automation, Computing, Communication, Control and Compressed Sensing (IMAC4S 2013), Organized by **School of Electronics, St Josephs College of Engineering and Technology, Palai,** March-22, 23, 2013. **DOI:**[10.1109/iMac4s.2013.6526458](https://doi.org/10.1109/iMac4s.2013.6526458).
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5. **J. Ajayan** and D. Nirmal,S. Sivasankari, D. Sivaranjini, M. Manikandan **“**High Speed Low Power Full Adder Circuit Design Using Current Comparison Based Domino**”,** Second International Conference on Devices Circuits and Systems (ICDCS’14), **IEEE**, Karunya University, Coimbatore, Tamil Nadu, India, March 6-8, 2014.
6. **J. Ajayan** and D. Nirmal,D. Sivaranjini, S. Sivasankari, M.Manikandan **“**High Performance Low Leakage Power Full Adder Circuit Design Using Rate Sensing Keeper” **IEEE** International Conference on Electronics And Communication System (ICECS-2014), Karpagam University, Coimbatore, Tamil Nadu, India, March 6-8, 2014.
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9. S. Shriram, **J. Ajayan,** K. Vivek, D. Nirmal and V. Rajesh, “A High Speed 256-Bit Carry Look Ahead Adder Design Using 22 nm Strained Silicon Technology”, **IEEE** Sponsored 2nd International Conference on Electronics and Communication System (ICECS-2015), ISBN: 978-1-4244-xxxx-x/09©2009 IEEE, PP. 174-179, 2015.
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19. N. Hemapradhap and **J. Ajayan, “**A 5 GHz 1.2V Divide-by-128/129 and 256/257 Dual Modulus Prescalers Using 90nm CMOS Technology”, **IEEE** International Conference on Advances in Electrical, Electronics, Information, Communication and Bio-Informatics (AEEICB16), ISBN: 978-1-4673-9745-2 ©2016 IEEE, PP. 115-120, 2016.
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21. **J. Ajayan**, P. Santhosh Kumar, S. Saravanan, S. Sivadharini and R. Sophia, “Development of Smart Mirror using Raspberry-pi 3 for Interactive Multimedia”, **12th International Conference on RecenT Innovations in Science, Engineering and Management (ICRISEM-2018)**, Sri Venkateswara College of Engineering & Technology, Etcherla, Srikakulam, ISBN: 978-93-87793-01-9, February 17, 2018.
22. Pratik P Pandit, L. Arivazhagan, P. Prajoon, J. S. Rajkumar, **J. Ajayan** and D. Nirmal, “DC Performance Analysis of AlGaN/GaN HEMT for Future High Power Applications”, Fourth **IEEE** International Conference on Devices, Circuits and Systems (ICDCS-2018), ISBN: 978-1-5386-3476-9/18/$31.00©2018 IEEE, PP. 313-318, Karunya Institute of Technology and Sciences, Coimbatore, Tamil Nadu, India, 2016.
23. B. Santhosh Kumar, R.Cristin, **J. Ajayan**, “Survey on Privacy Preserving Data Mining for Information Extraction”, Proceedings of the International Conference on Intelligent Computing and Sustainable System (ICICSS 2018) DVD Part Number:CFP18O03-DVD; ISBN;978-1-5386-4344-0, 978-1-5386-4345-7/18/$31.00 ©2018 IEEE, PP. 119-122, 2018, Organized by Akshaya College of Engineering and Technology (ACET), 20, 21 September, 2018.
24. R. Sangeetha, A. Vidhyashri, M. Reena, R. B. Sudharshan, Sangeetha govindan, **J. Ajayan,** “An Overview Of Dynamic CMOS Comparators”, Proceedings of the [5th International Conference on Advanced Computing & Communication Systems (ICACCS)](https://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=8722826), Organized by Sri Eshwar College of Engineering, Coimbatore, Tamilnadu, India. 15-16 March 2019, **DOI:**[10.1109/ICACCS.2019.8728470](https://doi.org/10.1109/ICACCS.2019.8728470), ISBN: 978-1-5386-9533-3/19/$31.00 ©2019 IEEE, P. 1001-1004, 2019.
25. R Shri pradha, V P Suryaswetha, K M Senthil, **J Ajayan,** J Jayageetha, A Karhikeyan, “Agricultural Field Monitoring using IoT”, Proceedings of the [5th International Conference on Advanced Computing & Communication Systems (ICACCS)](https://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=8722826), Organized by Sri Eshwar College of Engineering, Coimbatore, Tamilnadu, India. 15-16 March 2019, **DOI:**[10.1109/ICACCS.2019.8728508](https://doi.org/10.1109/ICACCS.2019.8728508), ISBN: 978-1-5386-9533-3/19/$31.00 ©2019 IEEE, P. 277-280, 2019.
26. Yasodharan R, Senthilkumar A P, **Ajayan J,** Mohankumar P, “Effects of layer thickness on Power Conversion Efficiency in Perovskite solar cell: A numerical simulation approach”, Proceedings of the [5th International Conference on Advanced Computing & Communication Systems (ICACCS)](https://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=8722826), Organized by Sri Eshwar College of Engineering, Coimbatore, Tamilnadu, India. 15-16 March 2019, **DOI:**[10.1109/ICACCS.2019.8728410](https://doi.org/10.1109/ICACCS.2019.8728410), ISBN: 978-1-5386-9533-3/19/$31.00 ©2019 IEEE, P. 1132-1135, 2019.
27. Sanjeev. S, **Ajayan. J,** Gowtham. S, “Microcontroller Based Borewell Vehicle Status Informer Using GSM”, Proceedings of the [5th International Conference on Advanced Computing & Communication Systems (ICACCS)](https://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=8722826), Organized by Sri Eshwar College of Engineering, Coimbatore, Tamilnadu, India. 15-16 March 2019, **DOI:**[10.1109/ICACCS.2019.8728308](https://doi.org/10.1109/ICACCS.2019.8728308), ISBN: 978-1-5386-9533-3/19/$31.00 ©2019 IEEE, P. 73-77, 2019.
28. Ramprabhu R, Sanjay k, Saran Kumar V, Santhosh A. C, M. Saravanan, **Ajayan J**, “An Overview of Recent Developments in Silicon Solar Cells”, Proceedings of the [5th International Conference on Advanced Computing & Communication Systems (ICACCS)](https://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=8722826), Organized by Sri Eshwar College of Engineering, Coimbatore, Tamilnadu, India. 15-16 March 2019, **DOI:**[10.1109/ICACCS.2019.8728339](https://doi.org/10.1109/ICACCS.2019.8728339), ISBN: 978-1-5386-9533-3/19/$31.00 ©2019 IEEE, P. 73-77, 2019.
29. Vishnu Vardhanaan.S, Saranya M, **Ajayan J**, “Web Surfing in Anonymity Status”, Proceedings of the [5th International Conference on Advanced Computing & Communication Systems (ICACCS)](https://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=8722826), Organized by Sri Eshwar College of Engineering, Coimbatore, Tamilnadu, India. 15-16 March 2019, **DOI:**[10.1109/ICACCS.2019.8728323](https://doi.org/10.1109/ICACCS.2019.8728323), ISBN: 978-1-5386-9533-3/19/$31.00 ©2019 IEEE, P. 73-77, 2019.
30. Augustine Fletcher A.S, Nirmal D, Arivazhagan L, **Ajayan J**, “Influence of assorted back barriers on AlGaN/GaN HEMT for 5G K-band applications”, 2019 International Conference on Signal Processing and Communication (ICSPC -2019), March. 29 – 30, 2019, Organized by Karunya Institute of Science and Technology, Coimbatore, INDIA, 2019.
31. L. Arivazhagan, D. Nirmal, J. Ajayan, D. Godfrey, J. S. Rajkumar, and S. Bhagya Lakshmi, “Enhancement of drain current in AlGaN/GaN HEMT using AlN passivation”, AIP Conference Proceedings 2201, 020009 (2019); <https://doi.org/10.1063/1.5141433>, Second International Conference on Material Science, Smart Structures and Applications, November 20-21, Organized by Surya Engineering College, Erode, India, 2019.
32. L. Arivazhagan, D. Nirmal, J. Ajayan, D. Godfrey, J. S. Rakkumar, and S. Bhagya Lakshmi, “Modeling of self-heating for AlGaN/GaN HEMT with thermal conductivity degradation effect”, AIP Conference Proceedings 2201, 020010 (2019); <https://doi.org/10.1063/1.5141434>, Second International Conference on Material Science, Smart Structures and Applications, November 20-21, Organized by Surya Engineering College, Erode, India, 2019.
33. Sedhumadhavan. A ; Sabariesh. S ; Shanmathi. V ; Ramya. K ; Venukumar. R ; **Ajayan. J,** “Study of Performance Comparison of Static and Dynamic Approximate Reverse Carry Propagate Adder Using 22 nm CMOS Technology”, 2020 6th International Conference on Advanced Computing and Communication Systems (ICACCS), Organized by Sri Eshwar College of Engineering, Coimbatore, Tamilnadu, India. 6-7 March 2020, DOI: 10.1109/ICACCS48705.2020.9074311, ISBN: 978-1-7281-5197-7/20/$31.00 ©2020 IEEE, P. 288-292, 2020.
34. P.M. Aarthi ; A. Dinesh ; T. Janani ; V.Ananth Kumar ; M. Saravana ; **J. Ajayan,** “Study of Performance of High-Speed Low-Power Differential Input Based Dynamic Comparator Using 22 nm CMOS Technology”, 2020 6th International Conference on Advanced Computing and Communication Systems (ICACCS), Organized by Sri Eshwar College of Engineering, Coimbatore, Tamilnadu, India. 6-7 March 2020, DOI: 10.1109/ICACCS48705.2020.9074441, ISBN: 978-1-7281-5197-7/20/$31.00 ©2020 IEEE, P. 394-397, 2020.
35. K Sanjay ; V Sabareeshsun ; Sangeetha Govindan ; K Reena ; M. Saravannan ; **Ajayan. J,** “Automated Honeycomb Composite Structure Repair System”, 2020 6th International Conference on Advanced Computing and Communication Systems (ICACCS), Organized by Sri Eshwar College of Engineering, Coimbatore, Tamilnadu, India. 6-7 March 2020, DOI: 10.1109/ICACCS48705.2020.9074193, ISBN: 978-1-7281-5197-7/20/$31.00 ©2020 IEEE, P. 276-279, 2020.
36. H. K. Husna, D. Nirmal, S. Merlin Gilbert Raj, **J. Ajayan**, L. Arivazhagan and A. S. Augustine Fletcher, "6 GHz GaN HEMT Linear Power Amplifier," *2021 3rd International Conference on Signal Processing and Communication (ICPSC)*, 2021, pp. 219-222, DOI: 10.1109/ICSPC51351.2021.9451754.
37. M. Manikandan, D. Nirmal; G. Dhivyasri; L. Arivahagan; **J. Ajayan**; R. Chandru; K. Rajeshwaran, "Simulation analysis of UV –A band LEDs with BGaN single quantum well using SiC substrate for medical applications," *2021 3rd International Conference on Signal Processing and Communication (ICPSC)*, 2021, pp. 312-314, DOI: 10.1109/ICSPC51351.2021.9451764.
38. Vishal Jain; Shubham Tayal; Parveen Singla; Vikas Mittal; Swati Gupta; Ajayan. J, “An Intensive Study of Thermal Effects in High Speed Low Power CMOS Dynamic Comparators”, 6th International Conference on Communication and Electronics Systems (ICCES), 2021, pp. 250-254, **DOI:**[10.1109/ICCES51350.2021.9488992](https://doi.org/10.1109/ICCES51350.2021.9488992).

**WORKSHOPS/SEMINARS ATTENDED**

* Engineering faculty workshop “WIPRO MISSION 10X”- Conducted at Sri Manakular Vinayagar Engineering College, Madagadipet, Pondicherry, 24-26 October 2013.
* A three days training programme “RIPE FACULTY DEVELOPMENT MODULE (RFDMTM)” Conducted by RIPE Academy, Chennai, Organized by MVIT Pondicherry, June 10-12, 2013.
* A two days faculty development programme on “Physical Design of Analog & Digital Circuits Using Cadence Design Suite”, held on February 12-13, Conducted by the Department of Electronics and Communication Engineering in association with Cadence Design Systems, India, conducted at SRM University.
* A three days faculty development programme on “E-LITERACY LEVEL-II (Advanced Teaching Techniques)”, Conducted by ICT Training Academy (ICTACT), PONDICHERRY, held at ICT Training Academy on 4-6 May, 2015.
* INUP Familiarization workshop on “Nanofabrication technologies”, Conducted at the centre for nano science and engineering, Indian Institute of Science (IISc) Bangalore, May 18-20, 2015.
* A five days faculty development programme on “LIFE SKILLS”, Conducted by ICT Training Academy (ICTACT), PONDICHERRY, held at ICT Training Academy on 2-6 November, 2015.
* Workshop titled “Innovative Techniques in Teaching and Learning for Professionals-US Perspective”, conducted at Holy Grace Academy of Engineering, Mala, Thrissure on February 5, 2016. Conducted by the Department of Computer science, University of Texas, DALLAS.
* National level research seminar on “Sponsored Research Funding Opportunities Through DRDO & Intellectual Property Rights-Opportunities and Challenges in Engineering and Entrepreneurship (READ-2017)”, Organized by Research and Development Cell, SNS College of Engineering on 30th November 2017.
* Short term training programme through ICT Mode on NBA Accreditation, Organized by National Institute of Technical Teachers Training and Research from 22-04-2019 to 26-04-2019.
* NAAC Supported 2 Days Seminar on “Challenges and Opportunities of NAAC Revised Accreditation Frame work, at SNS College of Technology.

**INTERNATIONAL ONLINE CERTIFICATIONS**

* **CIRCUITS & ELECTRONICS** - A Course of study offered by Massachusetts Institute of Technology through EDX
* **INTRODUCTION TO BIO MEDICAL IMAGING** – A Course of study offered by University of Quensland through EDX
* **FUNDAMENTALS OF NANOELECTRONICS** - A Course of study offered by Massachusetts Institute of Technology through EDX
* **INTRODUCTION TO LINUX** - A Course of study offered by Linux Foundation through EDX
* **DISCRETE TIME SIGNALS AND SYSTEMS**- A Course of study offered by Rice University through EDX
* **INTRODUCTION TO BIOMEDICAL IMAGING**- A Course of study offered by University of Quensland through EDX
* **SIGNALS AND SYSTEMS**- A Course of study offered by IIT Bombay through EDX
* **SOLAR ENERGY**- A Course of study offered by Delft University through EDX
* **INTERNET OF THINGS: COMMUNICATION TECHNOLOGIES-**an online non-credit course authorized by University of California San Diego and offered through Coursera
* **CONTROL OF MOBILE ROBOTS-**an online non-credit course authorized by Georgia Institute of Technology and offered through Coursera
* **INTRODUCTION TO THE INTERNET OF THINGS AND EMBEDDED SYSTEMS-**an online non-credit course authorized by University of California, Irvine and offered through Coursera
* **INTRODUCTION TO BLOCKCHAIN TECHNOLOGIES-**an online non-credit course authorized by INSEAD and offered through Coursera
* **INTRODUCTION TO VIRTUAL REALITY**-an online non-credit course authorized by University of London and Goldsmiths, University of London and offered through Coursera
* **AI FOR EVERYONE**-an online non-credit course authorized by deeplearning.ai and offered through Coursera
* **ELECTRIC INDUSTRY OPERATIONS AND MARKETS**-an online non-credit course authorized by Duke University and offered through Coursera
* **INTRODUCTION TO AUGMENTED REALITY AND ARCORE**-an online non-credit course authorized by Google AR & VR and offered through Coursera

**CONFERENCES/WORKSHOPS/SPECIAL LECTURES CONDUCTED**

* Conducted a one day workshop on “Analog Circuit Simulations Using LTSPICE” at Manakula Vinayagar Institute of Technology, For IInd year ECE students, Pondicherry, September, 2013.
* Conducted a one day workshop on “Analog Circuit Simulations Using PSPICE” at Manakula Vinayagar Institute of Technology, For IIIrd year ECE students, Pondicherry, January, 2014.
* Conducted a one day workshop on “Digital Circuit Simulations Using MICROWIND” at Manakula Vinayagar Institute of Technology, For IIIrd year ECE students, Pondicherry, September, 2014.
* Conducted a two days workshop on “PCB Layout Design Using CADSOFT EAGLE” at Manakula Vinayagar Institute of Technology, For IIIrd year ECE students, Pondicherry, January, 2015.
* Delivered a special lecture on “High Speed Low Power Digital Circuit Design” at Manakula Vinayagar Institute of Technology, For IInd year ECE MTech students, Pondicherry, September, 2015.
* Delivered a special lecture on “Nano Devices” at Manakula Vinayagar Institute of Technology, For BTech ECE MTech students, Pondicherry, October, 2015.
* Coordinator of 12th National Conference on Innovation in Communication and Computing (NCICC-2018) organized at SNS College of Technology, Coimbatore on 28th March 2018.
* **Organized a webinar** on “Artificial Intelligence for Medical Image Analysis of Neuro Imaging Data” on 19th May 2020. The resource person of the program was Dr. Ebenezer Daniel, Post-Doctoral Fellow, National Medical Centre, California, USA.
* **Organized a Webinar** on “Real-Life Experience in Virtual Reality” on 11th May 2020. The resource person of the program is Dr. Razwan Najimaldeen, Professor, Cihan University, Iraq.
* **Organized a Webinar on** “Recent trends in semiconductor devices and future perspectives” on 29 July 2020. The resource person of the program is Dr. Kumar Prasannajit Pradhan, Indian Institute of Information Technology, Design and Manufacturing (IIITDM), Kancheepuram. Institute of National Importance under MHRD, Govt. of India.

**EDITORIAL BOARD MEMBER OF INTERNATIONAL REFERRED JOURNALS**

* Guest Editor of “Special Issue on Energy Harvesting Devices, Circuits and Systems for Internet of Things” in **Microelectronics Journal, Elsevier, Impact Factor: 1.322.**
* Guest Editor of **“special issue on P2P Computing for Beyond 5G Network (B5G) and Internet-of-Everything (IoE)” in Peer-to-Peer Networking and Applications, Springer, Impact Factor: 2.397.**
* Editor of “**Instrumentation Mesure Métrologie (I2M)**” SCOPUS indexed journal.

**REVIEWER OF INTERNATIONAL REFERRED JOURNALS/CONFERENCES**

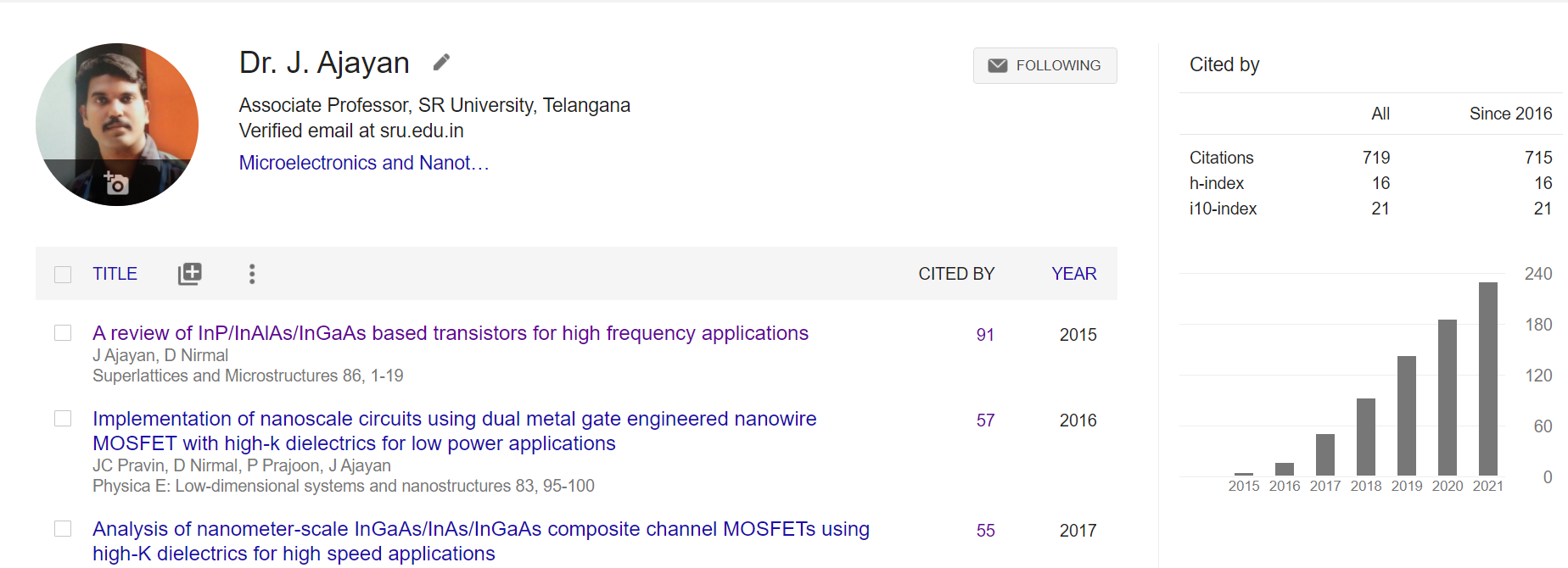
* Reviewer of the journal IEEE Transactions on Nanotechnology from 6/2/2017
* Reviewer of the journal IEEE Transactions on Electron Devices from 12/8/2019
* Reviewer of “Superlattices and Microstructures**”** Elsevier journal from 12/05/2021.
* Reviewer of the journal Semiconductor Science and Technology (IOP Science) from 10/1/2017
* Reviewer of the journal International Journal of Electronics, Taylor & Francis from 5/6/2016
* Reviewer of the journal “Journal of semiconductors” IOP Science from 24/10/2016
* Reviewer of the journal “International Journal of Circuit Theory and Applications ” Wiley from 17/03/2017
* Reviewer of the journal “ETRI Journal” Wiley from 31/05/2018
* Reviewer of the journal “International Journal of Electronics Letters” Taylor & Francis from 7/06/2018
* Reviewer of the journal “IET Circuits, Devices & Systems” IET Digital library from 22/05/2018
* Reviewer of “International Journal of Electronics and Communications” ELSEVIER from 25/09/2018
* Invited Reviewer of “The 7th Global Conference on Material Science and Engineering”, (CMSE 2018), organized by **School of Materials and Chemical Engineering,**[**Xi'an Technological University**](http://chxy.xatu.edu.cn/info/13824/193569.htm), held in **Xi'an, Shaanxi, China** during November 1st-4th, 2018.
* Reviewer of “**Heliyon” Elsevier** journal from 15/11/2018.
* Reviewer of “**Journal of Engineering and Technological Sciences**” from 6/12/2018.
* Reviewer of “**International Journal of Numerical Modelling: Electronic Networks, Devices and Fields”, Wiley,** From 16/02/2019.
* Reviewer of “**Micro & Nano Letters” IET**, From 12/18/2018.
* Reviewer of **“Measurement” ELSEVIER** from 03/06/2019.
* Reviewer of **“IEEE Access”** IEEE from 31/05/2019.
* Reviewer of **“Journal of Electrical and Computer Engineering” Hindawi** from 29/09/2019.
* Reviewer of **“Silicon’ Springer** from 14/10/2019.
* Reviewer of “International Journal of RF and Microwave Computer-Aided Engineering” Wiley from 17/12/2019.
* Reviewer of “**Nuclear Science and Techniques”, Springer** from 31/01/2020.
* Reviewer of **“Journal of Science:Advanced Materials and Devices”,** Elsevier from 04/03/2020.

**INVITED TALKS/GUEST LECTURES**

* Invited Talk on “Advanced Trends in Communication” delivered at Government Polytechnique College Perumbavoor, Ernakulam, Kerala on 17/2/2017.
* Invited Speaker and session chair in the International Multi-Conference on Computing, Communication, Electrical & Nano Technology (I2CN2K18), Organized by Mangalam College of Engineering, Kottayam, Kerala, India on 26th and 27th April 2018.
* Member of the international **scientific committee** of ISPECE 2019, **2019 2nd International Symposium on Power Electronics and Control Engineering (ISPECE 2019), *Conference Date: November 22-24,2019 Conference Place: Tianjin, China.***
* **Invited Guest Lecture “Analog Electronic Circuit Design”, at Kathir College of Engineering, Coimbatore on 11/10/2019.**
* **Advisory committee member of ICICV 2021,** 3rd Intelligent Communication Technologies and Virtual Mobile Networks, Organized by Francis Xavier Engineering College, Tirunelveli, India. sponsored by IEEE. <http://icicv.org/2021/>.
* Delivered a talk during the **National level Three Day Online Faculty Development Program “VLSI technology and hardware for AI and ML”** organized by the department of Electronics and Communication Engineering at **GMR Institute of Technology**, Rajam during 25th to 27th May 2020. Topic: **Semiconductor Transistor Technologies For The Next Decade.**
* Delivered a Webinar on **"The Art of writing Technical Papers"**, held on 29 May 2020, organized by Department of Electronics Engineering/**Govt. Model Engineering College, Thrikkakara,** in association with ASIC - Association of M.Tech VLSI & Embedded Systems.
* Delivered a talk during **A Five Day Online National Level Faculty Development Program On “Opportunities and Challenges in Next-Generation Semiconductor Devices"** Organized by Department of Electronics & Communication Engineering, Anil Neerukonda Institute Of Technology And Sciences (A) during 16th to 20th June 2020, Topic: **Solid-State transistors for terahertz applications.**
* Delivered a Webinar on **"The Art of writing Review Papers"**, held on 9th June 2020, organized by Department of Mechatronics Engineering/SNS **College of Technology, Coimbatore**.
* Delivered a Webinar on **"The Art of writing Technical Papers"**, held on 22nd July 2020, organized by Department of Computer Science Engineering/**PSN College of Engineering And Technology, Tirunelveli**.
* Invited Speaker and session chair in the AICTE Sponsored “**IEEE International Conference on Nanoelectronics, Nanophotonics, Nanomaterials, Nanobioscience & Nanotechnology**” (5NANO 2021), Organized by Mangalam College of Engineering, Kottayam, Kerala, India on 29th and 30th April 2021.
* Delivered a Webinar on **"Analog Circuits Simulation Using SPICE Tools"**, held on 19th May 2021, organized by IEEE Photonics Society Student Chapter of Mangalam College of Engineering in collaboration with MSME Technology Development Centre. Ministry of Micro, Small & Medium Enterprises (MSME), Govt. of India.
* Delivered a Webinar on **"Transistor Technologies for Future 7nm Technology Node Applications"**, held on 31st May 2021, organized by Department of Electronics and Communication Engineering, RAAK College of Engineering and Technology, Pondicherry, India.
* Invited Speaker and session chair in the “**International Conference on Recent Trends in Communication and Embedded System Technologies - 2021” (ICRCET-'21),** Organized by **Christ College of Engineering, Irinjalakuda,** Kerala, India on 13th to 15th July 2021.

**GOOGLE SCHOLAR PROFILE**

<https://scholar.google.ca/citations?user=RtgX7O8AAAAJ&hl=en>



**RESEARCH GATE PROFILE**

<https://www.researchgate.net/profile/J_Ajayan2/research>

**I hereby declare that all the information presented above are true and correct to the best of my knowledge and belief.**

REFERENCE-1

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REFERENCE-2

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