

Name: **Dr. Kamalika Tiwari**



**Department: Instrumentation & Electronics Engineering &
Electrical Engineering**

Contact Nos.: 9732892130/9474542130/9434478961

**Qualifications: Ph D (Instrumentation & Electronics Engg), Jadavpur University
M. Tech(AMST), NIT Durgapur
B.E((Instrumentation & Control Engg), Pune University**

Designation: Assistant Professor (AGP 7000)

VIDWAN ID: 184816.

Experience (Teaching / Research / Industry, in yrs):

Teaching: 13 yrs

Research: 2.4 yrs

Industry: 0.6 year(6 months)

Date of Joining at the Present Institution: 1 NOVEMBER 2006

Examinations Cleared: NET-CSIR/GATE : NIL

Qualifications Summary (Reverse chronological order):

| Degree | Institute | From - To | Subjects |
|---------------|------------------|------------------|-----------------|
|---------------|------------------|------------------|-----------------|

| Degree | Institute | From - To | Subjects |
|------------|---------------------|-----------|---|
| Phd | Jadavpur University | 2014-2019 | Instrumentation & Electronics Engineering |
| M.Tech | NIT Durgapur | 2007-2009 | Advance Material Science & Technology |
| PG Diploma | Steam Engineering | 2005-2006 | Forbes Marshall |
| B.E | Pune University | 2001-2005 | Instrumentation & Control Engineering |

Experience Summary (In chronological order):
Designation, Organization, Date From – Date To

| Designation | Organization | Date From – Date |
|---------------------|--------------------------------|-----------------------|
| Tranee Engineer | Halward Pumps | 1.3.2006 – 31.10.2006 |
| Lecturer | Dr B C Roy Engineering College | 1.11.2006-30.8.2012 |
| Research Scholar | Jadavpur University | 1.9.12-31.12.2014 |
| Assistant Professor | Dr B C Roy Engineering College | 1.1.15- till date |

Specialization/Research Interest: Machine Olfaction, Pattern Recognition, Sensors,

Instrumental Analysis of Water pollutants, Artificial Neural Network

Awards & Recognitions

Best paper/ scholarship/Position in university exam / awards while at industry/ other organizations etc.

- TEQIP Scholarship (2012), DST SERB Young Scientist International Travel Grant
- CSIR –Summer Research Training Program (CSIR - SRTP) 2020

Courses taught:

B.Tech: Specify the name of the subject/s (Theory first and then practical)

B.Tech: Theory:

- Sensor & Transducers
- Industrial Instrumentation (EIE)
- Analytical Instrumentation (EIE)
- Power Electronics (EIE)
- Advance
Sensor
(MEMS) (EIE)
- Biomedical
Instrumentation
(EIE)
- Material
Science (EE)
- Electronic Instrumentation (EIE)
- Electrical Instrumentation & Measurement (EE)
- Analog Electronics (EE)
- Power Plant Instrumentation (EIE)
- Introduction to MEMS(EIE)

Laboratory:

- Sensor & Transducers (EIE)
- Industrial Instrumentation (EIE)
- Electrical Instrumentation & Measurement
(EIE)
- Electronic Instrumentation (EIE)
- Electronic Instrumentation (EIE)
- Analog Electronics(EE)

M.Tech: specify the name of the Subject/s: Not Allotted till date

Online Mode of Teaching:

The Faculty member needs to specify the online teaching/ assessment method adopted. (Link to any faculty created resources for Lecture notes / PPT/ Video Lecture etc. in Google Drive / Weblink etc)

Publications:

Journal:

1. **Kamalika Tiwari**, Bipan Tudu, Rajib Bandyopadhyay, Anutosh Chatterjee, Panchanan Pramanik, Voltammetric sensor for electrochemical determination of the floral origin of honey based on a zinc oxide nanoparticle modified carbon paste electrode, Journal of Sensors and Sensory Systems, 7(2018) 1-11.
2. **Kamalika Tiwari**, Sudip Biswas, Bipan Tudu, Rajib Bandyopadhyay, Panchanan Pramanik, Anutosh Chatterjee, Development of metal oxide modified carbon paste based sensor for honey analysis using electronic tongue, Journal of Materials Today: Proceedings, 4 (2017) 9500-9504.
3. **Kamalika Tiwari**, Bipan Tudu, Rajib Bandyopadhyay, Anutosh Chatterjee, Identification of monofloral honey using voltammetric electronic tongue, Journal of Food Engineering, 117(2013) 205-210.
4. **Kamalika Tiwari**, Santigopal Pain, An Exploration of Glassy Carbon and Carbon Paste Sensors for Voltammetric Electronic Tongue, Int.J.HIT.TRANS: ECCN. Vol.6: Issue 1A (2020) Page 24-29

Conference:

1. Sunil Choudhury, **Kamalika Tiwari**, Santigopal Pain, Optimum Power Flow scheduling with Valve-Point Effects using Barnacles Mating Optimization, **SPRINGER: International Conference on Communication, Devices and Computing**, Haldia, India, 16-18th August 2021.
2. **Kamalika Tiwari**, Santigopal Pain, Bipan Tudu, Rajib Bandyopadhyay, Anutosh Chatterjee, Classification of different floral origin of honey using Hybrid model of Particle Swarm Optimization and Artificial Neural Network, Innovation in Sustainable Energy and Technology, Bangalore, India, 3rd-4th December 2020.
3. Santigopal Pain , **Kamalika Tiwari**, Dilip Kumar Dey, Parimal Acharjee, CEPSO based Load Frequency Control of Isolated Power System with Security Constraints, Innovation in Sustainable Energy and Technology, Bangalore, India, 3rd-4th Dec 2020.
4. Mohit Raja, Chirag Kumar, Rohan Jayesh, **Kamalika Tiwari**, Chhanda Roy, Instrumental Analysis of Groundwater and Water quality Index in Fuljhore Durgapur using GIS, IEEE Conference , Dr.B.C Roy Engineering College , 4th-5th Feb 2020
5. **Kamalika Tiwari**, Bipan Tudu, Rajib Bandyopadhyay, Anutosh Chatterjee, Instrumental testing of floral origin of honey using an electronic tongue, International Conference on

Advancement of Computer Communication and Electrical Technology, Murshidabad, India, 21st-22nd October, 2016.

6. Ajay Shankar, Krishna Mohan Singh, Nimish Kashyap, Sourab Kr. Choubey, **Kamalika Tiwari**, Debasis De. Fabrication of Nanostructured Zinc Oxide for Gas Sensing Application, International Conference on Recent Trends in Engineering and Material Science, Jaipur, 17-19th March, 2016
7. **Kamalika Tiwari**, Sudip Biswas, Bipan Tudu, Rajib Bandyopadhyay, Panchanan Pramanik, Anutosh Chatterjee, Investigation of glassy carbon and carbon paste electrode in honey floral identification using electronic tongue, 16th International Symposium on Olfaction & Electronic Nose, France, 28th June- 1st July, 2015.
8. **Kamalika Tiwari**, Sudip Biswas, Bipan Tudu, Rajib Bandyopadhyay, Panchanan Pramanik, Anutosh Chatterjee, Voltammetric technique for honey analysis using NiO/Nps modified carbon paste electrode, International Conference on Control, Instrumentation, Energy & Communication, Kolkata, India, 31st January- 2nd February, 2014.
9. **Kamalika Tiwari**, Bipan Tudu, Nabarun Bhattacharyya, Rajib Bandyopadhyay, Anutosh Chatterjee, Identification of floral origin of honey based on cyclic voltammetric electronic tongue and correlation with physiochemical parameters, 15th International Symposium on Olfaction & Electronic Nose, Daegu, South Korea, 2nd-5th July, 2013.
10. Santigopal Pain, **Kamalika Tiwari**, A graphical design methodology of missile autopilot, International MutliConference on Automation, Computing, Communication, Control and Compressed Sensing (iMac4s) 2013, Palai, Kerela, India, 22-23rd March 2013
11. **Kamalika Tiwari**, Bipan Tudu, An Electronic tongue for unifloral honey identification, National Seminar cum Workshop on Sensor and Sensing System for Taste Characterization of Food and Agro Products, Indian Institute of Technology-Kharagpur, West Bengal, India, 9th -10th May, 2013.
12. **Kamalika Tiwari**, Bipan Tudu, Rajib Bandyopadhyay, Anutosh Chatterjee, Discrimination of monofloral honey using cyclic voltammetry, National Conference on Emerging Trends and Applications in Computer Science, Shillong, India, 28th-31st March, 2012.

Book:
NIL

Book Chapter:

1. **Kamalika Tiwari**, Santigopal Pain, Bipan Tudu, Rajib Bandyopadhyay, Anutosh

Chatterjee Classification of different floral origin of honey using Hybrid model of Particle Swarm Optimization and Artificial Neural Network, Innovation in Sustainable Energy and Technology, Bangalore, India, 3rd -4th December 2020.

2. Santigopal Pain , **Kamalika Tiwari**, Dilip Kumar Dey, Parimal Acharjee, CEPSCO based Load Frequency Control of Isolated Power System with Security Constraints, Innovation in Sustainable Energy and Technology, Bangalore, India, 3rd -4th December 2020.

Supervision of Ph.D/M.Tech/ B.Tech Projects:

For Ph.D

1. Name of the student, Name of the supervisor, " Title of the thesis", Year , Name of the university (completed)
2. Name of the student, Name of the supervisor, " Title of the thesis", Year, Name of the university (Registered)

Projects:

| | | | |
|----------------------|-------------|--|------|
| Nilesh Ranjan | 12000513029 | The data analysis of metal oxide modified carbon based sensor array of electronic tongue using clustering analysis | 2016 |
| Rajeev Ranjan | 12000513034 | | |
| Kundan Kumar | 12000513023 | | |
| Subham Sangam | 12000513049 | Synthesis and characterisation of Zirconium Oxide nanoparticles as an electrochemical sensor | 2017 |
| Mainak Das | 12000513026 | | |
| Abhishek Kumar Singh | 12000513002 | | |
| Ranjan Kumar Dwiwedy | 12000513037 | Comparison of multivariate preprocessing techniques as applied to e-tongue for honey floral type classification | 2017 |
| Kundan Kumar Arya | 12000513024 | | |
| Kum ar Shubham | 12000513022 | | |
| Ajay Shankar | 12000512003 | Nano structured gas sensor | 2017 |
| Krishna Mohan Singh | 12000512020 | | |
| Nimish Kashyap | 12000512028 | | |
| Sourav Kumar Choubey | 12000512056 | | |
| Ankit Kumar | 12005514002 | Smoke Detector | 2018 |
| Deep Sikha | 12005515009 | Temperature dependent viscosity analysis of soyabean oil an Experimental study | 2019 |
| Jyoti Kumari | 12005515013 | | |
| Rohan Jayesh | 12005516013 | A study on Underground Water Quality Assessment of Durgapur | 2020 |
| Mohit Raja | 12005516020 | | |
| Chirag Kumar | 12005516026 | | |

Invited Lectures:

Topic of the lecture : **21st Century Skill Development in the light of AICTE IDEA Lab**

Name of the event: **NATIONAL WEBINAR**

Organized by: **R&D Cell of Dr. B. C. Roy Engineering College, Durgapur.**

Date: **28th June, 2021**

Participation in seminar/conference/symposium/workshop/discussion meeting

Seminar

1. National Seminar cum Workshop on Sensor and Sensing System for Taste Characterization of Food and Agro Products, Indian Institute of Technology, Kharagpur, West Bengal, India, 9th-10th March, 2013.

Webinar

1. Trends in Nanotechnology , 20th October, 2020, Dr. B C Roy Engineering College, Durgapur
2. Scope of Research Post Covid-19, Dr. B. C. Roy Polytechnic, 17th July, 2020.
3. Role of Youth on Nation Building and National Integration, IIIT Nagpur, NIT Rourkela, VNIT Nagpur, IIITDM Kurnool & IGNOU Center Nagpur, 10th July 2020.
4. Robotics & the Future of Healthcare, 19th June 2020, St. Xavier's College, NEVTA
5. Data Analytics and Machine Learning with Python & R, 14th June 2020, CYPHER
6. Introduction to Industrial IOT and its Prospects, June 8th 2020, Dr. D.Y Patil University, Pune
7. Artificial Intelligence, Foursteps Training Solutions, Chennai, 5th June 2020
8. Biomedical Applications of Raman Spectroscopy, May 11th 2020, University of Lucknow

Conference

1. **Kamalika Tiwari**, Santigopal Pain, Bipan Tudu, Rajib Bandyopadhyay, Anutosh Chatterjee Classification of different floral origin of honey using Hybrid model of Particle Swarm Optimization and Artificial Neural Network, Innovation in Sustainable Energy and Technology, Bangalore, India, 3rd -4th December 2020
2. International Conference on Advancement of Computer Communication and Electrical Technology, Murshidabad, India, 21st -22nd October, 2016.
3. International Conference on Control, Instrumentation, Energy & Communication, Kolkata, West Bengal, India, 31st January- 2nd February, 2014.
4. National Conference on Emerging Trends and Applications in Computer Science, Shillong, India, 28th -31st March, 2012.

Symposium

1. International Symposium on Olfaction & Electronic Nose, Daegu, South Korea, 2nd-5th July, 2013.

Workshop

1. NEMS Technologies: Modern Interdisciplinary Approach in Engineering, organized by Department of Mechanical Engineering and Department of Electronics & Instrumentation Engineering, National Institute of Technology Silchar from 17th - 21st August 2020.
2. Quartz Crystal Microbalance (QCM) & Surface Acoustic Wave (SAW) Sensor, 13-14th May 2013, Jadavpur University
3. Application of NIR Infrared Technology for Tea Quality analysis, March 15th 2014, Sonnet, Kolkata
4. Application of NIR spectroscopy for food and agriculture, 23rd March 2019, Science city, Kolkata
5. Physics & Technology of Sensors (PHYTSENS 12), Nov 21st to Dec 11th 2013, Institute of Radio Physics & Electronics, University of Calcutta, Kolkata
6. Relevance of Physics Education in Present Technological Scenario, January 18th -19th 2008 National Institute of Technology, Durgapur
7. Corrosion Fundamentals, Testing and Prevention, July 14th-25th, National Institute of Technology, Durgapur
8. Quest for Advance Materials, Feb 26th 2008, National Institute of Technology, Durgapur

Participation in faculty development programmes

1. Teaching and Learning Skill development Organized by IEEE student chapter, IEI student chapter at Dr. B C Roy Engineering College Durgapur on 22nd August 2019
2. ATAL Faculty Development Programme organized by AICTE at Burdwan University On SENSOR TECHNOLOGY from 3rd Nov to 7th Nov 2020
3. RGTEYH
4. ATAL Faculty Development Programme organized by Indira Gandhi Delhi Technical University for Women “**Foundation of Data Science and its Applications**” from 6-11 September, 2021.

Organization of events (Dr. B. C. Roy Engineering College)

D.M Auditorium Inauguration, 12th Feb 2019

Participation in administrative committees (selected)

Name of the post (Convener/Joint Convener/Member secretary/Co-ordinator etc.), Name of the committee, year

- **Coordinator : SSEP Coordinator , 2021**
- **Technical Program Committee (TPC) member Women Institute of Technology conference on Electrical and Computer Engineering (IEEE WITCON ECE-2019), Conference ID 48374, Dehradun Uttarakhand.**
 1. **Anti Ragging Committee (2016-2019) (2006-12)**
 2. **Discipline Committee (2017-2019) (2006-2012)**
 3. **Departmental Library Committee (EIE) (2018-2020)(2007-2012)**
 4. **Departmental Library Committee (ECE) (2015- 17)**
 5. **Tech –Fest Committee (2019) (2006-2008)**
 6. **Cultural Committee (2007-2012)**
 7. **Departmental Exam Coordinator (2006-2009)**
 8. **Research and Development (2010-2012)(2020- till date)**
 9. **Women Grievance Cell (2010-2012)**
 10. **Hostel Supertendent (2017- 2019)**
 11. **Soft skill Enhancement Programme Coordinator(2021)**
 12. **NEET 2021 OBSERVER(2021)**
 13. **NTA OBSERVER (2021)**
 14. **National Science Congress (Burdwan District 2021) Mentor Evaluator**

Project Ideas Submitted to Govt. Agencies/ On-going Projects / Research Ideas under preparation & execution

- **MSME Government of India (Submitted: January 2020)**

Project Title : Characterization of honey samples using Multielectrode Potentiostat system and soft computing techniques. (2020)

- **National Post Doctoral fellowship :**

Project title : Intelligent sensor and instrumentation for rapid and cost-effective quality evaluation of Indian honey(2021)

Membership of professional bodies: IEEE, IETE, IEL, CSI, MGMI etc. NIL

