



# Monali Sil

College Whole Time Teacher

Department of Electronics

## Contact Information

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## Specialization

- Nanotechnology



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## Biographical Sketch

Monali Sil is currently associated as College Whole Time Teacher, in the Department of Electronics, The Bhawanipur Education Society College, affiliated to University of Calcutta. Prior to joining this institution, She worked as a Part time Faculty, at Techno India college of Technology, Newtown. She completed her B.Sc in Electronics from Barrackpore Rastraguru Surendra Nath College and M.Sc degree in Electronic Science from University College of Science, Technology & Agriculture (Rajabazar Science College), University of Calcutta, Kolkata, . She has also completed M.Tech degree in VLSI design from the department of Radio Physics and Electronics, (University of Calcutta), and is currently pursuing Ph.D on the topic of Advanced CMOS devices for Low power and high performance applications, from the same institute. She has qualified for the GATE exam in 2014 and has also achieved the Senior research Fellowship of Council of Scientific and Industrial Research (CSIR) in 2018. She has presented her research papers in conferences (International) and published research papers in reputed journals.

## Academic Qualifications

Abbreviation of the Degree	Name of the College/ University	Class Obtained	Area of Specialization	Year of Passing
Ph.D	University College of Science, Technology & Agriculture (University of Calcutta)	N.A	Nano Technology	Pursuing
M.Tech	Department of Radio Physics and Electronics (University of Calcutta)	1 <sup>st</sup> Class	VLSI Design	2016
M.Sc.	University College of Science, Technology & Agriculture (University of Calcutta)	1 <sup>st</sup> Class	Electronic Science	2014
B.Sc. (Honors)	Barrackpore Rastraguru Surendra Nath College, (West Bengal State University)	1 <sup>st</sup> Class	Electronics	2012



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## Position Holding (Full Time)

- College Whole Time Teacher, Department of Electronics, The Bhawanipur Education Society College, University of Calcutta, December 2021-Present.

## Position Held (Full Time)

- Part Time Faculty of the department of ECE, Techno India college of Technology, Newtown, July 2017-June 2018.

## Guest Appointment

- Guest Faculty-Post-Graduate Department of Electronic Science (M.Sc), Acharya Prafulla Chandra College, West Bengal State University, August 2017-June 2019.
- Guest Faculty - Post-Graduate Department of Physics (M.Sc), Lady Brabourne College, University of Calcutta, July 2017- Dec 2017.

## Research Experience

- Senior Research Fellow of CSIR, Department of Electronic Science, University of Calcutta, May 2018 - April 2021.

## Research Interests

Nano Structure | Low power Devices | High performance logic circuits with advanced CMOS devices | Digital Electronics | FinFET | Junctionless FinFET (JL-FinFET) | Negative-Capacitance FinFET (NC-FinFET).





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## Journal Publications

- M. Sil, Sk. M. Nawaz, and A. Mallik., "On the Performance of Hafnium Oxide-Based Negative Capacitance FinFETs, With and Without a Spacer" Journal of Semiconductor Science and Technology (IOPScience), Feb 2022.
- M. Sil, and A. Mallik; "On the Logic Performance of Bulk Junctionless FinFETs", Analog Integrated Circuits and Signal processing (Springer), Vol. 106, pp. 467- 472, Jan. 2021.
- M. Sil, S. Guin, Sk. M. Nawaz, and A. Mallik; "Performance of Ge p-channel junctionless FinFETs for logic applications", journal of Applied Physics A (Springer), Vol. 125, pp. 782, Nov. 2019.
- S. Guin, M. Sil, A. Mallik, Comparison of logic performance of CMOS circuits implemented with junctionless and inversion mode FinFETs. IEEE Trans. On Electron Devices vol. 64, pp. 953-959, Jan. 2017.

## Paper Presentations At Conferences

- M.Sil, and A. Mallik., "Comparative performance of SRAM cells built with inversion mode and junctionless FinFETs" XXth International Workshop on Physics of Semiconductor Devices: IWPSD 2019.

## Vision Statement

- Encourage students to embrace enterprise, self-confidence, creativity and social justice in all their endeavors.
- Inspiring free thinking among students, and teaching them to be game changers in their chosen professions.





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- Promote the virtues of research and scholarly inquiry, so that students can bring important critical thinking skills to their pursuits, both inside and outside the college.

*Monali Sil*

Signature of the  
Faculty Member

Date: 01st September, 2022



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