# Faculty Profile

| | |
|---|---|
| Name: | **Dr. Rajesh Kumar Jha** |
| Designation: | Assistant Professor |
| Teaching Areas: | Digital Electronics, Electronic Devices and Circuits, Microelectronics and VLSI |
| Research Area: | Semiconductor Devices, Thin Films, Nonvolatile Memory and Solar cell. |
| Education: | PhD from Indian Institute of Information Technology, Allahabad in 2020. |
| | M.Tech from Indian Institute of Information Technology, Allahabad in 2017. |
| | B.E. (Hons.) from RGPV Bhopal in 2013. |
| | Qualified GATE 2014 with 99 percentile |

## Professional Experience: (2 Years)

1. Oct 2020-Till Date: Assistant Professor, IFHE, Hyderabad.
2. March 2020-Sept 2020: Post doc at IIT Kanpur.
3. July 2013- June 2015: Engineer at Riding Consultancy India Pvt. Ltd. New Delhi.

## Research / Selected Publications:

1. **Rajesh Kumar Jha,** Prashant Singh**, Upendra Kashniyal, Manish Goswami and B. R. Singh, "**Impact of $HfO_2$ Buffer layer on the Electrical Characteristics ferroelectric/High-K Gate Stack for Nonvolatile Memory Applications**", Applied Physics A, Materials Science & Processing, 126(6),2020 *Springer,* ,. (**SCI, **IF-1.81).**
2. **Rajesh Kumar Jha,** Prashant Singh**, Manish Goswami and B. R. Singh, "**Impact of Plasma Enhanced Atomic Layer Deposited $HfO_2$ Buffer Layer on the Structural, Electrical and Ferroelectric Properties of Metal/Ferroelectric/Insulator/Semiconductor Gate Stack for Nonvolatile Memory Applications**", *Journal of Materials Science: Materials in Electronics*, *Springer*, Volume 30, Issue 16, pp. 15224–15235, 2019. (**SCI, **IF-2.22).**
3. **Rajesh Kumar Jha,** Prashant Singh**, Manish Goswami and B. R. Singh, "**Integration of Ferroelectric-BIT and Dielectric-$HfO_2$ on Silicon Substrate with High Data Retention and Endurance for Ferroelectric-FET Applications**", Applied Physics A, Materials Science & Processing *Springer, 125(11), 798*,.2019 (**SCI, **IF-1.81).**
4. **Rajesh Kumar Jha,** Prashant Singh**, Manish Goswami and B. R. Singh, "**Comparative study of Structural Electrical Dielectric and Ferroelectric Properties of $HfO_2$ Deposited by Plasma Enhanced Atomic Layer Deposition and Radio Frequency Sputtering Technique for the Application in 1-T FeFET**", *Journal of Materials Science: Materials in Electronics*, *Springer*,Volume 30(23),20360-20368 (**SCI, **IF-2.22).**
5. **Rajesh Kumar Jha,** Prashant Singh**, Manish Goswami and B. R. Singh, "**Plasma enhanced Atomic Layer Deposited $HfO_2$ ferroelectric films for Non-volatile Memory Applications"**,Journal of Electronic Materials** ,*Springer*,49(2) pp. 1445-1453, 2019 (**SCI, **IF 1.774).**
6. **Rajesh Kumar Jha,** Prashant Singh**,** Manish Goswami and B. R. Singh, "**Impact of $HfO_2$ as a Passivation Layer on Efficiency Enhancement of Passivated Emitter Rear Cell type Solar cell**", *Journal of Nanoscience and Nanotechnology, 20.6 (2020): 3718-3723* (**SCIE, **IF-1.354).**