

## CV of Dr. Basab Das

Name: **Dr. Basab Das**

Designation: **Assistant Professor**

Address for Communication: (office) **Room no. 210, 2<sup>nd</sup> Floor (GIMT Building),  
Department of ECE, GCU, Hathkhowapara, Guwahati, Assam. Pin:781017.**

Email: basab\_ece@gimt-guwahati.ac.in

Sex: **Male**

Date of Birth: **25<sup>th</sup> of December**

Educational Qualifications:

Sl. No.	Examination Passed	Year of passing	Board / Council / University	Specialization
1	HSLC/10 <sup>th</sup> Std.	2003	CBSE	
2	HSSLC/10+2 Std.	2005	CBSE	Science
3	B.Tech	2010	North Eastern Hill University	Electronics and Communication
4	M.Tech	2014	National Institute of Technology Silchar	Microelectronics and VLSI Design
6	Ph. D.	2022	National Institute of Technology Silchar	Semiconductor Device Physics

Languages known:

**English, Hindi, Assamese, Bengali.**

Academic/ Administrative Experience: **8years 6 months**

## List of Publications:

### **International Journal**

1. **B. Das** and B. Bhowmick, " Impact of traps on DC, analog/RF, and linearity performance of Ferro-TFET," in Silicon, Oct. 2022. Doi: <https://doi.org/10.1007/s12633-022-02167-8>.
2. **B. Das** and B. Bhowmick, "Effect of Curie Temperature on Ferroelectric Tunnel FET and Its RF/Analog Performance," in IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, vol. 68, no. 4, pp. 1437-1441, April 2021, doi: 10.1109/TUFFC.2020.3033761.
3. **B.Das** and B. Bhowmick, "Noise behavior of ferro electric tunnel FET," Microelectronic Journal, vol. 96, pp. 104677-104682, Nov. 2019. doi:10.1016/j.mejo.2019.104677.
4. **B.Das**, R.Goswami and B.Bhowmick. "A Physics Based Potential and Electric Field Model of a Nanoscale rectangular high-K gate dielectric HEMT," *Pramana (Springer India)*, Vol .86, Issue. 4, pp 723–736, April ,2016
5. B.Bhowmick, R.Goswami and **B.Das**. " A Mathematical Model and an Algorithm for Transmission in Single Rectangular Potential Barriers," *International Journal of Pure and Applied Mathematics*, v.101, no.5, pp 605-615, Jun., 2015.
6. R.Goswami, P.K. De and **B.Das**. "Study Of Some Properties Of Square Of Whole Number," *International Journal of Computer Application*, v.112,no. 16, pp 4-9, Feb., 2015.
7. Rupam Goswami and **Basab Das**, "Behaviour of Transmission Probability in a Single Rectangular Potential Barrier at Constant Barrier Height-Barrier Width Product,"*The International Journal of Engineering and Science (The IJES)* [ISSN(e): 2319-1813; ISSN(p): 2319-1805], Volume-1, Issue-1 in November, 2012.

### **International Conferences**

8. J.Talukdar and **B.Das**, "An Improved TIQ Comparator based 3-bit Flash ADC," in *Proceedings of 1<sup>st</sup> International Conference on Electronics, Materials Engineering & Nano Technology (IEMENTECH 2017)*, Science City, Kolkata, India, 28-29 April,2017. (**Participated and Presented**).
9. T.Kalita and **B.Das**, "A 4 bit Quantum Voltage Comparator based flash ADC for low noise applications," in *Proceedings of International Conference on Emerging Devices and Smart Systems (ICEDSS)*,Namakkal, Tamil Nadu India, 4-5 March, 2016.
10. **Basab Das** and Brinda Bhowmick, "Arc shaped gate nanoscale AlGaIn/GaN HEMT with high-k gate dielectric," in *Proceedings of 3<sup>rd</sup> International Conference on Recent Trends in Engineering & Technology (ICRTET' 2014)* (March 28-30, 2014), Elsevier Science & Technology, SNJB's Late Sau. K. B. Jain College of Engineering, Chandwad, India, March 28-30, 2014
11. Rupam Goswami, **Basab Das** , Brinda Bhowmick and Shanidul Haque, "A single gate nanoscale n-channel Silicon MOSFET with gate overlap Silicon Germanium region for improved  $I_{on}/I_{off}$  ratio," in *Proceedings of IEEE International Conference on Circuit, Power and Computing Technologies (ICCPCT 2014)*, Noorul Islam Centre for Higher Education, Kumaracoil, India, March 20-21, 2014.
12. **Basab Das** and Brinda Bhowmick, "Simulation study of gate dielectric arc-shaped gate MOSHEMT," in *Proceedings of International Conference on Recent Trends in Engineering Sciences' 2014 (ICRTES '14)*, Nashik, India, March 15 – 16, 2014.
13. Brinda Bhowmick, Srimanta Baishya, Rupam Goswami, **Basab Das**, and C Joshy, "An Optimized SOI g-TFET and its application in a Half Adder Circuit," in *Proceedings of IEEE International Conference on Devices, Circuits and Systems 2014 (ICDCS'14)*, Karunya University, Tamil Nadu, India, March 6-8, 2014.
14. **Basab Das** and Brinda Bhowmick, "AlGaIn/GaN nanoscale HEMT with arc shaped gate and stacked HfO<sub>2</sub> – SiO<sub>2</sub> gate dielectric," in *Proceedings of IEEE Conference on*

*Green Computing, Communication and Electrical Engineering (ICGCCEE)*, Tamil Nadu, India, March 6-8, 2014.

15. Brinda Bhowmick, Rupam Goswami, and **Basab Das**, “A mathematical model for transmission in rectangular potential barriers,” in *Proceedings of International Conference of Mathematical Computer Engineering 2013*, VIT University, Chennai, India, November 29-30, 2013.

### **National Journal**

1. **B. Das**, “GaN channel Nanoscale MOSFET with silicon source and Drain and Silicon Germanium Bulk,” in *Int. Journ. of Computer Sciences and Engineering (IJCSE)*, Vol. 04, Issue. 07, Dec , 2016.

### **National Conferences**

1. **B. Das**, “GaN channel Nanoscale MOSFET with silicon source and Drain and Silicon Germanium Bulk,” in *proceedings of National conference on Recent Innovative Trends in Engineering and Technology (NCRITET 2016)*, Guwahati, Assam.India, Nov. 11-12, 2016. (**Participated and Presented**).

### **Book Chapter**

1. **B. Das** and B. Bhowmick, " Effect of Noise and Temperature on the Performance of Ferro-Tunnel FET," In: R. Goswami, R., R. Saha (eds) *Contemporary Trends in Semiconductor Devices. Lecture Notes in Electrical Engineering*, vol 850. Springer, Singapore. [https://doi.org/10.1007/978-981-16-9124-9\\_3](https://doi.org/10.1007/978-981-16-9124-9_3)

### Research Experience:

- Research & Consultancy Projects:

**Assam Science Technology and Environment Council, Assam, India: September, 2021 – Current**  
**Topic: - “Intelligent Video Analytics”**

**Grant: - Rs. 4,30,000/- (Rupees Four Lakhs Thirty Thousand only)**

### Membership of Professional bodies:

- **Member of IEEE (Membership No.: 92553009) since March, 2013**
- **Member of IEEE Electron Devices Society since March, 2013**

### Award, Fellowship & Recognition:

#### **Certification**

**NPTEL Online Certification (Swayam), MoE, Govt. of India : July, 2022 – September,2022**  
Course: - Developing Soft Skills and Personality (78%)

#### **Reviewer**

- Silicon (Springer),
- Scientific Reports (Springer),
- Microelectronics( Elsevier),
- Superlattice an Microstructure(Elsevier),
- IEEE Sensor(IEEE).