



Dr Kosalaya Chakrabarti

E-mail: kosalayac@gmail.com

Profile URL :

<https://vidwan.inflibnet.ac.in/profile/332448>

Orcid Id: 0000-0001-6087-981X

Phone: 03224-252900,

Address: Purba Medinipur ,West Bengal,India - 721657

Expertise

Telecommunications

Photonics, Sensors, QCA

Work experience

1. Haldia Institute of Technology 2018 — Present

Professor

Purba Medinipur

Education

1. Post Doctoral - 2015

National Institute for Materials Science, Japan

2. Post Doctoral - 2012

Utsunomiya University, Japan

3. Ph.D - 2011

University of Tsukuba , Japan

4. M.Tech - 2001

University of Calcutta

Honours and Awards

1. Keynote Speaker - 2023

2nd International Conference on Optoelectronic Information and Computer Engineering (OICE 2023)

2. Invited Speaker - 2020

EEE Association, RUET Rajshahi

3. Invited Speaker - 2019

ICECTE 2019, RUET Rajshahi

4. MONBUKAGAKUSHO: MEXT) Scholarship - 2006

Japanese Government

Research Project

Construction of next-generation infrastructure system using innovative materials

Role: NIMS Postdoctoral Researcher

Year 2014, Amount ¥2000000

Development of nanoscale dynamic analysis and nondestructive evaluation technology

Role: NIMS Postdoctoral Researcher

Year 2014, Amount ¥1000000

Membership In Professional Bodies

1. IEEE Member/Customer Number: 92716210, 2013

Senior Member

2. Optical Society of India. Member Code: L335 , 2005
Life Fellow

Membership In Committees

1. ICCDC 2023, 2023
Program committee Member
2. HIT Publication Committee , 2022
Member
3. Anti Ragging Squad, 2021
Chairman

Patent

1. Image Segmentation of Brain Tumors in 3D using Deep Learning
Inventor(s): 1 . Dr.Varalatchoumy. M 2 . Dr. Ganesh D R 3 . Kisalaya Chakrabarti 4 . Ravi Shankar 5 . Dr. Mahendra Pratap Swain 6 . Dr. HAKKIM DEVAN MYDEEN 7 . Dr swati sah 8 . Anand Kumar, Assignee:
Published: 2021-12-10
2. Image processing based methodology for image segmentation of brain tumors using Artificial Intelligence and Deep Learning
Inventor(s): 1 . Dr. Pavika Sharma 2 . Dr. Kisalaya Chakrabarti 3 . Dr. Shailesh Khapre 4 . Dr. S. Anantha Siva Prakasham 5 . Dr. Sachin Tyagi 6 . Er. Gurpreet Singh, Assignee:
Published: 2022-01-07
3. PORTABLE MACHINE LEARNING-BASED HEART HEALTH MONITORING DEVICE
Inventor(s): Dr. Santanu Koley, Dr. Jayeeta Majumder, Dr. Moumita Das, Dr. Arindam Giri, Dr. Nabanita Das, Dr. Sudipta Bhattacharya, Patrali Pradhan, Abhijit Debnath, Dr. Kisalaya Chakrabarti, and Dr. Krishna Chandra Mishra, Assignee:
Published: 0000-00-00

Publication

1. **A Genre of Cognitive Evolutions Through Artificial Superintelligence and Robotics Technology**
Shahriar Mostufa , Kisalaya Chakrabarti
Brain-like Super Intelligence from Bio-electromagnetism, Volume , Year 2024, Pages
2. **A review on quantum utility for secure authentication protocol towards cryptographic standard in quantum dot cellular automata**
Tapna S.;Chakrabarti K.;Mukhopadhyay D.
Journal of Discrete Mathematical Sciences and Cryptography, Volume 27, Year 2024, Pages 1415-1423
3. **A highly optimized and sensitive bowtie shapebased SPR biosensor for different analyte detection**
Md Abu Huraiya, Sankar Ganesh Ramaraj, Sk. Md. Shahadat Hossain, Kisalaya Chakrabarti, Hitoshi Tabata and S. M. Abdur Razzak
Nanoscale Advances, Volume , Year 2024, Pages
4. **Innovative Technique For Generation Of X-Ray Based On Molecular Quantum Harmonic Oscillator And Subsequent Application In Determination Of Carcinoma Of Lungs And Breast Cells Using Gold Nanowire Network**
Sachindeb Jana, Razia Sultana, Rajrupa Metia, Kisalaya Chakrabarti, Angsuman Sarkar
Afr. J. Biomed. Res., Volume 27, Year 2024, Pages
5. **Translational Symmetry of Intermediate Nodes and Antinodes of Entangled Particles**
Kisalaya Chakrabarti
Quantum Entanglement in High Energy Physics, Volume , Year 2023, Pages
6. **Optimization of Different Parameters of One Bit Full Adder Using QCA Technology**
Sachindeb Jana, Kisalaya Chakrabarti & Angsuman Sarkar
Lecture Notes in Electrical Engineering, Volume 1046 LNEE, Year 2023, Pages 333-345
7. **Performance Analysis of Logical Structures Using Ternary Quantum Dot Cellular Automata (TQCA)-Based Nanotechnology**
Tapna S.;Chakrabarti K.;Mukhopadhyay D.
Lecture Notes in Networks and Systems, Volume 613 LNNS, Year 2023, Pages 421-441
8. **Metamaterials-Based Photonic Crystal Fiber (PCF) Design for Wireless Charging**
Chakrabarti, K., Goswami, M.
Lecture Notes in Networks and Systems, Volume 618 LNNS, Year 2023, Pages 469-476
9. **A Reversible Hybrid Architecture for Multilayer Memory Cell in Quantum-Dot Cellular Automata with Minimized Area and Less Delay**
Tapna S.;Mukhopadhyay D.;Chakrabarti K.
Studies in Computational Intelligence, Volume 1085, Year 2023, Pages 153-170
10. **A Secure Communication Gateway with Parity Generator Implementation**

in QCA Platform

Tapna, S.;Chakrabarti, K.;Mukhopadhyay, D.

Communications in Computer and Information Science, Volume 1579 CCIS, Year 2022, Pages 197-209

11. Design and Analysis of GO Coated High Sensitive Tunable SPR Sensor for OATR Spectroscopic Biosensing Applications

Md. Arefin Islam;Alok Kumar Paul;Belal Hossain;Ajay Krishno Sarkar;Md. Mahabubur Rahman;Abu Sadat Md. Sayem;Roy B. V. B. Simorangkir;Md Asaduzzaman Shobug;John L. Buckley;Kisalaya Chakrabarti;Ali Lalbakhsh

IEEE Access, Year 2022

12. Theoretical Study of Channel Coded Secured Nano Communication Network in QCA Platform.

Tapna, S.;Chakrabarti, K.;Mukhopadhyay, D.

ResearchSquare, Year 2022

13. A Highly Sensitive and Ultra-Low Loss Photonic Crystal Fiber-Based Gas and Chemical Sensor

Hussayeen Khan Anik, M.;Mahmud, S.;Chakma, P.;Talukder, H.;Chakrabarti, K.;Biswas, S.K.

Lecture Notes in Electrical Engineering, Volume 851, Year 2022, Pages 33-44

14. 5G Security and Privacy Issues: A Perspective View

Yesmin, T.;Agasti, S.;Chakrabarti, K.

Smart Innovation, Systems and Technologies, Volume 248, Year 2022, Pages 89-98

15. Solution of Fractional Order Differential Equation Problems by Triangular Functions for Biomedical Applications

Anish Majumder ., Nilotpai Chakraborty ., Kisalaya Chakrabarti ., Anindita Ganguly .,

International Journal of Computer and Communication Technology, Volume 8, Year 2022, Pages 7-11

16. Photovoltaic Integrated Solar Induction Heater Using Voltage Source Inverter

Palash Pal ., Sourav Kumar Das ., Dilip Dey ., Kisalaya Chakrabarti .,

ES Energy and Environment, Volume 16, Year 2022, Pages 26-29

17. Design and analysis of a position chirped metamaterial photonic crystal array for confinement of light pulses

Kisalaya Chakrabarti ., Shahriar Mostufa ., Alok Kumar Paul .,

Journal of Optics (United Kingdom), Volume 23, Year 2021

18. Design and analysis of a multi-core whispering gallery mode bio-sensor for detecting cancer cells and diabetes tear cells

Kisalaya Chakrabarti ., Mohammad S. Obaidat ., Shahriar Mostufa ., Alok Kumar Paul .,

OSA Continuum, Volume 4, Year 2021, Pages 2294-2307

19. Detection of hemoglobin in blood and urine glucose level samples using a graphene-coated SPR based biosensor

Shahriar Mostufa ., Alok Kumar Paul ., Kisalaya Chakrabarti .,

OSA Continuum, Volume 4, Year 2021, Pages 2164-2176

20. **Numerical analysis of an ultra-high negative dispersion compensating micro-structured optical fiber with air-holes arranged in octagonal structure**
Shovasis Kumar Biswas ., M. Ifaz Ahmad Isti ., Mohammad Mahmudul Alam Mia ., Hriteshwar Talukder ., Kisalaya Chakrabarti .,
Proceedings of 4th International Conference on 2021 Devices for Integrated Circuit, DevIC 2021, Volume , Year 2021, Pages 84-89
21. **Is There Any Spooky Action at a Distance?**
Kisalaya Chakrabarti .,
Lecture Notes in Networks and Systems, Volume 170 LNNS, Year 2021, Pages 669-682
22. **Detection of hemoglobin in blood and urine glucose level samples using a graphene-coated SPR based biosensor**
Shahriar Mostufa;Alok Kumar Paul;Kisalaya Chakrabarti
OSA Continuum, Volume 18, Year 2021, Pages 4148-4157
23. **Optimization of Effective Area of 3-Inputs XOR Gate Using QCA Simulation**
Sachindeb Jana, Kisalaya Chakrabarti, Anshuman Sarkar
Journal of Critical Reviews, Volume 7, Year 2020, Pages 2816-2823
24. **Twin core photonic crystal fiber refractive index sensor for early detection of blood cancer**
Md. Aslam Mollah ., Md. Yousufali ., Istihad Mahmud Ankan ., Md. Mahabubur Rahman ., Hasan Sarker ., Kisalaya Chakrabarti .,
Sensing and Bio-Sensing Research, Volume 29, Year 2020
25. **Design and Evaluation of Liquid Filled PCF Temperature Sensor Based on SPR**
Md. Abu Bakar Siddik ., Md. Selim Hossain ., Alok Kumar Paul ., Md. Mahabubur Rahman ., Md. Hassanul Karim Roni ., Kisalaya Chakrabarti .,
2020 IEEE Region 10 Symposium, TENSYP 2020, Volume , Year 2020, Pages 1795-1799
26. **An SPR-based optical biosensor with shared plasmonic materials and optimized graphene layer: An angular interrogation approach**
Md. Mahabubur Rahman ., Md. Masud Rana ., Md. Shamim Anower ., Nazmus Sakib ., Kisalaya Chakrabarti ., Alok Kumar Paul .,
2020 IEEE Region 10 Symposium, TENSYP 2020, Volume , Year 2020, Pages 1680-1683
27. **Design and Analysis of Plasmonic Temperature Sensor Utilizing Photonic Crystal Fiber**
Md Kamrul Hasan ., Md. Kamrul Hasan ., Md Mahabubur Rahman ., Md. Mahabubur Rahman ., Md. Shamim Anower ., Md Shamim Anower ., Md Masud Rana ., Md. Masud Rana ., Alok Kumar Paul ., Alok Kumar Paul ., Kisalaya Chakrabarti ., Kisalaya Chakrabarti .,
2020 IEEE Region 10 Symposium, TENSYP 2020, Volume , Year 2020, Pages 1189-1192
28. **Polarization-maintaining and Polarization-filtering Negative Curvature Hollow Core Fiber in THz Regime**
Istihad Mahmud Ankan ., Md. Aslam Mollah ., Alok Kumar Paul ., Kisalaya Chakrabarti .,

29. **Finite Element Method Based Design Analysis of Internal Coated and External Coated PCF Temperature Sensor**

Md. Abu Bakar Siddik ., Md Abu Bakar Siddik ., Md. Selim Hossain ., Md Selim Hossain ., Alok Kumar Paul ., Alok Kumar Paul ., Md. Mahabubur Rahman ., Md Mahabubur Rahman ., Md Hassanul Karim Roni ., Md. Hassanul Karim Roni ., Kisalaya Chakrabarti ., Kisalaya Chakrabarti .,
2020 IEEE Region 10 Symposium, TENSYP 2020, Volume , Year 2020, Pages 1764-1769

30. **Realization of original quantum entanglement state from mixing of four entangled quantum states**

Kisalaya Chakrabarti .,
Studies in Computational Intelligence, Volume 863 SCI, Year 2020, Pages 159-169

31. **Review of Single-Mode Fiber-Based Polarization-Sensitive OCT**

Kisalaya Chakrabarti ., Kushal Roy .,
Lecture Notes in Electrical Engineering, Volume 602, Year 2020, Pages 213-222

32. **Impact of Stresses on Different Societies during the Lockdown Period due to COVID-19 Infection**

Tahamina Yesmin ,Kisalaya Chakrabarti
International Journal of Creative Research Thoughts, Volume 8, Year 2020, Pages 2265-2271

33. **A proposed model to fight against spread of novel corona virus in India from stage 2 to stage 3**

Arindam Pattanayak, Rupalekha Ghorai, Kisalaya Chakrabarti
Asian Journal of Science and Technology, Volume 11, Year 2020, Pages 10969-10971

34. **Metal Detector Robotic Vehicle**

Kisalaya Chakrabarti, Kushal Roy and Tilak Mukherjee
Lambert Academic Publishing , Volume , Year 2019, Pages

35. **Simulation Study of Strains Obtained by Two Different Scattering Processes in Optical Fiber Sensors**

Kisalaya Chakrabarti, Mitsuharu Shiwa
International Journal of Computer Sciences and Engineering, Volume 4, Year 2016, Pages 1-9

36. **Heat transfer and friction characteristics of artificially roughened solar air heater duct: A review**

PranabKanti Roy, Kisalaya Chakrabarti
Asian Journal of Science and Technology, Volume 4, Year 2013, Pages 045-056

37. **Image recovery by backward iteration of the non-standard finite difference time domain algorithm**

James B. Cole ., Kisalaya Chakrabarti .,
Optical Review, Volume 18, Year 2011, Pages 149-152

38. **Simulation study on the effect of back scattered noise from detectors on the quality of medical images using Non-Standard Time Domain Time**

Inverse Algorithm

Kisalaya Chakrabarti, James B. Cole

Proceedings of ODF'10, Yokohama" April 19-21, 2010, Volume , Year 2010, Pages

39. Simulation study of photonics crystals using a high accuracy FDTD Algorithm based on Non-Standard Finite Differences

Kisalaya Chakrabarti, James B. Cole

Conference Proceedings of 15th Microoptics Conference (MOC 2009) Odaiba, Tokyo, Japan, Volume , Year 2009, Pages J61-2

40. Reflection Spectrum of a Finite Dielectric Layered Structure with Subwavelength Features

James B. Cole, Dong Zhu, Kisalaya Chakrabarti , and Saswatee Banerjee

Technical Digest of 5th International Conference on Optics-photonics Design & Fabrication, Volume , Year 2006, Pages 7PS2 -07