

BIO-DATA

1. Name: **Dr. Narayan Sahoo**

2. Present Position: **Assistant Professor**
Department of Electronic Science
Berhampur University,
Bhanja Bihar, Berhampur – 760 007, Odisha

3. Academic Achievements/Fellowships:

Assistant Professor (Stage-1)

Department of Electronic Science, Berhampur University, Odisha (21.6.2018 onwards)

National Post Doctoral Fellow

Selected by SERB, Govt. of India (1.8.2016 to 6.6.2018)

INSPIRE Fellow (JRF and SRF)

Selected by DST, Govt. of India (1.10.2011 to 11.6.2016)

National Eligibility Test (Lectureship) conducted by UGC (2013)

1st class 1st Position in M.Sc. (2008)

4. Education:

Examinations	Board / University	Year	Division	% of marks
HSC	BSE, ODISHA	2001	1 ST	75.33%
I. Sc.	CHSE, ODISHA	2003	1 ST	66.66%
B.Sc.(Hons)	UTKAL UNIVERSITY, ODISHA	2006	1 ST	67.00%
M.Sc. (Electronic Sc.)	BERHAMPUR UNIVERSITY, ODISHA	2008	1 ST	79.54%
M. Tech (ECE)	S'O'A' UNIVERSITY, BBSR	2011	1 ST	79.90%
Ph.D.	BERHAMPUR UNIVERSITY, ODISHA	2016		

5. Academic/Administrative responsibilities:

- a. Assistant superintendent of Rushikulya boys Hostel, BU (From 4.7.2018 to till date).
- b. Alumni activity in-charge of BU (From 28.10.2018).

6. Research:

Areas of research interest:

Semiconductor Materials and Devices

Electron transport in low dimensional semiconductors

Publication : **24** International Journals of repute (SCI)
 24 International Conf. Proceedings (peer reviewed and Scopus Indexed)
 20 Participation in short term courses / workshops / Conferences
 25 Presentation in Seminars / Conferences / Workshops

(List of publications attached)

6. Research and Teaching Experience:

- (a) Assistant Professor, Department of Electronic Science, Berhampur University, Odisha (21.6.2018 to till date).
- (b) National Post Doctoral Fellow, Dept. of ECE, National Institute of Science and Technology, Odisha (1.8.2016 to 7.6.2018).
- (c) JRF/SRF (INSPIRE Fellow), Dept. of Electronic Science, Berhampur University, Odisha (1.10.2011 to 11.6.2016).
- (d) Lecturer (Diploma), Department of E&TC, C. V. Raman Polytechnic, Bhubaneswar, Odisha (26.7.2008 to 30.9.2011).

7. Ph.D. Guidance: 03

- Ajit K Sahu, SRF, NFOBC, Govt. of India (Electron mobility in Non-Square quantum well based low dimensional semiconductor devices)
- Ram Chandra Swain (Effect of strain on transport properties in III-V compound semiconductor based quantum well structures)
- Asutosh Patnaik (Memristor)

8. Award/ Appreciations:

- (a) **Best Poster Award (Simulation and Modeling)** of IUMRS – ICYRAM 2016 organized by **Indian Institute of Science, Bangalore** from 11.12.2016 to 15.12.2016.
- (b) **Best paper presentation award** of NCDC – 2016 organized by NIST, Berhampur on 19th February, 2016.

- (c) Research Scholar award for **OUTSTANDING RESEARCH PUBLICATION** (Science Stream) for the year 2014 by Berhampur University on 2.1.2015.
- (d) **Post Graduate Merit Scholarship** by Govt. of Odisha for pursuing M.Sc. (2006-2008).
- (e) **Godavarish Merit Scholarship** by Godavarish Mahavidyalaya, Banpur, during B.Sc.

9. Academic activities:

- (a) M. Sc. ETC Faculty selection committee member at Khallikote (Auto) college on 14th October, 2019.
- (b) External examiner in the department of physics (4th Semester), CUTM Rayagada campus on 19th April, 2019.
- (c) External examiner for final year students of ECE and EIE major project and comprehensive viva at GIET University, Gunupur on 21.3.2019.
- (d) External examiner for practical examination for B. Sc. 3rd Semester in the Dept. of Electronics in Hinjilicut (Auto.) Science College on 13-14 December, 2018.

10. Invited Talks/Presentations:

- 1) Delivered a talk as a resource person in the webinar entitled “Recent Advances in Emerging Electronics” organized by P. G. Dept. of Electronic Science, Berhampur University from 22-23 February 2022.
- 2) Delivered a talk as a resource person in the webinar entitled “Use of Technology in Education” organized by R.C.M. Science College, Khallikote, Ganajm on 10.8.2021.
- 3) Delivered lecture as a **Resource person** in the FDP program sponsored by AICTE on “Semiconductor Devices, Microwave, and Renewable Energy” organized by Asansol Engineering College, WB, 21-25 September 2021
- 4) Delivered lectures (three sessions) as a resource person in the “Short Term Training Programme” sponsored by AICTE, New Delhi on “Recent Trends in Emerging Devices and Nanotechnology” Phase-II held from 15.6.2021 to 20.6.2021 conducted by NIST, Odisha.
- 5) Delivered an invited talk entitled “Quantum Cascade Laser: Principle and Applications”, organized by IEEE Photonic Society, Kolkata Chapter on 16.5.2020.
- 6) Delivered a talk as key note speaker in ICFTEMST-19 organized by GIET University, Gunupur, Odisha on 5th January, 2019.
- 7) Completed one week faculty development program from 3-8 October 2023 on ‘Physics:

current and future trends' organized by HRDC, Berhampur University in association with P.G. Dept. of Physics, BU.

- 8) Participated in an International Symposium on Semiconductor Materials and Devices (ISSMD-2022) at KIIT University, Odisha from 16-18 December 2022.
- 9) Presented a paper entitled 'Improvement of transport mobility in asymmetric V-shaped double quantum well structure', organized by EDKCON-2022, Calcutta, India from 26-27 November 2022.
- 10) Participated and Secured **Grade A** in the **Refresher Course (RC)** in Information and Communication Technology conducted by UGC HRDC, Utkal University, Odisha from 17.11.2021 to 30.11.2021.
- 11) Participated the "Short Term Training Programme (STTP)" sponsored by AICTE, New Delhi on "Simulation with Matlab from Device to Circuit" Phase-II held from 30.8.2021 to 4.9.2021 conducted by GIS College of Engineering, West Bengal, India.
- 12) Participated in the "5-Day Workshop on VLSI Device and Circuit Design Tools", organized by the School of Electronics Engineering (SENSE), VIT-AP University, Amaravati (AP), India in association with Academic Staff College (ASC) VIT-AP during 22nd to 26th June, 2021.
- 13) Participated the "Short Term Training Programme (STTP)" sponsored by AICTE, New Delhi on "Recent Trends in Emerging Devices and Nanotechnology" Phase-I held from 1.6.2021 to 6.6.2021 conducted by NIST, Odisha.
- 14) Presented a paper entitled "Multisubband electron mobility in pseudomorphic $\text{Al}_{0.3}\text{Ga}_{0.7}\text{As}/\text{In}_{0.15}\text{Ga}_{0.85}\text{As}$ double quantum well based FET structure" in the 4th international conference on "2021 Devices for Integrated Circuits (DevIC 2021)" organized by Kalyani Govt. Engineering College during 19-20 May 2021.
- 15) Participated National Workshop on "Quantum Computation and Quantum Technology", organized by Dept. of Physics, Berhampur University, Odisha, March 8-9, 2020.
- 16) Presented a paper entitled "Review on electron mobility in AlGaIn/GaN HEMT Structures" in national conference on RISEM-2K20 organized by TITE, Bhubaneswar from 28-29 February, 2019.
- 17) Participated 3-day workshop on "Signal Processing Techniques for 5G Communication", organized by NIST, Berhampur from 25-27 September, 2019.

- 18) Presented a paper entitled “Nonlinear electron transport properties in GaAs/Al_xGa_{1-x}As hybrid double quantum well field effect transistor structure” in NSRAP-19 organized by Dept. of Physics, Berhampur University, Odisha from 23-24 March, 2019.
- 19) Participated and Secured **Grade A** in the **Orientation Course (OC)** conducted by HRDC, University of Hyderabad from 13.2.2019 to 12.3.2019.
- 20) Presented a talk as **keynote speaker** on “Effect of asymmetric potential profile on electron transport in quantum well structures” in ICFTEMST-19 organized by GIET University, Gunupur, Odisha on 5th January, 2019.
- 21) Participate and presented the research paper entitled “Effect of intersubband interaction on non-linear electron mobility in asymmetric AlGaAs parabolic double quantum well structure,” in the international conference IEEE EDKCON, Organised by IEEE EDS Kolkata Chapter, The Pride Hotel, Kolkata, 24th – 25th November, 2018.
- 22) GAIN course on “Introduction to Spintronics”, organized by **IIT Roorkee**, Uttarakhanda, from 18 – 22 December, 2017.
- 23) International Workshop on Physics of Semiconductor (IWPSD - 2017), and tutorial course on the topic “III –N based RF devices” held at **IIT Delhi**, during 11 – 15 December, 2017.
- 24) Participated the International Conference on Emerging Electronics (ICEE) organized by **IIT Bombay**, during 27 – 30 December 2016.
- 25) International Workshop on Physics of Semiconductor (IWPSD - 2015), held at J N Tata Auditorium, **IISc, Bangalore**, during 7-10 Dec. 2015.
- 26) Short course program on “Modeling, Simulation and Characterization of Nano Transistors”, Organized by Dept. of Electrical Engineering, **IIT Kanpur**, U.P., 26-30 October 2015.
- 27) National Seminar on “Recent Advances in Physics (NSRAP)”, Organised by **P.G. Dept. of Physics, Berhampur University and IOP, BBSR**, 5-6 May, 2014.
- 28) National work shop on Condensed Matter Days of Physics and one day Workshop on “Smart materials and thin films (SMTF)”, **NIT Rourkela**, from 28 – 30 August 2013.
- 29) Workshop on “Application of Simulators in Photonics, Electronics and Communication Technology (ASPECT-2013)”, **IRPE, Calcutta University**, 11-15 March 2013.
- 30) National conference on Condensed Matter Days of Physics, organized by **Birla Institute**

of Technology, Mesra, Ranchi, during 29-31 August, 2012.

31) International Symposium on “Biologically Inspired Computing and Application”, **Institute of Technical Education and Research, Bhubaneswar**, 2009.

32) Short term / In-house training programme on “Teaching Technique”, **NITTER, Kolkata**, 24-27 Feb. 2009.

11. MEMBERSHIP (Professional Organisation):

IEEE Professional Member (Member No. 93606964).

IEEE Electron Device Society Member

Orissa Physical Society (OPS) LIFE Member

12. Scientific Skills :

Software Tools: MatLab, Fortran and ATLAS Silvaco, Xilinx Vivado, Comsol,

Operating systems: Windows-10, 7/ XP /2000/ Ubuntu/Fedora

PUBLICATIONS

ORCID ID: 0000-0002-8254-6140

Researcher ID: N-9006-2017

Scopus Author ID: 55480004900

Google scholar ID: SickwSsAAAAJ

<https://vidwan.inflibnet.ac.in/profile/115694>

International Journals of Repute:

1. A. K. Sahu and N. Sahoo, “Effect of parabolic structure potentials on electron mobility in $\text{Al}_x\text{Ga}_{1-x}\text{As}$ quantum well based field effect transistor structure”, *Micro and Nanostructures*, 184, pp. 207677 (2023). (**Elsevier Publication**)
2. R. Swain, A. K. Sahu, and N. Sahoo, “Improvement of electron mobility mediated by interface roughness scattering in pseudomorphic GaAs/In_{0.15}Ga_{0.85}As asymmetric double quantum well structure”, *Materials Today: Proceedings*, 2023 (online) (**Elsevier Publication**)
3. D. Jena, A. K. Sahu, N. Sahoo, A. Tripathy, A. K. Panda, and T. Sahu, “Effect of structure parameters on electron mobility in asymmetric V-shaped double quantum well structure”, *Physica Scripta*, Vol. 98, issue 6, pp. 064003 (2023) (**IOP Publication**) (IF- 3.01).
4. A. K. Sahu, R. Swain, N. Sahoo, and T. Sahu, “Transport and quantum lifetimes of electrons in

- modulation doped Pseudomorphic $\text{Al}_{0.3}\text{Ga}_{0.7}\text{As}/\text{In}_{0.15}\text{Ga}_{0.85}\text{As}$ double quantum well structure”, *Physics Letters A*, Vol. 472, pp. 128813, 5th June 2023 (**Elsevier Publication**) (IF- 2.707)
5. A. K. Sahu, **N. Sahoo**, and R. Swain, “Electric Field induced Non-monotonic Electron Transport in Pseudomorphic $\text{Al}_{0.3}\text{Ga}_{0.7}\text{As}/\text{In}_{0.15}\text{Ga}_{0.85}\text{As}$ Coupled Quantum Well Structure”, *Physica E: Low Dimensional Systems and Nanostructures*, Vol. 145, pp. 115500, January 2023 (**Elsevier Publication**) (IF- 3.369)
 6. M. Mishra, N. R. Das, **N. Sahoo**, and T. Sahu, “Performance enhancement of armchair graphene nanoribbon resonant tunneling diode using V-shaped potential well”, *Physica Scripta*, Vol. 96, pp. 124076, 23rd December 2021 (**IOP Publication**) (IF- 2.487).
 7. M. A. Billaha, B. Roy, and **N. Sahoo**, “Effect of external electric field on photo-responsivity of CdS/ZnSe multiple quantum well photodetector”, *Superlattices Microstructures*, Vol. 157, pp. 107003, 4th August, 2021. (**Elsevier Publication**) (IF- 2.658)
 8. **N. Sahoo**, A. K. Sahu, and S. Palo, “Electron mobility in asymmetric coupled $\text{Al}_x\text{Ga}_{1-x}\text{As}$ parabolic quantum well structure – impact of external electric field”, *Physica B*, Vol. 608, 412798, 1st May, 2021. (**Elsevier Publication**) (IF- 2.436)
 9. A. K. Panda, S. K. Palo, **N. Sahoo**, and T. Sahu, “Electric field induced non-linear multisubband electron mobility in V-shaped asymmetric double quantum well structure”, *Philosophical Magazine*, Vol. 100, issue 4, pp. 512-527 (2020) (doi: 10.1080/14786435.2019.1695069) (**Taylor and Francis Publication**) (IF- 1.864).
 10. A. K. Panda, S. Palo, **N. Sahoo**, T. Sahu and T. C. Tripathi, “Effect of external electric field on multisubband electron mobility in n-V-shaped double quantum well HEMT structure”, *Physica Scripta*, Vol. 95, issue 3, pp. 034002 (2020) (**IOP Publication**) (IF- 2.487).
 11. S. K. Palo, **N. Sahoo**, A K Panda and T. Sahu, “Electron transport in $\text{Al}_x\text{Ga}_{1-x}\text{As}$ based double quantum well modulation doped field effect transistor structure: Effect of non-square potential profile”, *J. Micromechanics Microengineering*, Vol. 29, issue 8, pp. 084003 (2019) (**IOP Publication**) (IF- 1.881).
 12. S. K. Palo, **N. Sahoo**, A K Panda and T. Sahu, “Oscillation of electron mobility in V-shaped double quantum well structure under applied electric field, *Physica Status Solidi b*, vol. 256, issue 5, pp. 1800337 (2019) (**Wiley Publication**) (IF- 1.710).
 13. **N. Sahoo**, A K Panda and T. Sahu, “Enhancement of electron mobility in $\text{GaAs}/\text{Al}_x\text{Ga}_{1-x}\text{As}$ square - parabolic double quantum well HEMT structure, *Microsystem Technologies*,

vol. 25, issue 5, pp. 1901-1907 (2019) (**Springer Publication**) (IF- 1.826).

14. **N. Sahoo**, A K Panda and T. Sahu, “Electron mobility in $\text{Al}_x\text{Ga}_{1-x}\text{As}$ based square-parabolic double quantum well HEMT structure – Effect of asymmetric doping profile, **Physica Status Solidi b**, 254, 1700221 (2017) (**Wiley Publication**) (IF- 1.710).
15. **N. Sahoo**, A K Panda and T. Sahu, “Enhancement of multisubband electron mobility in square-parabolic asymmetric double quantum well structure”, **Superlattices and Microstructures**, **105**, 11-21 (2017) (**Elsevier Publication**) (IF- 2.658).
16. **N. Sahoo** and T. Sahu, “Mobility Modulation in Inverted Delta Doped Coupled Double Quantum Well Structure”, **Physica B**, **498**, 49 (2016) (**Elsevier Publication**) (IF- 2.436).
17. T. Sahu and **N. Sahoo**, “Oscillating electron mobility in $\text{GaAs}/\text{Al}_x\text{Ga}_{1-x}\text{As}$ double quantum well structure under applied electric field.” **Superlattices and Microstructures**, **77**, 162-170 (2015) (**Elsevier Publication**) (IF- 2.658).
18. **N. Sahoo** and T. Sahu, “Electric field induced oscillating electron mobility in asymmetric wide $\text{GaAs}/\text{Al}_x\text{Ga}_{1-x}\text{As}$ quantum well structure”, **J. Appl. Phys**, **116**, 043703 (2014) (**AIP Publication**) (IF- 2.546).
19. **N. Sahoo** and T. Sahu, “Oscillation of electron mobility in parabolic double quantum well structure due to applied electric field.” **AIP Advances**, **4**, 127106 (2014) (**AIP Publication**) (IF- 1.548).
20. S. Palo, **N. Sahoo** and T.Sahu, “Effect of doping profile on multisubband electron mobility in AlGaAs parabolic quantum well structures”, **Physica-E**, **64**, 33 (2014) (**Elsevier Publication**) (IF- 3.382).
21. T. Sahu, S. Palo, P. K. Nayak, **N. Sahoo**, “Enhancement of low temperature electron mobility due to an electric field in an $\text{InGaAs} / \text{InAlAs}$ double quantum well structure”, **Semiconductors**, **48**, 1354 (2014) (**Springer Publication**) (IF- 0.674).
22. **N. Sahoo** and T. Sahu, “Multisubband electron mobility in a parabolic quantum well structure under the influence of an external applied electric field”, **Journal of Semiconductors**, **35**, 0120011- 0120016 (2014). (**IOP Publication**).
23. T. Sahu, **N. Sahoo** and A. K. Panda, “Effect of parabolic well potential profile on multisubband electron mobility in a coupled quantum well in presence of an external electric field”, **Superlattices and Microstructures**, **61**, 50-58 (2013). (**Elsevier Publication**) (IF- 2.658).

24. T. Sahu, S. Palo and **N. Sahoo**, “Electric field induced enhancement of multisubband electron mobility in strained GaAs/InGaAs coupled quantum well structures”, **Physica-E**, **46**, 155-159, (2012). (**Elsevier Publication**) (IF – 3.382).

International Conferences Full Paper Published (Scopus Indexed):

1. S. Lenka, A. K. Sahu, M. Mishra, N. Sahoo (2024), Modulation of Energy Bandgap in Graphene Nanoribbons Using KWANT. In: Lenka, T.R., Saha, S.K., Fu, L. (eds) Micro and Nanoelectronics Devices, Circuits and Systems. MNDCS 2023. Lecture Notes in Electrical Engineering, vol 1067. Springer, Singapore. https://doi.org/10.1007/978-981-99-4495-8_10
2. R. Swain, A. K. Sahu, and N. Sahoo, M. Mishra, and T. Sahu, Improvement of Electron Transport in Pseudomorphic $\text{In}_{0.52}\text{Al}_{0.48}\text{As}/\text{In}_y\text{Ga}_{1-y}\text{As}$ Double Quantum Well Structure, DevIC-20223, Kalyani University, Calcutta, India from 7-8 April 2023, pp. 104-107.
3. M. Mishra, T. Sahu, N. Sahoo, S. K. Tripathy, and N. K. Sahoo, N. R. Das, Graphene Nanoribbon based Triple Barrier Double Quantum Well Resonant Tunneling Diode, DevIC-2023, Kalyani University, Calcutta, India from 7-8 April 2023, pp. 364-367.
4. A. K Sahu, N. Sahoo, M. Mishra, S. K Tripathy, N. K Sahoo, T. Sahu, N. R. Das, Conductance Enhancement of C-shaped Graphene Nanoribbon Circuit Interconnect through Defect Treatment, 2022 IEEE 2nd International Symposium on Sustainable Energy, Signal Processing and Cyber Security (iSSSC), Organized by GIET University, Gunupur, Odisha from 15-17 December 2022. DOI: <https://doi.org/10.1109/iSSSC56467.2022.10051459>
5. D. Jena, N. Sahoo, A. K. Sahu, T. Dash, A. K. Panda, and T. Sahu, Improvement of transport mobility in asymmetric V-shaped double quantum well structure’, EDKCON-2022, Calcutta, India from 26-27 November 2022.
6. A. K. Sahu, and N. Sahoo, Multisubband electron mobility in parabolic coupled double quantum well structure’, EDKCON-2022, Calcutta, India from 26-27 November 2022.
7. M. Mishra, N. Sahoo, T. Sahu, S. K. Tripathy, and N. K. Sahoo, A study on absorptance enhancement of multilayer graphene metamaterials in terahertz regime, EDKCON-2022, Calcutta, India from 26-27 November 2022.
8. A. K. Sahu, **N. Sahoo**, A. Patnaik, Modulation of Electronic Properties in Double Quantum Well-Based FET Structure. In: Lenka, T.R., Misra, D., Fu, L. (eds) Micro and

- Nanoelectronics Devices, Circuits and Systems. Lecture Notes in Electrical Engineering, vol 904, pp. 79-88 (2023). Springer, Singapore. https://doi.org/10.1007/978-981-19-2308-1_9
9. A. Patnaik, **N. Sahoo**, A. K. Sahu, A Comparative Study on Electrical Characteristics of Bulk, SOI, and DG MOSFET. In: Lenka, T.R., Misra, D., Fu, L. (eds) Micro and Nanoelectronics Devices, Circuits and Systems. Lecture Notes in Electrical Engineering, vol 904, pp. 51-59 (2023). Springer, Singapore. https://doi.org/10.1007/978-981-19-2308-1_6
 10. **N. Sahoo**, R. Swain, A K Sahu, and S. Palo, "Multisubband electron mobility in pseudomorphic $\text{Al}_{0.3}\text{Ga}_{0.7}\text{As}/\text{In}_{0.15}\text{Ga}_{0.85}\text{As}$ double quantum well based FET structure", Proc. of DeVIC-2021 organized by Kalyani University, WB, pp. 99-102, 19 – 20 May 2021. (**IEEE Xplore**)
 11. M. Mishra, N. R. Das, **N. Sahoo**, and T. Sahu, "Effect of well width and barrier width on I-V characteristics of Armchair graphene Ribbon based resonant tunneling diode structure ", Proc. of DeVIC-2021 organized by Kalyani University, WB, pp. 75-78, 19 – 20 May 2021. (**IEEE Xplore**)
 12. S. K. Palo, **N. Sahoo**, A K Panda, T. Sahu, and T. C. Tripathy, "Mobility modulation in V-shaped double quantum well based HEMT structure", Proc. of DeVIC-2019 organized by Kalyani University, WB, 23 – 24 March 2019. (**IEEE Xplore**).
 13. S. Palo, **N. Sahoo**, A. K. Panda and T. Sahu, "Mobility oscillation in V-shaped double quantum well field effect transistor structure", Proceedings of 4th IEEE ICEE, organized by **IISc. Bangalore**, from 16-19 December, 2018 (978-1-5386-9118-2/18/\$31.00 ©2018 IEEE).
 14. **N. Sahoo**, S. Palo, A. K. Panda and T. Sahu, "Effect of intersubband interaction on non-linear electron mobility in asymmetric AlGaAs parabolic double quantum well structure," Proc. Of IEEE EDKCON, Organised by IEEE EDS Kolkata Chapter, The Pride Hotel, Kolkata, 24th – 25th November, 2018, pp. 148-151. (**IEEE Xplore**).
 15. S. Palo, **N. Sahoo**, T. Sahu and A. K. Panda, "Electron transport in $\text{Al}_x\text{Ga}_{1-x}\text{As}$ based non-square double quantum well field effect transistor structure," Proc. Of IEEE EDKCON, Organised by IEEE EDS Kolkata Chapter, The Pride Hotel, Kolkata, 24th – 25th November, 2018, pp. 157-160. (**IEEE Xplore**).
 16. **N. Sahoo**, A K Panda and T. Sahu, "Nonlinear electron transport mobility in $\text{GaAs}/\text{Al}_x\text{Ga}_{1-x}\text{As}$ square – parabolic double quantum well MODFET structure", Proc. of 4th International Conferences on Devices, Circuits and Systems (ICDCS) organized by Karunya

University, Coimbatore, Tamil Nadu, from 16–17 March 2018, pp-21-24. (**IEEE Xplore**).

17. **N. Sahoo**, S. Das, S. Palo, S. R. Panda, A. Sahu, A K Panda and T. Sahu, “Nonlinear electron transport in asymmetric double quantum well structures”, AIP Conf. Proc. **2005**, 020013 (2018). (**AIP Proceedings**).
18. **N. Sahoo**, S. Palo, A K Panda and T. Sahu, “Effect of Parabolic Potential on Improvement of Electron Mobility in Hybrid Double Quantum Well Structure”, AIP Conf. Proc. **2005**, 070003 (2018). (**AIP Proceedings**).
19. **N. Sahoo**, A K Panda and T. Sahu, “Enhancement of Electron Transport Mobility in Square – Parabolic Double Quantum Well”, Proc. of DeVIC-2017 organized by Kalyani University, WB, 23 – 24 March 2017. (Published by **IEEE Xplore**).
20. **N. Sahoo**, A K Panda and T. Sahu, “Enhancement of Multisubband Electron Mobility in Hybrid Double Quantum Well Structure”, Proc. of ICEE – 2016 organized by IITB, Mumbai, 27 – 30 December 2016. (Published by **IEEE Xplore**).
21. S. Palo, **N. Sahoo**, T. Sahu and A. K. Panda, “Enhancement of Multisubband Mobility in AlGaAs parabolic quantum wells”, Proceedings of ICAEE-2014, VIT, Vellore, January 9-11, 2014 (**IEEE Xplore**).
22. **N. Sahoo**, A. K. Panda and T. Sahu, “Effect of Intersubband interaction on multisubband electron mobility in a parabolic quantum well under applied electric field”, International workshop on physics of semiconductor (IWPSD) Proc, 2013, Amity University, Noida, Dec. 10-13, 2013 (**Springer**).
23. T. Sahu, S. Palo and **N. Sahoo**, “Electric Field Induced Enhancement in Multisubband Electron Mobility Strained GaAs/InGaAs Double Quantum Well Structures”, IEEE-ICSE-2012 Proc., Kuala Lumpur, Malaysia, pp - 47-51 (**IEEE Xplore**).
24. **N. Sahoo**, G. Padhi, N. Bhoi and P. Rautary; “Automatic Localization of Pupil using Thresholding and Region Based Mask Filter”, Soft Computing Techniques in Vision Sci, **395**, 55 – 62, (2012) (**Springer**).

National Conferences Full Paper Published:

1. **N. Sahoo**, S. Palo, T. Sahu and A. K. Panda, “The effect of structure potential on the electronic properties of GaAs/Al_xGa_{1-x}As double quantum well structures”, Proceedings of 4th National Conference on Devices and Circuits, NIST, Odisha, pp. 11-15. Feb. 24, 2018.

(ISBN: 978-93-83060-16-0).

2. S. Palo, **N. Sahoo**, T. Sahu and A. K. Panda, “Electron transport mobility in $\text{Al}_x\text{Ga}_{1-x}\text{As}$ based V-shaped single quantum well structures”, Proceedings of 4th National Conference on Devices and Circuits, NIST, Odisha, pp. 62-65. Feb. 24, 2018. (ISBN: 978-93-83060-16-0).
3. **N. Sahoo**, S. Palo and T. Sahu, “Mobility modulation in delta doped double quantum well field effect transistor”, Proceedings of 2nd National Conference on Devices and Circuits, NIST, Odisha, pp. 1-5. Feb. 19, 2016. (ISBN: 978-93-82208-78-5).
4. **N. Sahoo** and T. Sahu, “Oscillating electron mobility in an asymmetric wide quantum well in presence of an external electric field”, Proceedings of 1st National Conference on Devices and Circuits, NIST, Odisha, pp. 78-81. Feb. 20-21, 2015. (ISBN: 978-93-82208-75-4).
5. S. Palo, T. C. Tripathi and **N. Sahoo**, “Multisubband electron mobility in delta doped parabolic quantum well”, Proceedings of 1st National Conference on Devices and Circuits, NIST, Odisha, pp. 82-86, Feb. 20-21, 2015. (ISBN: 978-93-82208-75-4).
6. **N. Sahoo**, N. Bhoi; “Detection of Open and Close State of Eye Using Intensity Variation ” ; Proceedings of National Conference on Recent Trends in Communication Technology-2011; pp. 75-79, Konark Institute of Technology, BBSR, January 22-23, 2011.