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Designation : Senior Assistant Professor

Department : Department of Electronics & Communication Engg.
(JOINED THE INSTITUTE IN JULY, 2018)

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RESEARCH INTERESTS

- ✓ Semiconductor Device Modeling
- ✓ Bandgap Engineered Devices
- ✓ Reliability analysis of advanced heterostructure Devices

Academic Qualifications

Ph. D. (Electronics), Siksha „O“ Anusandhan (Deemed to be University), India

M. Tech. (VLSI & Embedded System Design), BPUT, Odisha, India

B.Tech (Electronics & Telecommunication Engineering), BPUT, Odisha, India

Teaching Experience/Industrial Experience/Research Experience

- ✓ Teaching Experience (7 years)
- ✓ Research experience (10 years)

PUBLICATIONS

JOURNALS :

JOURNAL ARTICLES & CONFERENCE PAPERS

- [1]. D. Jena, **Sanghamitra Das** & T. P. Dash, Design and Simulation of Enhancement-Mode Vertical Superjunction GaN HEMT with Improved Ron and Cut-Off Frequency. IETE Journal of Research, pp.1–9, 2023.
- [2]. Devika Jena, **Sanghamitra Das**, Biswajit Baral, Eleena Mohapatra and Taraprasanna Dash, Linearity improvement in graded channel AlGaIn/GaN HEMTs for high-speed applications, Physica Scripta, Vol. 98, p. 105936, 2023.
- [3]. Eleena Mohapatra, Jhansirani Jena, Devika Jena, **Sanghamitra Das**, Taraprasanna Dash, Workfunction variability and inverter design possibility in advanced gate all around FETs, Nanomaterials and Energy, Vol. 12, pp.81–89, 2023.
- [4]. E. Mohapatra, D. Jena, **Sanghamitra Das**, C.K. Maiti and T. P. Dash, Design and optimization of stress/strain in GAA nanosheet FETs for improved FOMs at sub-7 nm nodes, Physica Scripta, Vol. 98, p. 065919, 2023.

- [5]. J. Jena, D. Jena, E. Mohapatra, **Sanghamitra Das** & T. P. Dash, FinFET-Based Inverter Design and Optimization at 7 Nm Technology Node, Silicon, Vol. 14, pp.10781–10794, 2022.
- [6]. P. P. Maiti, Ajit Dash, S. Guhathakurata, **Sanghamitra Das**, Atanu Bag, T. P. Dash, G. Ahmad, C. K. MAITI & S. Mallik, Experimental and simulation study of charge transport mechanism in HfTiO_x high-k gate dielectric on SiGe heterolayers, Bull Mater Sci, Vol. 45, 2022.
- [7]. **Sanghamitra Das**, Tara Prasanna Dash, Devika Jena, Eleena Mohapatra and Chinmay Kumar Maiti, "Strain-engineering in AlGa_N/Ga_N HEMTs: impact of silicon nitride passivation layer on electrical performance," Physica Scripta, Vol. 96, 2021.
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- [9]. **Sanghamitra Das**, S. Dey, T. P. Dash, E. Mohapatra, J. Jena and C. K. Maiti, "Impact of NBTI and Hot Carrier Stress on nanowire Characteristics," Nanomaterials and Energy, vol. 8, pp.1-7, 2019.
- [10]. **Sanghamitra Das**, T. P. Dash, S. Dey, R. K. Nanda and C. K. Maiti, "Reliability Studies on Biaxially Tensile Strained-Si Channel p-MOSFETs," International Journal of Microstructure and Materials Properties, vol.14, pp. 28-46, 2019.
- [11]. **Sanghamitra Das**, T. P. Dash and C. K. Maiti, "Negative Bias Temperature Instability in Strained-Si MOSFETs," International Journal of Nano and Bio Materials (IJNBM), vol. 7, pp. 299 – 310, 2018.
- [12]. **Sanghamitra Das**, T. P. Dash and C. K. Maiti, "Effects of Hot-Carrier Degradation on the Low Frequency Noise in Strained-Si p-MOSFETs," International Journal of Nanoparticle (IJNP), vol.10, pp. 58-76, 2018.
- [13]. D. Pradhan, **Sanghamitra Das** and T. P. Dash, "Study of strained-Si p-channel MOSFETs with HfO₂ gatedielectric," Superlattices and Microstructures, vol. 98, pp. 203-207, 2016.
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ANY OTHER

BOOK CHAPTERS

1. **Sanghamitra Das**, Taraprasanna Dash, Biswajit Baral, Sudhansu Mohan Biswal, Devika Jena and Eleena Mohapatra. "Analytical modelling of nanoscale advance devices and their reliability aspects." Nanoelectronics: Physics, Materials and Devices, Elsevier, January 2023, pp.385-408, 10.1016/B978-0-323-91832-9.00011-7, ISBN: 978-0-323-91832-9.
2. **Sanghamitra Das**. "Stress Generation Techniques in CMOS Technology." Stress and Strain Engineering at Nanoscale in Semiconductor Devices, CRC Press, May 2021, www.routledge.com/Stress-and-Strain-Engineering-at-Nanoscale-in-Semiconductor-Devices/Maiti/p/book/9780367519292, ISBN 9780367519292

PATENTS

3. Application Number : 202131048431
Title of Invention : Monitoring and Control of PV systems connected to the grid with a conventional inverter and with an interlaced inverter.
Date of publication : 12-11-2021
4. Application Number : 202131050907
Title of Invention : Monitoring And Evaluating The Operation Of Electronic Noses.
Date of publication: 10-12-2021