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Ph.D	ThinFilmbasedTemperatureSensors,fromPanjabUniversityChandigarh.
M.Tech	MicroelectronicsandVLSI design,IITKharagpur
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PhDGuiding	04
M.TechGuided	25

ListofPublication(forlastFiveyears):

A) InternationalJournals

1. Hetro-dielectric (HD) oxide-engineered Junctionless double gate all around (DGAA) nanotube field effect transistor (FET), *Raj Kumar, and Arvind Kumar, Silicon* 13, no. 7,2177-2184, 2021.
2. Hafnium based high-k dielectric gate-stacked (GS) gate material engineered (GME) junctionless nanotube MOSFET for digital applications, *Raj Kumar, and Arvind Kumar. Applied Physics A*, 127, no. ,1-10, 2021
3. Study and Analysis of Advanced 3D Multi-Gate Junctionless Transistors,*Raj Kumar, Shashi Bala, and Arvind Kumar, Silicon* 1-15, 2021
<https://doi.org/10.1007/s12633-020-00904-5>.
4. Analytical modelling and simulation analysis of Junctionless Nanotube (JL NT) MOSFET, *Raj Kumar, Shashi Bala, and Arvind Kumar , Transactions on Electrical and Electronic Materials*, 1-9, 2021. <https://doi.org/10.1007/s42341-021-00349-6>.
5. Parameter Variation Analysis of Dopingless and Junctionless Nanotube MOSFET,*Shashi Bala, Raj Kumar and Arvind Kumar, Silicon Journal*pp. 1-9, 2021, <https://doi.org/10.1007/s12633-021-01303-0>.
6. Total Ionization Dose (TID) Effects on 2D MOS Devices, *Shashi Bala, Raj Kumar and Arvind Kumar, Transactions on Electrical and Electronic Materials*, pp.1-9.Vol.22, no.1, 2020.
7. Study and Analysis of Enclosed Gate FET's, *Vandana, Arvind Kumar, Pooja Shilla and Yadevendra Kamal,In IOP Conference Series: Materials Science and Engineering*, vol. 1033, no. 1, p. 012024. IOP Publishing, 2021.
8. Comparative performance analysis of Carbon Nanotube and Si-Nanotube based Field effect Transistors, *Raj Kumar, Shashi Bala, and Arvind Kumar,In IOP Conference Series: Materials Science and Engineering*, vol. 1033, no. 1, p. 012028. IOP Publishing, 2021.
9. Effect of band to band tunnelling (BTBT) on multi-gate Tunnel field effect transistors (TFETs)-A Review, *Pooja, Arvind Kumar and Raj Kumar,In IOP Conference Series: Materials Science and Engineering*, vol. 1033, no. 1, p. 012018. IOP Publishing, 2021.
10. Evaluation and Analysis of Different Spectrum Slicing Techniques in Free Space Optical Systems, *Jitesh Jindal, Arvind Kumar, and Raj Kumar, In IOP Conference Series: Materials Science and Engineering*, vol. 1033, no. 1, p. 012074. IOP Publishing, 2021.

11. **Fabrication and linearisation of conformable POMANI-Mn₃O₄ nanocomposite based thermistor for temperature monitoring applications in prosthetic gloves**
AKumar, ML Singla, AKumar, JK Rajput-Sensors and Actuators A: Physical, 285, 588-598, 2019.
12. **SnO₂-Glycine Functionalised CNTs based electronic nose for detection of explosive materials**,
Arvind Kumar, Jaspreet Kaur Rajput, Sukhvir Kaur, Priya Arora, Harminder Singh, Sensor Letters, 14(7), 733-739 2016
13. **Study of Zr_xZn_{0.5-x}Ni_{0.5}Fe₂O₄ (0 ≤ x ≤ 0.25): Synthesis, Structural, Magnetic and Electrical Properties**, *Jasmeen Saini, Rupesh Kumar, Jaspreet Kaur Rajput, Arvind Kumar, Journal of Magnetism and Magnetic Materials*, Journal of Magnetism and Magnetic Materials 401, 770–774, 2016.
14. **POMANI-Mn₃O₄ based thin film NTC thermistor and its linearization for overheating protection sensor**, *Arvind Kumar, Madan Lal Singla, Amod Kumar, Jaspreet Kaur Rajput, Materials Chemistry and Physics*, 156, 150-162, 2015.
15. **HCl/CSA doped POT-Mn₃O₄ nanocomposites based conformable thin film temperature sensor for prosthetic and gloves**
Arvind Kumar, Madan Lal Singla, Amod Kumar, Jaspreet Kaur Rajput, Journal of Materials Science: Materials in Electronics, 26(3), 1838-1852, 2015.
16. **Designing of ALU using Vedic Multiplier for Single Precision IEEE 754 Standard Floating Point Numbers**, *Satnam Singh Shergill, Arvind Kumar, International Journal of Applied Engineering Research* 10(12), 29357-29365, 2015.
17. **Enhanced BeeGA algorithm for route optimization in Vehicular Ad Hoc networks (VANETs)**, *Daljeet Singh Motton, Arvind Kumar, International Journal of Applied Engineering Research* 10(13), 32803-32812, 2015.
18. **Performance analysis of hybrid routing protocol for application in vehicular Ad Hoc networks**, *Daljeet Singh Motton, Arvind Kumar, International Journal for Research In Technological Studies*, 2(6), 50-54, 2015.
19. **A Review Report on Existing Routing Protocols in Vehicular Ad Hoc Networks (VANETS)**, *Daljeet Singh Motton, Arvind Kumar, Int. Journal of Electrical & Electronics Engg.* Vol.2, Spl. Issue 1, 105-108, 2015
20. **Carbon Nanotubes Based Sensor for Detection of Traces of Gas Molecules-A Review**, *Arvind Kumar, Jaspreet Kaur Rajput, Sukhvir Kaur, Int. Journal of Electrical & Electronics Engg.*, Vol.2, Spl. Issue 1, 2015
21. **Design and Implementation of Optimized 4:1 Mux Using Adiabatic Technique** *Dikshant Kamboj, Arvind Kumar, Vijay, International Journal of Advance Research In Science And Engineering*, Vol.No.3, Issue No.9, 98-108, 2014
22. **Local positioning system using near field communication**, *Baldeep Singh, Arvind Kumar, Sabhyata, American International Journal of Research In Science, Technology Engineering & Mathematics, AIJRSTEM* 14-778, 165-167, 2014
23. **Optimized Conditional Privacy Preservation Protocol for NFC Applications using Genetic Algorithm**, *Baldeep Singh, Arvind Kumar, Sabhyata, International Journal of Computer Applications*, Volume 102-Number 9, 7-11, 2014
24. **Design of High Speed Full Adder using Improved Differential Split Logic technique for 130nm Technology and its implementation in making ALU**, *Gurleen Kaur, Arvind Kumar, Jatinder Singh, International Journal of Computer Applications*, 40-47, 96(18), 2014.

B) International book/Book chapters

- 1. Chapter entitled “Analysis of Transfer Characteristic of Junctionless GaAs nanotube MOSFET with Hafnium Oxide Dielectric” in Advances in Intelligent Systems and Computing, Springer Publications, volume-93, pp473-479 Raj Kumar, Arvind Kumar, 2019.**
- 2. Chapter entitled “Comparative performance analysis of Nanowire and Nanotube field effect transistors” Innovative Applications of Nanowires for Circuit Design. IGI Global, 54-70, Raj Kumar, Shashi Bala, and Arvind Kumar, 2021.**
- 3. Chapter entitled “III-V-Based Gate-All-Around Cylindrical Nanowire Junctionless Field Effect Transistor” Innovative Applications of Nanowires for Circuit Design. IGI Global, 2021 Innovative Applications of Nanowires for Circuit Design. IGI Global, 101-121, Pooja Shilla, Raj Kumar and Arvind Kumar. 2021.**
- 4. Chapter entitled “Polymer Nanocomposites-Materials for Sensor Technology” in book-Engineering Applications of Nanoscience and Nanomaterials/197-216, Volume 757 of Material Science Forum, Trans Tech Publications, Switzerland, Arvind Kumar, Jaspreet Kaur Rajput, 2013.**