

CURRICULUM VITAE



Name : Sudipta Banerjee
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Mobile no. : 9614973938 / 9734773422
Current Organization : NSHM Knowledge Campus, Durgapur Group of Institutions
Google Scholar Profile : <https://scholar.google.com/citations?hl=en&user=ktKAct8AAAAJ>
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Scopus Author ID : 57217679808
Web of Science ID : IZE-1168-2023

❖ OBJECTIVE:

To work in such an environment where I can effectively contribute by sharing my knowledge towards the goal of the Institute with a flexible mindset and explore myself with a continuous learning process and thus make a progressive career out of it.

❖ PROFESSIONAL EXPERIENCE:

Overall experience of **16 years** in different fields as per given table:

INDUSTRY	ACADEMIC	RESEARCH
1 Year 4 Months	13 YRS	8 Years (In continuation with academics)

SI No.	Field of Experience	Name of Organization/Institute	Designation	Experience
1	Industry	Wipro Technologies, Bangalore	Project Engineer	1 Year 4 Months
2	Academics	Bengal College of Engg. & Tech. for Women, Durgapur	Lecturer	1 Year 5 Months
3	Academics	Aryabhata Institute of Engg. & Management, Durgapur	Asst. Professor	3 Years 1 Month
4	Academics	NSHM Knowledge Campus, Durgapur	Asst. Professor	8 Years 9 Month
5	Research	Central Mechanical Engineering Research Institute (CMERI), Durgapur	Project Assistant	1 Year 2 Months
6	Research	IIT(ISM) Dhanbad	Research Scholar	7 Years



ACADEMIC CAREER:

Examination Passed	Marks	School/College	Board/Council	Year of Passing
PhD (Electronics Engineering)	6.5(CGPA)	IIT(ISM) Dhanbad	IIT	2023
UGC NET (Electronics Science)	61.14%	UGC	UGC	2014
M. Tech (Electronics & Comm. Engg.)	7.39(CGPA)	IIT Kharagpur	IIT	2013
B. Tech (Electronics & Comm. Engg.)	8.28 (DGPA)	Kalyani Govt. Engineering College, Nadia, WB	WBUT	2007
Diploma (Electronics & Telecomm. Engg)	84.10%	M.B.C Inst. of Engg. & Technology, Burdwan, (Govt of West Bengal)	WBSCTE	2004
Higher Secondary	71.10%	Burdwan Municipal High School, Burdwan, WB	WBCHSE	2000
Madhyamik	85%	Meral SCP Institution, Burdwan, WB	WBBSE	1998



HIGHLIGHTS:

Overall experience of **16 years** in **Industry, Research and Academics.**

- ✓ **Received Best Paper Award** for “Current Prospects of TOPCon Solar Cell” in Two-Day **National Conference on “Science Technology and Management 2022 (NCSTM-2022)** organized by ORSI, India and NSHM Knowledge campus Durgapur, GOI
- ✓ **Topper(Nationwide) of NPTEL - Swayam 4 weeks Certification Course** on “Fundamentals of Electronic Device Fabrication” **conducted by IIT Madras in 2023.**
- ✓ **Topper (Nationwide) of NPTEL - Swayam 8 weeks Certification Course** on “Solar Photovoltaic: Principles, Technologies & Materials” **conducted by IIT Kanpur in 2021.**

- ✓ **UGC-NET qualified** in June 2014.
- ✓ **Reviewer of Book chapter (Engineering) of Pearson Publication.**
- ✓ **Reviewer of peer-reviewed Journals (SCI and SCOPUS Indexed).**
- ✓ **Reviewer of International Conference papers (Springer/AIP etc.)**
- ✓ **Ranked 16(Gen) in West Bengal JELET Exam** for B-Tech admission in 2004.
- ✓ Got **National Scholarship** as a talented student from **Govt. of India** in 1996.

❖ **Additional Academic and Non-academic Responsibilities:**

1. Member of **Institution's Innovation Council(IIC), Ministry of Education's Innovation Cell, New Delhi**
2. **NAAC departmental (ECE) Coordinator** of current organization.
3. **Class Teacher/Mentor** of B-Tech (ECE) students.
4. **Member of Examination Moderation Committee** of current organization.
5. **Acting as MAKAUT Examination Invigilation coordinator** of current organization.
6. **Member of the Internal Branding Committee** of the portal.
7. **Organizing Committee Member of seminars (National and International) and workshops** arranged by the Dept. of ECE held at the campus.
8. **SPOC of ECE for NSHM Centre of Innovation and Incubation.**
9. **Academic career counsellor** of B-Tech courses.
10. **Mentor of Institute funded research-based project and done publication.**
11. **Anticipating in Research and publication.**
12. **Active member of extracurricular activities (cultural, sports and all events) in the current organization.**

➤ **PROJECTS GUIDED:**

1. Modeling of High Efficient Thin Film Solar Cell using CdTe/CdS and exploration of its different properties (PG).
2. Modeling of High Efficient Thin Film Solar Cell (UG).
3. Optimization of Crystalline Silicon Solar Cell Parameters using PC1D Simulation Software(UG)
4. Home Automation System(UG)
5. Design and Simulation of High Efficiency Solar cell using CIGS/CdS material (UG).
6. Design of Air Purifier using Solar cell(UG).
7. Modeling and characterization of GaAs based solar cell (UG).
8. Design and implementation of solar cell using CdS/CdTe material (UG).



PUBLICATION:

1. **S. Banerjee**, S. S. A. Askari and M. K. Das, "Effect of Rear Contact Coverage and Improvement of Efficiency of Crystalline p-Si Solar Cell Compared to State of Art PERC Cell," in **IEEE Access**(**SCI, Impact factor 3.476**), vol. 11, pp. 34999-35006, 2023, DOI: 10.1109/ACCESS.2023.3264900.
2. Md. Irfan, **S. Banerjee**, H. Rza, A. Maji, (2023), "Optimization of Crystalline Silicon Solar Cell Parameters Using PC1D", Advances in Data Science and Computing Technologies, ADSC 2022 Lecture Notes in Electrical Engineering, Vol. 1056, pp.557-565, 2023 Springer, Singapore. DOI : 10.1007/978-981-99-3656-4_57
3. Md. Irfan, **Sudipta Banerjee**, Rakesh Shaw and Mukul Kr. Das, "Analysis of Silicon Solar Cell Parameters to Find Optimal Result using PC1D", International conference on machine intelligence and data security(MINDS-2022), AIP conference Proceedings (Accepted, under process of publication 2023)
4. **Sudipta Banerjee** and Mukul K. Das "Current Prospects of TOPCon Solar Cell", Latest Aspects of Applied Sciences & Informatics: The Paradigm Shifting, New Delhi Publishers, New Delhi, India, Chapter11, First Edition December 2022, ISBN: 978-93-93878-60-1
5. **S. Banerjee**, M.K. Das, "A review of Al₂O₃ as surface passivation material with relevant process technologies on c-Si solar cell" (**SCI, Impact factor 3**) 53, 60 (2021). <https://doi.org/10.1007/s11082-020-02689-8>
6. **Sudipta Banerjee**, Mukul Kr Das, "Review of Rear Surface passivation in Passivated Emitter Rear Cell(PERC) using Different Process Technologies", **IEEE** sponsored National Conference on Emerging Trends on Sustainable Technology and Engineering applications (NCETSTEAM),2020, **ISBN: 978-1-7281-4362-0**
7. H. Maity, **S. Banerjee et al.**, "Design of Quantum Cost and Delay optimized code Converter Using New Reversible Quantum Circuit Block (QCB)", Micro and Nanosystems (**Scopus**) 12(2020)
8. H. Maity, **S. Banerjee**, A. Biswas, A. Pal & A. K. Bhattacharjee, "Design of Reversible Shift Register Using Reduced Number of Logic Gate", Micro and Nanosystems (**Scopus**), 12(2019), 33-37.
9. **S. Banerjee**, "Dependence of Temperature of CdTe/CdS based solar cell performance", International Journal of Electronics Engineering, **ISSN: 0973-7383**, Vol. 10, Issue 2, pp.92-96, 2018.
10. **Sudipta Banerjee**, "Performance Analysis of Cadmium Sulfide/Cadmium Telluride (CdS/CdTe) Thin Film Solar Cell using PC1D", **IEEE** conference Devices for Integrated Circuit (DevIC), **ISBN: 978-1-5090-4724-6**, pp.189-195, 2017.
11. Koushik Sarkar, **Sudipta Banerjee**, A.K. Chakraborty and K.K. Ghosh, "Optimal Designing of Higher Efficiency Chalcogenide Thin Film Solar Cell", **Springer Proceedings in Physics**, **ISBN: 978-981-10-3908-9**, pp 189-195, pp. 730-733, 2017.
12. **S. Banerjee**, Y. K Ojha, K. Vikas, A. Kumar, "High Efficient CIGS based Thin Film Solar Cell Performance Optimization using PC1D", International Research Journal of Engineering and Technology, **ISSN: 2395 -0056**, Vol. 3, Issue 6, pp. 385-388, 2016.
13. **Sudipta Banerjee**, "High Efficiency CdTe/CdS Thin Film Solar Cell",

➤ Patent

UK Design Patent on "AI based hand hygiene monitoring" from Intellectual Property Office, United Kingdom with Design No. 6304212 on 30th August, 2023

➤ CONFERENCE, SEMINAR, FDP AND SHORT TERM COURSE:

➤ CONFERENCE Presentation and Participation:

1. Presented paper on "Current Prospects of TOPCon Solar Cell" National Conference in Two-Day **National Conference** on "Science Technology and Management 2022 (NCSTM-2022) held on 8th to 9th July 2023 organized by ORSI, India and NSHM Knowledge campus Durgapur, GOI, WB
2. **Presented paper in International Conference** on "Advances In Data Science and Computing Technologies (ADSC-2022)" held on 23th - 24th June 2022, Organized by **Kazi Nazrul University**, West Bengal, India.
3. **Presented paper in International Conference** on "Machine Intelligence and Network Data Security, MINDS – 2022", at NSHM Knowledge Campus Durgapur, held on 18th – 19th February, 2022
4. **Presented paper in IEEE sponsored National conference NCETSTEAM-2020** at Dr. B. C. Roy Engineering College from 07-08 Feb, 2020
5. **Participated in a DSTBT, West Bengal sponsored National Conference** of "Application of Optimization Techniques in Engineering and Management Science" held at NSHM Knowledge Campus, Durgapur on 15-16th November, 2018
6. **Presented paper in 2nd International Conference** on "2017- Device and Integrated Circuits (DevIC-2017)" sponsored by **IEEE** and organized by **Kalyani Government Engineering College** held on 23-24th March 2017.
7. **Presented in TEQIP-II Sponsored National Conference** on Renewable Energy (**NCRE-2016**) at Heritage Institute of Technology, Kolkata held on 27-28th July, 2016. Abstract of presented seminar has been published in Conference Proceedings.

➤ **Faculty Development Programme(FDP) Participated:**

1. Participated 5 Days FDP organized by **Indian Institute of Information and Technology Ranchi** held from 9th September to 13th September, 2023
2. Participated 5 Days FDP organized by **SRM Institute of Science and Technology** held from 30th January to 3rd February, 2023
3. Participated 5 Days FDP organized by **Heritage Institute of Technology** held from 27th February to 3rd March, 2023

4. Participated 5 Days FDP organized by **Dr B.C Roy engineering College** held from 14th to 18th February, 2023
5. Participated 5 Days FDP organized by **NSHM Knowledge Campus, Durgapur** from 11th to 15th July, 2022
6. Participated 5 Days FDP in Universal Human Value organized by **AICTE** from 18th to 22nd January, 2021
7. Participated in **TEQIP-II sponsored** 5 Days FDP organized by **Moulana Abul Kalam Azad University of Technology (MAKAUT), WB** from 2nd to 6th November, 2020.
8. Participated in **5-Days FDP-NKN Winter Courses 2019-2020** under the banner of **Ministry of Electronics and Information Technology(MeitY), Govt. of India** and **NIT Patna** in association with NSHM Knowledge Campus from 13rd to 17th January, 2020. **This programme was endorsed by AICTE/UGC/NBA.**
9. Participated in **5-Days FDP-NKN Winter Courses 2019-2020** under the banner of **Ministry of Electronics and Information Technology(MeitY), Govt. of India** and **NIT Patna** in association with NSHM Knowledge Campus from 23rd to 27th December, 2019. **This programme was endorsed by AICTE/UGC/NBA.**
10. Participated in **5-Days FDP-NKN Winter Courses 2019-2020** under the banner of **Ministry of Electronics and Information Technology(MeitY), Govt of India** and **NIT Patna** in association with NSHM Knowledge Campus from 16th to 20th December, 2019. **This programme was endorsed by AICTE/UGC/NBA.**
11. Participated in **5-Days FDP-NKN Winter Courses 2019-2020** under the banner of **Ministry of Electronics and Information Technology (MeitY), Govt of India** and **NIT Patna** in association with NSHM Knowledge Campus from 2nd to 6th December 2019. **This programme was endorsed by AICTE/UGC/NBA.**
12. Participated **FDP** on on 23rd December, 2017 at NSHM Knowledge Campus, Durgapur.
13. Participated **FDP** on 8th January, 2016 at NSHM Knowledge Campus, Durgapur.

➤ **SEMINAR Organizing and Participation:**

Coordinated, organized and participated in different International and National Conferences/Seminars/Workshops organized by the Department of ECE of NSHM Knowledge Campus Durgapur.

➤ **Participation in SHORT TERM COURSE:**

1. Participated and become **Topper(Nationwide) of NPTEL - Swayam 4 weeks Certification Course** on “Fundamentals of Electronic Device Fabrication” conducted by **IIT Madras in August-September, 2023**
2. Participated in One-Week Workshop on "VLSI to System Design: Silicon to End Application Approach" Organised by **All India Council for Technical Education (AICTE), ARM Education and ST Microelectronics** during 31st July to 4th August, 2023.
3. Participated and become **Topper(Nationwide) of 8 weeks NPTEL - Swayam Certification Course** on “Solar Photovoltaic: Principles, Technologies & Materials” **conducted by IIT Kanpur** during Jan-March, 2022
4. Participated in **ONE WEEK SHORT TERM COURSE** on “Outcome based Accreditation and NBA" during 20th to 24th April, 2020 from **National Institute of Technical Teachers Training and Research (NITTTR), Kolkata.**
5. Participated in **ONE WEEK SHORT TERM COURSE** on “Environmental Pollution and Health" during 27th April to 1st May, 2020 from **National Institute of Technical Teachers Training and Research (NITTTR), Kolkata.**
6. Participated in **ONE WEEK SHORT TERM COURSE** on “Modeling & Simulation of Optoelectronic Devices and Solar Photovoltaics (**MSODSP 2016**)" during 29th August to 2nd September, 2016 at **IIT(ISM) Dhanbad.**
7. Participated in **Short term course** on “Advanced Device Modeling & VLSI Technology (**ADMVT-2016**)" during 26th to 28th May, 2016 at **IIT(ISM) Dhanbad.**

❖ **ONLINE CERTIFICATION COURSE:**

Successfully completed more than 30 certified online courses provided by **Coursera, The Open University, Amity University, University of Leeds and Institute of Coding, Future Learn, Alison, Harappa, Coventry University, London School of Hygiene & Tropical Medicine and UK Public Health Rapid Support Team etc.** from April 2020 to till date.



PERSONAL DETAILS:

Name : **Sudipta Banerjee**
Father's Name : Mr. Jiban Hari Banerjee
Present Residential Address : G-21, Bidhanpark, Sector-I,
Durgapur - 713206, West Bengal
Date of Birth : 07.03.1983
Sex : Male
Marital Status : Married
No. of Children : 02
Nationality : Indian
Language Known : Bengali, English, Hindi.

I hereby declare that the information furnished above is true and correct to the best of my knowledge and belief.

Date: 31.10.2023

Place: Durgapur

Sudipta Banerjee

Signature(S/D)