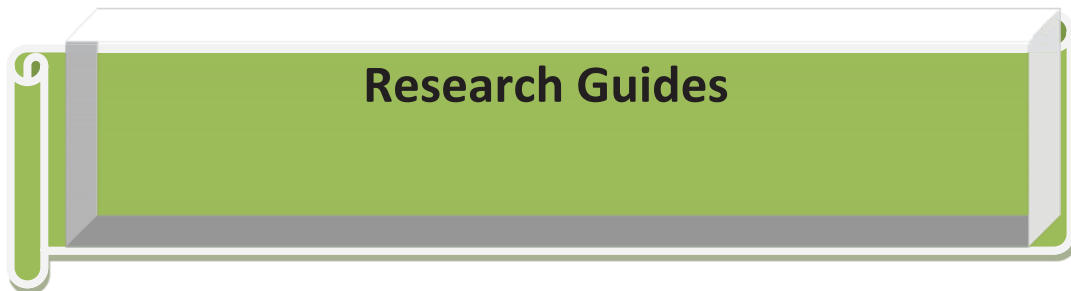




Heritage Institute of Technology

(An Autonomous Institution)



MaulanaAbulKalam Azad University of Technology, West Bengal
(Formerly Known as West Bengal University of Technology)



REGISTRATION CERTIFICATE

This is to certify that Shri/Smt. **SUDIP KUILA** has been granted registration for Ph.D. program in AEIE.

Details of registration are :

Ph.D. Registration no.: PhD/Tech/AEIE007/2020

Date of Enrollment : 20-01-2020

Title of the thesis : Development and Characterization of Clinically Agreeable Exhaled Breath Sensors for Assessing Asthma and Diabetes.

Supervisor : **Dr.Surajit Bagchi**

Co-Supervisor 01 : None

Co-Supervisor 02 : None

This registration shall be valid for six years with effect from the date of enrollment.

Dr. Surajit Bagchi
16/12/2020

Registrar

MaulanaAbulKalam Azad University of Technology, West Bengal
(Formerly Known as West Bengal University of Technology)



REGISTRATION CERTIFICATE

This is to certify that Shri/Smt. **SANTU GUIN** has been granted registration for Ph.D. program in AEIE.

Details of registration are :

Ph.D. Registration no.: Ph.D/Tech/AEIE005/2018

Date of Enrollment : 09-10-2018

Title of the thesis : Design of MEMS Devices for Detection of Common Blood Related Diseases by Sensing Non-biological Parameters.

Supervisor : Prof. (Dr.) Madhurima Chattopadhyay

Joint Supervisor : None

Associate Supervisor : None

This registration shall be valid for six years with effect from the date of enrollment.

Signature
24/12/2020

Registrar



MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

(FORMERLY KNOWN AS WEST BENGAL UNIVERSITY OF TECHNOLOGY)

Main Campus : Haringhata, Nadia, Pin-741249

Kolkata Campus : BF-142, SECTOR-I, SALT LAKE CITY, KOLKATA-700 064, (INDIA)

Website : www.wbut.ac.in

Ref. No. :

Date :

Dt: 23/11/2020

Enrollment Certificate for the PhD Program

This is to certify that Mr./Ms. Subhadeep Mondal has been enrolled as a provisional Ph.D scholar in Civil Engineering discipline.

Enrollment number : PHD/TECH/CIE005/2020

Date of enrollment : 05.10.2020

Validity : Two years from date of enrollment.

Name of Supervisor : Prof. Tapas Sadhu

Partha Pratim Lahiri
23.11.2020

(Dr. Partha Pratim Lahiri)
Registrar

REGISTRAR
Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly Known as West Bengal University of Technology)
Kolkata - 700 064

যাদবপুর বিশ্ববিদ্যালয়

PRINCIPAL SECRETARY
FACULTY OF ENGINEERING & TECHNOLOGY



*JADAVPUR UNIVERSITY
KOLKATA-700 032, INDIA

Ref. No. ৯-৭/এ/২০/২০

Date: November 18, 2020

২৫

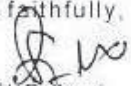
To,
Dr. Avijit Ghosh,
Assistant Professor,
Chemical Engineering Department,
Heritage Institute of Technology,
994 Madurdaha, Anandapur,
Kolkata - 700 107

Dear Sir,

I am hereby to inform you that the Doctorate Committee (Engg./Pharm.) in its meeting held on 14.02.2020 was resolved, vide Res. No. '6' (d), to appoint you as the Joint Supervisor of Sri Avijit Routh along with Prof. Mehabub Rahaman, Chemical Engineering Department, J.U.

Thanking you,

Yours faithfully,


Samit Pahari
Secretary, F.E.T.

Copy: Records - 2.

Secretary, FET (File No. 25/18/E)
(Vide D.C. Res. No. 6 (d) dt. 14.02.2020)

Supervisor/s: Dr. Mehabub Rahaman,
Chemical Engineering Department, J.U.,
Kolkata - 700 032

Sri. Avijit Routh,
Barmanikpur, Nagarchak
Paschim Midnapore,
PIN - 721 101

৯৬

* Established on and from 24th December, 1955 vide Notification No.10986-Edn/IU-42/55 dated 6th December, 1955 under Jadavpur University Act, 1955 (West Bengal Act XXXIII of 1955) followed by Jadavpur University Act, 1981 (West Bengal Act XXIV of 1981)

দূরভাষ: ২৪২৪-৬০০৮/৬৬৬৬. প্রসারণ: ২২২৫/২৪৪০

Website: www.jadavpur.edu Phone : 91-33-2414-6008/6666, Ext. : 2215/2440

দূরবার্তা: +৯১-৩৩-২৪২৪-৬০০৭

Fax: 91-33-2414-6007

যাদবপুর বিশ্ববিদ্যালয়

██████████
PRINCIPAL SECRETARY
FACULTY OF ENGINEERING & TECHNOLOGY



*JADAVPUR UNIVERSITY
KOLKATA-700 032, INDIA

Ref. No. ১৭/E/১১/২০

Date: November 13, 2020
২৪


To,
Dr. Avijit Ghosh,
Assistant Professor,
Chemical Engineering Department,
Heritage Institute of Technology,
994 Madurdaha, Anandapur,
Kolkata - 700 107

Dear Sir,

I am hereby to inform you that the Doctorate Committee (Engg. /Pharm.) in its meeting held on 14.02.2020 was resolved, vide Res. No. '6' (c), to appoint you as the Joint Supervisor of Sri Sankhadeep Ghosh along with Prof. Mehabub Rahaman, Chemical Engineering Department, J.U.

Thanking you,

Yours faithfully,


Samit Pahari
Secretary, F.E.T.

Copy: Records - 2.

Secretary, FET (File No. 28/18/E)
(Vide D.C. Res. No. 6 (c) dt. 14.02.2020)

Supervisor/s: **Dr. Mehabub Rahaman,**
Chemical Engineering Department, J.U.,
Kolkata - 700 032

Sri. Sankhadeep Ghosh,
Vill - Basantapur,
P.O. - Paratal, P.S. - Jamalpur,
Burdwan East,
PIN - 713 408



AMITY UNIVERSITY

MADHYA PRADESH

Established vide Government of Madhya Pradesh Act No. 27 of 2010

Ref. AUMP/ASET/CSE/RG/2021/93

Date: 08-July-2021

To

Dr. Anindita Kundu

Assistant Professor,

Department of Computer Science & Engineering

Heritage Institute of Technology, Kolkata

Dear Madam,

Warm Greetings from Amity University Madhya Pradesh. We hope that you and your family are safe in these unprecedented times.

On behalf of Amity University Madhya Pradesh, I am pleased to inform you that as per your consent letter, departmental research committee has approved your name as co-supervisor of Mr. Somenath Sengupta (Enrolment No: A60236420023), part time research scholar of our department since August 2020. This approval is only for his candidature till he completes his research in our University.

We sincerely hope that your association with us will help our scholar to pursue his research under your guidance and support.

Subhrendu Guha Neogi

Dr. Subhrendu Guha Neogi

Associate Professor, Dept. of CSE,

Amity School of Engineering & Technology

Amity University Madhya Pradesh



Amity University, Madhya Pradesh, Maharajpura (Opposite Airport), Gwalior (M.P.) – 474005

Amity Helpline : 0751-3290666, 3290667; 083-499-94630, 083-499-94631, 083-499-94632

Website : www.amity.edu/gwalior, Email : info@gwa.amity.edu; admissions@gwa.amity.edu

Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly Known as West Bengal University of Technology)



REGISTRATION CERTIFICATE

This is to certify that Shri/Smt. **SUDIPTA ROY** has been granted registration for Ph.D. program in **Mathematics**.

Details of registration are :

Ph.D. Registration no. : PhD/Science/Math008/2018

Date of Enrollment : 07.06.18

Title of the thesis : SOME CONTRIBUTIONS ON VECTOR VARIATIONAL INEQUALITIES AND VECTOR OPTIMIZATION PROBLEMS UNDER THE GENERALIZED CONVEXITY ASSUMPTIONS

Supervisor : Dr. Sandip Chatterjee

Joint Supervisor : None

Associate Supervisor : None

This registration shall be valid for six years with effect from the date of enrollment.

Rehmi 28.1.2020

Registrar

Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly Known as West Bengal University of Technology)



REGISTRATION CERTIFICATE

This is to certify that Shri/Smt. **INDRAJIT NASKAR** has been granted registration for Ph.D. program in **Applied Electronics & Instrumentation Engineering(AEIE)**.

Details of registration are :

Ph.D. Registration no. : PhD/Tech/AEIE004/2018

Date of Enrollment : 28.09.18

Title of the thesis : DESIGN OF EFFECTIVE SELF TUNING SCHEME AND EXTRACTON OF CONCISE RULES FOR FUZZY CONTROLLER OF NON LINEAR SYSTEM.

Supervisor : **Dr. Arabinda Kumar Pal**

Joint Supervisor : **Dr. Nandan Kumar Jana**

Associate Supervisor : None

This registration shall be valid for six years with effect from the date of enrollment.

Dehii
14.2.2020

Registrar



MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

(FORMERLY KNOWN AS WEST BENGAL UNIVERSITY OF TECHNOLOGY)

Main Campus : Haringhata, Nadia, Pin-741249

Kolkata Campus : BF-142, SECTOR-I, SALLAKE CITY, KOLKATA-700 064, (INDIA)

Website : www.wbut.ac.in

Ref. No. :

Date :

Dt: 19/11/2019

Enrollment Certificate

*This is to certify that Sri. / Smt. **Sonali Hazra Das** has been enrolled as a Probationary Ph.D Student under Maulana Abul Kalam Azad University of Technology, West Bengal in **Biotechnology**.*

*His / Her enrollment number is **PhD/Tech/BT034/2019** and is valid for two years counting from **13.11.2019**. This enrollment number in due course shall be treated as the candidate's Ph.D registration number upon successful completion of the compulsory Ph.D course works as per rules. He / She should follow Ph.D. rules as per new Ph.D guidelines framed by UGC.*

Partha Pratim Lahiri

(Dr. Partha Pratim Lahiri)
Registrar

Copy forwarded for information:-

1. The Candidate
2. **Dr. Srabanti Basu, Supervisor**
3. **Dr. Bhaswati Chakraborty, Joint Supervisor**
4. **Dr. Sudipta Dey Bandyopadhyay, Associate Supervisor**
5. O/C

Partha Pratim Lahiri
Registrar
Maulana Abul Kalam Azad University
of Technology, West Bengal
(Formerly West Bengal University of Technology)
Haringhata, Nadia-741 249



MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

(FORMERLY KNOWN AS WEST BENGAL UNIVERSITY OF TECHNOLOGY)

Main Campus : NH-12, SIMHAT, HARINGHATA, NADIA, PIN-741249

Kolkata Campus : BF-142, SECTOR-I, SALT LAKE CITY, KOLKATA - 700 064, INDIA

www.wbut.ac.in

Ref. No. :

Date :

Dt: 30/12/2019

Enrollment Certificate

This is to certify that Sri. / Smt. *Pratyusha Biswas* has been enrolled as a Probationary Ph.D Student under Maulana Abul Kalam Azad University of Technology, West Bengal in *Electrical Engineering*.

His / Her enrollment number is *PhD/Tech/EE055/2019* and is valid for two years counting from **30.12.2019**. This enrollment number in due course shall be treated as the candidate's Ph.D registration number upon successful completion of the compulsory Ph.D course works as per rules. He / She should follow Ph.D. rules as per new Ph.D guidelines framed by UGC.

Partha Pratim Lahiri 30/12/19

(Dr. Partha Pratim Lahiri)
Registrar

Copy forwarded for information:-

1. The Candidate
2. **Dr. Nabamita Banerjee Roy, Supervisor**
3. Dr. Kesab Bhattacharya, Joint Supervisor
4. O/C

Partha Pratim Lahiri
Registrar
Maulana Abul Kalam Azad University
of Technology, West Bengal
(formerly West Bengal University of Technology)
Haringhata, Nadia-741 249



MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

(FORMERLY KNOWN AS WEST BENGAL UNIVERSITY OF TECHNOLOGY)

Main Campus : Haringhata, Nadia, Pin-741249

Kolkata Campus : BF-142, SECTOR-I, SALT LAKE CITY, KOLKATA-700 064, (INDIA)

Website : www.wbut.ac.in

Dt: 21/06/2018
Date:

Ref. No. :

Enrollment Certificate

*This is to certify that Sri. / Smt. **Biswajit Maity** has been enrolled as a Probationary Ph.D Student under Maulana Abul Kalam Azad University of Technology, West Bengal in **Chemical Engineering**.*

*His / Her enrollment number is **PhD/Tech/CHE001/2018** and is valid for two years counting from **21.06.2018**. This enrollment number in due course shall be treated as the candidate's Ph.D registration number upon successful completion of the compulsory Ph.D course works as per rules. He / She should follow Ph.D. rules as per new Ph.D guidelines framed by UGC.*

(Dr. Indranil Mukherjee)
Registrar (Actg.)
Registrar (Acting)
Maulana Abul Kalam Azad University
of Technology, West Bengal
Haringhata, P.O.-Simhat, Pin-741249

Copy forwarded for information:-

1. The Candidate
2. Dr. Biswajit Mondal, Supervisor
3. Dr. Sunil Baran Kuila, Joint Supervisor
4. **Dr. Avijit Ghosh, Associate Supervisor**
5. O/C



MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

(FORMERLY KNOWN AS WEST BENGAL UNIVERSITY OF TECHNOLOGY)

Main Campus : Haringhata, Nadia, Pin-741249

Kolkata Campus : BF-142, SECTOR-I, SALLAKE CITY, KOLKATA-700 064, (INDIA)

Website : www.wbut.ac.in

Ref. No. :

Dt: 21/06/2018

Enrollment Certificate

This is to certify that Sri. / Smt. **Samar Samanta** has been enrolled as a Probationary Ph.D Student under Maulana Abul Kalam Azad University of Technology, West Bengal in **Chemical Engineering**.

His / Her enrollment number is **PhD/Tech/CHE002/2018** and is valid for two years counting from **21.06.2018**. This enrollment number in due course shall be treated as the candidate's Ph.D registration number upon successful completion of the compulsory Ph.D course works as per rules. He / She should follow Ph.D. rules as per new Ph.D guidelines framed by UGC.

(Dr. Indranil Mukherjee)
Registrar (Actg.)

Copy forwarded for information:-

1. The Candidate
2. Dr. Biswajit Mondal, Supervisor
3. **Dr. Avijit Ghosh, Joint Supervisor**
4. Dr. Sunil Baran Kuila, Associate Supervisor
5. O/C

Registrar (Acting)
Maulana Abul Kalam Azad University
of Technology, West Bengal
(Formerly Known as West Bengal University of Technology)
BF-142, Sector-I, Salt Lake, Kolkata-64

Panel of Experts for Thesis Evaluation

To,
Dean P.G. Studies,
Pacific University,
Udaipur.

Sir,

Please find the Panel of six Experts for Thesis Evaluation Titled "Squamous Cell Carcinoma detection & Measurement by Image Processing Technique" of (Name of Candidate) Himadri Nath Moudal registered in the Faculty of Engineering Department of Computer Science Engineering

S.No.	Name of Expert	Highest Qualification	Designation (Professor/ Associate Professor)	Official Address	Correspondence Address	Contact No. of Expert (Preferably mobile no.)	E-mail ID of Expert
1.	Dr. Muneesh Chandra Trivedi	Professor	Professor	Ex Former Professor Computer Science Greater Noida	Anility University	9999013200	muneesh.trivedi@gmail.com
2.	Dr. Samir Gopalak			faculty of Computer Science & Management, Jindus University, Ahmedabad		9712902350	Samir.gopalak@gmail.com
3.	Prof. Neeraj Bhatnagar			Asst. Prof., Department of Computer Science, School of Engineering & System Sciences, VITS University, Amner-305001		9460527062	dr.neerajbhatnagar@yahoo.com

4.	P.V. Vorparua	Professor	Director	Department of Computer Science, Sardar Patel University, Near Jain Bazar Vallabh Vidyanagar-388120	9426533146	
5.	Dr. Atul M Gosai			Department of Computer Science Sardar Bhausaheb University University Road, Kalyan - 360025	9427236866	
6.	Prof Navcen Hemrajani		MOD	MOD-JECRC University, Jaipur	9829032657	navcen-h@ yahoo.com

Signature of the Supervisor with seal and Date P. Das, 27.06.18

Name of the Supervisor Dr. Poulami Das

Note:

- i) The Supervisor shall not submit more than two Names of Experts from the same State.
- ii) An Expert suggested by the Supervisor for Evaluation should not be less than an Associate Professor / Reader
- iii) Out of six names minimum three Experts should be designated as Professor.
- iv) The Expert should not be from the Institute / University and Localize where you are working.
- v) The Name of Experts submitted in the Panel should be from of the University Department / Faculty. (Names of Retired Professors of University Department / Faculty can also be submitted for Thesis Evaluation)

AEIE002/2017

Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly known as West Bengal University of Technology)

MAULANA ABUL KALAM AZAD
UNIVERSITY OF TECHNOLOGY,
WEST BENGAL



REGISTRATION CERTIFICATE

To:

DEBJYOTI CHOWDHURY

QTR. NO. C-44,
STREET-2, BLOCK-3,
F.B. PROJECT, FARAKKA,
MURSHIDABAD, PIN-74221.

Dear Sir/Madam,

I am glad to inform you that you have been granted registration for Ph. D programme under this University in *Applied Electronics & Instrumentation Engineering* for the Degree of Doctor of Philosophy (Ph. D.).

Your Registration No. *PhD/Tech/AEIE002/2017* is with effect from **18.05.17**.

This registration shall remain valid for five years with effect from the date of registration as indicated above.

Title of the Thesis

STUDY OF MEMS BASED DEVICES
FOR NON - CLINICAL ASSESSMENT
OF BIO - MEDICAL NEEDS

Dr. Madhurima Chattopadhyay
(Supervisor)

(Joint Supervisor)

(Associate Supervisor)

Yours faithfully,

Indranil Mukherjee

Registrar

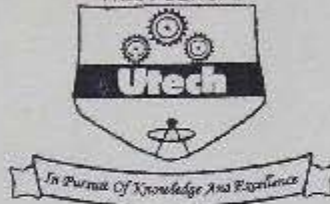
August 02, 2018

Maulana Abul Kalam Azad University of Technology, West Bengal

This Registration Certificate will be deemed cancelled if any case of ineligibility is detected.

Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly known as West Bengal University of Technology)

MAULANA ABUL KALAM AZAD
UNIVERSITY OF TECHNOLOGY
WEST BENGAL



REGISTRATION CERTIFICATE

To:

SANTANU MONDAL

NARIMORE, BURDWAN,
KALNA ROAD, PIN-713101.

Dear Sir/Madam,

I am glad to inform you that you have been granted registration for Ph. D programme under this University in *Applied Electronics & Instrumentation Engineering* for the Degree of Doctor of Philosophy (Ph. D.).

Your Registration No. *PhD/Tech/AEIE003/2017* is with effect from **18.05.17**.

This registration shall remain valid for five years with effect from the date of registration as indicated above.

Title of the Thesis

STUDIES ON DIFFERENT TYPES OF
COMMUTATION TECHNIQUES FOR
SENSORLESS BLDC MOTOR DRIVE

Dr. Madhurima Chattopadhyay
(Supervisor)

(Joint Supervisor)

(Associate Supervisor)

Yours faithfully,

Indranil Mukherjee

Registrar

August 02, 2018

Maulana Abul Kalam Azad University of Technology, West Bengal

This Registration Certificate will be deemed cancelled if any case of ineligibility is detected.

BT019/2016

Maulana Abul Kalam Azad University of Technology, West Bengal

(Formerly known as West Bengal University of Technology)

MAULANA ABUL KALAM AZAD
UNIVERSITY OF TECHNOLOGY,
WEST BENGAL



In Pursuit Of Knowledge And Excellence

REGISTRATION CERTIFICATE

To:

PLABAN CHAUDHURI

UPL 010201, UPOHAR, 2052 CHAK,

GARIA, KOLKATA – 700094.

Dear Sir/Madam,

I am glad to inform you that you have been granted registration for Ph. D programme under this University in **BIOTECHNOLOGY** for the Degree of Doctor of Philosophy (Ph. D.).

Your Registration No. **PhD/Tech/BT019/2016** is with effect from **31/08/2016**.

This registration shall remain valid for five years with effect from the date of registration as indicated above.

Title of the Thesis

PREVALENCE OF METABOLIC SYNDROME
AMONG THE OBSTETRIC POPULATION AND
THE BIRTH OUTCOMES IN KOLKATA, INDIA

Dr. Riddhi Goswami

(Supervisor)

(Joint Supervisor)

(Associate Supervisor)

Yours faithfully,

Registrar

February 16, 2018

Maulana Abul Kalam Azad University of Technology, West Bengal
BF -142, Sector 1, Salt Lake, Kolkata - 700064

This Registration Certificate will be deemed cancelled if any case of ineligibility is detected.

যাদবপুর বিশ্ববিদ্যালয়



DR. B.KARMAKAR
PRINCIPAL SECRETARY
FACULTY OF ENGINEERING & TECHNOLOGY

*JADAVPUR UNIVERSITY
KOLKATA-700 032, INDIA

Ref No D-7/E/562/17
Date July 26, 2017
০২.০৮.

To
Ankush Chattopadhyay,
49, S. K. Deb Road,
"Annapurna" Aprt.
Block - B, Flat - 17,
Kolkata - 700 048

Sub : Ph.D. (Engineering) Registration.

With reference to your application for registration to Ph D (Engineering) degree, you are hereby informed that you have been permitted to register your name on payment of requisite Ph.D.Programme fee of Rs.22000/- (Rupees twenty two thousand only) payable in three semi annual installments (8,000/- + 8,000/- + 6,000/-) You may be noted that the date of payment of registration fee will be considered as date of registration

Registration shall remain valid for five years from the date of registration. The period of validity may be extended on sufficient grounds, if the Doctorate Committee satisfied. But such extension shall not exceed two years. Such application for extension duly forwarded by the supervisor/s shall have to be submitted before expiry of the validity of registration.

The approved title of your thesis is: "STUDY OF ANALOG/RF PERFORMANCES AND LINEARITY, HARMONIC DISTORTION ANALYSIS OF FETs BEYOND SUB-22 NANOMETER TECHNOLOGY NODE FOR SOC APPLICATIONS".

If the registration fee is not paid within a month from date of issue of this letter, your application may be treated as cancelled. Your research will be governed by this New Ph.D.Rules and Regulation Please visit our University website www.jadavpur.edu for New Ph.D. Rules and Regulations. For any further clarification you may contact the undersigned

You are directed to complete 2 (Two) course work within a maximum period of two years from the date of registration as per Revised New Ph. D rules & regulation.

You are informing to bring the following documents at the time of deposition of Ph.D. programme fee.

1. Original Migration Certificate.

(Dr B Karmakar)
Principal Secretary, FET

Copy : Secretary, FET (vide Res. No. A (23) of D.C meeting. Dt. 21.06.17)

Records - 2

Supervisor/s - Prof. Chandan Kumar Sarkar,
E.T.C.E. Department, J.U.

Prof. Chayanika Bose,
E.T.C.E. Department, J.U

Dr. Atanu Kundu,

Dept. of Electronics & Communication Engg.,
Heritage Institute of Technology, Kolkata - 700 107

Sm

যাদবপুর বিশ্ববিদ্যালয়



DR. B. KARMAKAR
PRINCIPAL SECRETARY
FACULTY OF ENGINEERING & TECHNOLOGY

JADAVPUR UNIVERSITY
KOLKATA-700 032, INDIA

Ref. No. D-7/E/230/17
Date: March 20, 2017
২৫

To
Nilanjana Gangopadhyay,
Satyam Apartments, 1st Floor,
28A, North Purbachal Kalitala Link Road,
Kolkata - 700 078

Sub : Ph.D. (Engineering) Registration.

With reference to your application for registration to Ph.D. (Engineering) degree, you are hereby informed that you have been permitted to register your name on payment of requisite Ph.D. Programme fee of Rs.22000/- (Rupees twenty two thousand only) payable in three semi annual installments (8,000/- + 8,000/- + 6,000/-). You may be noted that the date of payment of registration fee will be considered as date of registration.

Registration shall remain valid for five years from the date of registration. The period of validity may be extended on sufficient grounds, if the Doctorate Committee satisfied. But such extension shall not exceed two years. Such application for extension duly forwarded by the supervisor/s shall have to be submitted before expiry of the validity of registration.

The approved title of your thesis is: "ON THE DENSITY OF POINTS IN THE EUCLIDEAN SPACE OF DIFFERENT DIMENSIONS".

If the registration fee is not paid within a month from date of issue of this letter, your application may be treated as cancelled. Your research will be governed by this New Ph.D. Rules and Regulation Please visit our University website www.jadavpur.edu for New Ph.D. Rules and Regulations. For any further clarification you may contact the undersigned.

You are directed to complete 2 (Two) course work within a maximum period of two years from the date of registration as per Revised New Ph. D. rules & regulation.

(Dr. B. Karmakar)
Principal Secretary, FET

Copy Secretary, FET (vide Res. No. B (12) of D.C meeting. Dt. 27.09.16)
Records - 2

Supervisor/s - Prof. Suranjan Ghosh,
Computer Sc. & Engineering Department, J.U.

✓ Prof. Subhashis Majumder,
Computer Sc. & Engineering Department,
Heritage Institute of Technology, Kolkata - 700 107

Sm

HL

Established on and from 24th December, 1955 vide Notification No.10986-Edu/10-42/55 dated 6th December, 1955 under Jadavpur University Act, 1955 (West Bengal Act XXIII of 1955) followed by Jadavpur University Act, 1981 (West Bengal Act XXIV of 1981)

দুর্ভাগ্য: ২৪১১-১০০০/১৩৪৪, কলকাতা ২২১০/২৪১০

ফোন: ৯১-৩৩-২৪১১-১০০০

Website: www.jadavpur.edu
E-mail: secretary_fet@admin.jdvu.ac.in

Phone : 91-33-2414-6008/6666, Ext. : 2215/2440

Fax: 91-33-2414-6007

BT014/2016

Maulana Abul Kalam Azad University of Technology, West Bengal
(Formerly known as West Bengal University of Technology)

MAULANA ABUL KALAM AZAD
UNIVERSITY OF TECHNOLOGY,
WEST BENGAL



REGISTRATION CERTIFICATE

To:

RIMASHREE BAISHYA
H.NO.- 52, BHAGADUTTAPUR,
GAROKUCHI PATH, BELTOLA,
GUWAHATI – 781028. ASSAM.

Dear Sir/Madam,

I am glad to inform you that you have been granted registration for Ph. D programme under this University in **BIOTECHNOLOGY** for the Degree of Doctor of Philosophy (Ph. D.). Your Registration No. **PhD/Tech/BT014/2016** is with effect from **18/01/2016**. This registration shall remain valid for five years with effect from the date of registration as indicated above.

Title of the Thesis

**ANTI-BIOFILM ACTIVITY INVESTIGATIONS OF
SOME COMMONLY USED PLANTS ON
BIOFILM PRODUCING BACTERIA**

Dr. Soma Banerjee
(Supervisor)

(Joint Supervisor)

Dr. Dipankar Chaudhuri
(Associate Supervisor)

Yours faithfully,

November 29, 2016

Registrar

Maulana Abul Kalam Azad University of Technology, West Bengal
BF -142, Sector 1, Salt Lake, Kolkata - 700064

This Registration Certificate will be deemed cancelled if any case of ineligibility is detected.

BT005/2015

Maulana Abul Kalam Azad University of Technology, West Bengal

(Formerly known as West Bengal University of Technology)

MAULANA ABUL KALAM AZAD
UNIVERSITY OF TECHNOLOGY,
WEST BENGAL



REGISTRATION CERTIFICATE

To:

BANHISHIKHA SINGH
KATJURIDANGA,
TARAGOTI SAMANTA ROAD,
BANKURA – 722102.

Dear Sir/Madam,

I am glad to inform you that you have been granted registration for Ph. D programme under this University in **BIOTECHNOLOGY** for the Degree of Doctor of Philosophy (Ph. D.).

Your Registration No. **PhD/Tech/BT005/2015** is with effect from **21/04/2015**.

This registration shall remain valid for five years with effect from the date of registration as indicated above.

Title of the Thesis

**AMELIORATIVE EFFECT OF SALT-COMBINATIONS
ON METAL STRESSED RICE SEEDLINGS**

Dr. Soma Banerjee

(Supervisor)

(Joint Supervisor)

(Associate Supervisor)

Yours faithfully,

November 29, 2016

Registrar

Maulana Abul Kalam Azad University of Technology, West Bengal
BF -142, Sector 1, Salt Lake, Kolkata - 700064

This Registration Certificate will be deemed cancelled if any case of ineligibility is detected.

INDIAN SCHOOL OF MINES, DHANBAD
Admn. Deptt; Academic Section

No.633017/EE/Acad/2016

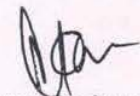
Dated: 22.06.2016

To,
Ms Priyadarshiny Dhar
GD-40, Rajdanga Main Road,
Kolkata - 700 107

Sub: Registration as Part time Research Scholar for Ph.D Programme.

This has reference to your application dated 25.04.2016 for Part Time Research Scholar; I am directed to inform you that on the basis of recommendation of DSC meeting held on 10.06.2016, the Competent authority has approved your Ph.D Registration as a Part Time Research Scholar in the Dept. of Electrical Engineering w.e.f 25.04.2016, subject to ratification in the next Academic Council Meeting as per details given below:

1. **Topic of Research: "Current Methods in Bio-electrical Signal Classification"**
 2. Name of Guide(s): Dr V Mukherjee, Assistant Professor, Electrical Engineering
Ext.Guide: Dr Saibal Dutta, Associate Professor, Kolkata
 3. To get yourself registered for the programme, you are advised to pay Rs.20000/- (including one time charges Rs. 1400/-, yearly fees Rs.13, 600/- refundable caution money Rs.5000/-). The fee is to be paid by demand draft drawn in favour of the Registrar, Indian School of Mines, Dhanbad payable at State Bank of India, ISM Campus Branch (Code No.1641) within 30 days of issue of this letter. The fees of the subsequent years should be paid during the month of **April** every year (Rs, 13,600/-).
 4. You have to clear the following two Postgraduate courses with minimum C Grade within two years from the date of confirmation of registration. According to Rule 3(d) (General Guidelines), if you fail to obtain minimum of C grade in any course within the stipulated period your registration will stand cancelled
- | SNo. | Subject Code | Subject Name |
|------|--------------|--------------------------------------|
| 1. | MSC 41000 | Research Methodology & Statistics |
| 2. | HSC 61153 | Research and Technical Communication |
5. You are also required to submit Annual Progress report through your internal guide/External guide to the undersigned at the end of each year, failing which your registration will be cancelled.
 6. **Please bring with you all original certificates for verification in original.**


Assistant Registrar
(Exam&Acad)

CC: HOD (EE)

✓ Dr V Mukherjee, Guide, Electrical Engineering
Dr Saibal Dutta, Ext Guide Dept. of Electrical Engineering, HIT, Kolkata



CERTIFICATE OF REGISTRATION FOR PhD PROGRAMME

No : R/2016/48

Date 19-05-2016

This is to certify that **Ms. SAYANTANI BHATTACHARYA** is registered under this Institute as per following details

Name : SAYANTANI BHATTACHARYA
 Address : FLAT NO 8/12 M.I.G (U) BIRATI HOUSING ESTATE
 NIMTA
 City - KOLKATA State - W B Pin - 700049

Registration No : PhD/R/2016/0048
 Date of Registration : 30-03-2016
 Faculty : BASIC AND APPLIED SCIENCES
 Department/School/Centre : CHEMISTRY

Supervisor(s) :

1. **Dr. JAYATI DATTA**
 DEPARTMENT OF CHEMISTRY-IIEST, SHIBPUR
 HOWRAH-WEST BENGAL-711103
2. Dr. PARTHA BHATTACHARYA
 DEPT. OF ELECTRONICS & TELECOMM. ENGG., IEST, SHIBPUR---RESI.; - KHUSHIGALI, HALDARPUKUR,
 P.O: BURASHIBTALA
 CHINSURAH-WEST BENGAL-712105

Registration Validity : 29-03-2021
 (Renewable as per PhD regulation)

Amit Kumar Das
 Amit Kumar Das
 Dean (Academic)
 19/05/2016

No. R/2016/48 (7)

Date 19-05-2016

Copy forwarded for information and necessary action to :

1. Candidate
2. Supervisor(s)
3. Head of The Department,
 CHEMISTRY
4. Finance Officer
5. Registrar

Registration extended upto... 29.03.2022 DC held on 25.03.2021
 Head : Intimate the Supervisor(s) & Scholar p1.
sepuh
 Dean (Academic) 30/06/2021

যাদবপুর বিশ্ববিদ্যালয়



DR. B.KARMAKAR
PRINCIPAL SECRETARY
FACULTY OF ENGINEERING & TECHNOLOGY

*JADAVPUR UNIVERSITY
KOLKATA-700 032, INDIA

Ref. No. D-7/E/312/16

Date: April 22, 2016

27.

To
Ankita Mazumder,
Trayee Apartment (1st Floor),
Modern Park, 20 - B Central Road,
(Near Kadamtala Rickshaw Stand),
Santoshpur,
Kolkata - 700 075

Sub : Ph.D. (Engineering) Registration.

With reference to your application for registration to Ph.D. (Engineering) degree, you are hereby informed that you have been permitted to register your name on payment of requisite Ph.D. Programme fee of Rs. 14000/- (Rupees Fourteen thousand only) payable in three semi annual installments (5,000/- + 5,000/- + 4,000/-). You may be noted that the date of payment of registration fee will be considered as date of registration.

Registration shall remain valid for five years from the date of registration. The period of validity may be extended on sufficient grounds, if the Doctorate Committee satisfied. But such extension shall not exceed two years. Such application for extension duly forwarded by the supervisor/s shall have to be submitted before expiry of the validity of registration.


The approved title of your thesis is: "STUDIES ON ADVANCED OILY WASTEWATER TREATMENT PROCESS".

If the registration fee is not paid within a month from date of issue of this letter, your application may be treated as cancelled. Your research will be governed by this New Ph.D. Rules and Regulation Please visit our University website www.jadavpur.edu for New Ph.D. Rules and Regulations. For any further clarification you may contact the undersigned.

You are directed to complete 2 (Two) course work within a maximum period of two years from the date of registration as per Revised New Ph. D. rules & regulation.

You are informing to bring the following documents at the time of deposition of Ph.D. programme fee.

1. Original Migration Certificate.


(Dr. B. Karமாகar)
Principal Secretary, FET

Copy : Secretary, FET (vide Res. No. B (22) of D.C meeting. Dt. 27.01.16)
Records - 2
Supervisor/s - Prof. Chiranjib Bhattacharjee,
Chemical Engg. Department, J.U.

Dr. Dwaipayan Sen,
Department of Chemical Engineering,
Heritage Institute of Technology,
Kolkata - 700 107

Sm



OFFICE OF THE DEAN (ACADEMIC)
INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY, SHIBPUR
(Formerly Bengal Engineering and Science University, Shibpur)
P.O. Botanic Garden, Shibpur, Howrah - 711103, INDIA

Phone : 033-26684561 Fax : 033 26682916 E-mail : dean.ac@iiests.ac.in Website : http://www.iiests.ac.in

CERTIFICATE OF REGISTRATION FOR PhD PROGRAMME

No : R/2015/86

Date :27-10-2015

This is to certify that Mr. SOUVIK BASU is registered under this Institute as per following details:

Name : SOUVIK BASU

Address : 78/1 , N.S.C BOSE ROAD

City - KOLKATA

State - W.B

Pin - 700040

Registration No : PhD/R/2015/0086

Date of Registration : 26-03-2015

Faculty : ENGINEERING AND TECHNOLOGY

Department/School/Centre : COMPUTER SCIENCE & TECHNOLOGY

Supervisor(s) :

1 Dr. SIPRA DAS BIT

FLAT F-3,50/A COLLEGE ROAD-B. GARDEN

HOWRAH-WEST BENGAL-711103

2 **Dr. SIULI ROY**

ASSOCIATE PROFESSOR, DEPT.OF MCA-HERITAGE INSTITUTE OF TECHNOLOGY

KOLKATA-700107

Registration Validity : 25-03-2020

(Renewable as per PhD regulation)

Amit Kumar Das

Amit Kumar Das
Dean (Academic)

27/10/15

No : R/2015/86 (7)

Date :27-10-2015

Copy forwarded for information and necessary action to :

1. Candidate.

2. Supervisor(s)

3. Head of The Department,

COMPUTER SCIENCE & TECHNOLOGY

4. Finance Officer

5. Registrar

যাদবপুর বিশ্ববিদ্যালয়

DR. B. KARMAKAR
PRINCIPAL SECRETARY
FACULTY OF ENGINEERING & TECHNOLOGY



*JADAVPUR UNIVERSITY
KOLKATA-700 032, INDIA

Ref. No. D-7/E/346/15

Date: June 5, 2015

To
Sri Hareram Lohar,
C/o Dr. Anirban Mitra,
Department of Mechanical Engineering,
Jadavpur University,
Kolkata-700 032

Sub : Ph.D. (Engineering) Registration.


With reference to your application for registration to Ph.D. (Engineering) degree, you are hereby informed that you have been permitted to register your name on payment of requisite Ph.D. Programme fee of Rs. 22000/- (Rupees twenty two thousand only) payable in three semi annual installments (8,000/- + 8,000/- + 6,000/-). You may be noted that the date of payment of registration fee will be considered as date of registration.

Registration shall remain valid for five years from the date of registration. The period of validity may be extended on sufficient grounds, if the Doctorate Committee satisfied. But such extension shall not exceed two years. Such application for extension duly forwarded by the supervisor/s shall have to be submitted before expiry of the validity of registration.

The approved title of your thesis is: "Static and Dynamic behavior of Axially Functionally Graded Structural Elements with Different Boundary Conditions".

If the registration fee is not paid within a month from date of issue of this letter, your application may be treated as cancelled. Your research will be governed by this New Ph.D. Rules and Regulation Please visit our University website www.jadavpur.edu for New Ph.D. Rules and Regulations. For any further clarification you may contact the undersigned.

You are directed to complete 2 (Two) course work within a maximum period of two years from the date of registration as per Revised New Ph. D. rules & regulation.


(Dr. B. Karmakar)
Principal Secretary, FET

Copy : Secretary, FET (vide Res. No. B (1) of D.C meeting. Dt. 24.03.15)
Records-2

Supervisor/s- Dr. Anirban Mitra,
Mechanical Engg. Dept., J.U.

Dr. Sarmila Sahoo,
Dept. of Civil Engg.,
Heritage Institute of Technology,
Kolkata-700 107

Sm

যাদবপুর বিশ্ববিদ্যালয়

DR. B.KARMAKAR
PRINCIPAL SECRETARY
FACULTY OF ENGINEERING & TECHNOLOGY



*JADAVPUR UNIVERSITY
KOLKATA-700 032, INDIA

Ref. No D-7/E/200/16
Date: March 16, 2016
২১

To
Puja Basu Chaudhuri,
12/2, Avenue East,
Modern Park, Santoshpur,
Kolkata - 700 075

Sub : Ph.D. (Engineering) Registration.

With reference to your application for registration to Ph.D. (Engineering) degree, you are hereby informed that you have been permitted to register your name on payment of requisite Ph.D Programme fee of Rs.22000/- (Rupees twenty two thousand only) payable in three semi annual installments (8,000/- + 8,000/- + 6,000/-). You may be noted that the date of payment of registration fee will be considered as date of registration.

Registration shall remain valid for five years from the date of registration. The period of validity may be extended on sufficient grounds, if the Doctorate Committee satisfied. But such extension shall not exceed two years. Such application for extension duly forwarded by the supervisor/s shall have to be submitted before expiry of the validity of registration.

The approved title of your thesis is: "STATIC AND DYNAMIC BEHAVIOR OF STIFFENED COMPOSITE HYPAR SHELLS WITH CUTOUT".

If the registration fee is not paid within a month from date of issue of this letter, your application may be treated as cancelled. Your research will be governed by this New Ph.D Rules and Regulation Please visit our University website www.jadavpur.edu for New Ph.D. Rules and Regulations. For any further clarification you may contact the undersigned.

You are directed to complete 2 (Two) course work within a maximum period of two years from the date of registration as per Revised New Ph. D. rules & regulation.

(Dr. B. Karmakar)
Principal Secretary, FET

Copy : Secretary, FET (vide Res. No. B (14) of D.C meeting, Dt. 27.01.16
Records - 2

Supervisor/s - Dr. Anirban Mitra,
Mechanical Engg Department, J.U.

Dr. Sarmila Sahoo,
Dept. of Civil Engg.,
Heritage Institute of Technology,
Kolkata - 700 107

Sm

যাদবপুর বিশ্ববিদ্যালয়

DR. B. KARMAKAR
PRINCIPAL SECRETARY
FACULTY OF ENGINEERING & TECHNOLOGY



*JADAVPUR UNIVERSITY
KOLKATA-700 032, INDIA

Ref No.

D-7/E/561/14

Date: July 8, 2014

TO

To
Sri Sabyasachi Chatterjee,
Electronics and Communication Engineering Dept.,
Heritage Institute of Technology,
Chowbaga Road, Anandapur,
Kolkata - 700 107

Sub : Ph.D. (Engineering) Registration.

With reference to your application for registration to Ph.D. (Engineering) degree, you are hereby informed that you have been permitted to register your name on payment of requisite Ph.D. Programme fee of **Rs.22000/-** (Rupees twenty two thousand only) payable in three semi annual installments (8,000/- + 8,000/- + 6,000/-). You may be noted that the date of payment of registration fee will be considered as date of registration.

Registration shall remain valid for five years from the date of registration. The period of validity may be extended on sufficient grounds, if the Doctorate Committee satisfied. But such extension shall not exceed two years. Such application for extension duly forwarded by the supervisor/s shall have to be submitted before expiry of the validity of registration.

The approved title of your thesis is: **"Some Studies on Spectrum Sensing & Primary User Detection Techniques for Enhanced Performance of Cognitive Radio Networks"**.

If the registration fee is not paid within a month from date of issue of this letter, your application may be treated as cancelled. Your research will be governed by this New Ph.D. Rules and Regulation. Please visit our University website www.jadavpur.edu for New Ph.D. Rules and Regulations. For any further clarification you may contact the undersigned.

You are directed to complete **2 (Two)** course work within a maximum period of two years from the date of registration as per Revised New Ph.D. rules & regulation.

You are informing to bring the following documents at the time of deposition of Ph.D. programme fee

1. Original Migration Certificate

(Dr. B. Karmakar)
Principal Secretary, FET

Copy Secretary, FET (vide Res. No. B (11) of D.C meeting, Dt. 29.05.14)

Records - 2

Supervisor/s - Prof. (Dr.) Mita Nasipuri,
Computer Sc. & Engg. Dept., J.U.

Dr. Prabir Banerjee

ECE Dept., H.I.T., Kolkata
Communication Address :
P 284, C.I.T. Road,
Scheme No. - IV M; Kolkata
PIN - 700 054

Sm

* Established on and from 24th December, 1955 vide Notification No.10986-Edn/II-42/55 dated 6th December, 1955 under Jadavpur University Act, 1955 (West Bengal Act XXXIII of 1955) followed by Jadavpur University Act, 1981 (West Bengal Act XXIV of 1981)

দুরভাস: ২৪১৪-৬০০৭/৬৬৬৬, প্রসারণ: ২২১৫/২৪৪০

Website: www.jadavpur.edu

Phone : 91-33-2414-6008/6664, Ext. : 2315/2446

দুরবাহী: +৯১-৩৩-২৪১৪-৬০০৭

E-mail: secretary_fet@admin.jdvu.ac.in

Fax: 91-33-2414-6007

DR. B. KARMAKAR
PRINCIPAL SECRETARY



*JADAVPUR UNIVERSITY
KOLKATA-700 032, INDIA

FACULTY COUNCIL OF ENGINEERING & TECHNOLOGY

Ref. No. D-7/E/410/14.

Date: May 21, 2014
DZ.

To
Sri Pradip Saha,
4 No. Matrisadan Road,
P.O. & P.S. - Ashoke Nagar,
Dist - 24 Pgs (N)
PIN - 743 222

Sub : Ph.D. (Engineering) Registration.

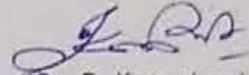
With reference to your application for registration to Ph.D. (Engineering) degree, you are hereby informed that you have been permitted to register your name on payment of requisite Ph.D. Programme fee of **Rs. 22000/-** (Rupees twenty two thousand only) payable in three semi annual installments (8,000/- + 8,000/- + 6,000/-). You may be noted that the date of payment of registration fee will be considered as date of registration.

Registration shall remain valid for five years from the date of registration. The period of validity may be extended on sufficient grounds, if the Doctorate Committee satisfied. But such extension shall not exceed two years. Such application for extension duly forwarded by the supervisor/s shall have to be submitted before expiry of the validity of registration.

The approved title of your thesis is: "**Efficient Electronic Tongue Signal Processing Techniques for Tea Quality Estimation**".

If the registration fee is not paid within a month from date of issue of this letter, your application may be treated as cancelled. Your research will be governed by this New Ph.D. Rules and Regulation **Please visit our University website www.jadavpur.edu for New Ph.D. Rules and Regulations.** For any further clarification you may contact the undersigned.

You are directed to complete **2 (Two)** course work within a maximum period of two years from the date of registration as per Revised New Ph. D. rules & regulation.


(Dr. B. Karmakar)
Principal Secretary, FET

Copy : Secretary, FET (vide Res. No. B (9) of D.C meeting. Dt. 24.03.14)
Records - 2
Supervisor/s -

Dr. Bipan Tudu,
Dept. of Instrumentation & Electronics Engg, J.U.
Saltlake, 2nd Campus, Kolkata - 700 098

Dr. Santanu Ghorai,
Deptt. Of AEIE,
Heritage Institute of Technology,
Kolkata - 700 107

Sm

* Established on and from 24th December, 1955 vide Notification No.10986-Edu/IU-42/55 dated 6th December, 1955 under Jadavpur University Act, 1955 (West Bengal Act XXXIII of 1955) followed by Jadavpur University Act, 1981 (West Bengal Act XXIV of 1981)

দুরত্ব: ২৪১৪-৬৬৬৬ (সংসারণ: ২২১৫/২৪৪০)

Website: www.jadavpur.edu

Phone : 2414-6666 (Extn. : 2215/2440

দুরবারী: ৯১-৩৩-২৪১৪-৬০০৭

E-mail: secretary_fet@admin.jdvu.ac.in




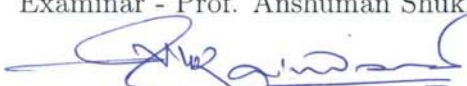


Fax: 91-33-2414-6007

E-mail: buk_2003@rediffmail.com / karmakar08@yahoo.co.in

Homi Bhabha National Institute

Recommendations of the Viva Voce Committee

As members of the Viva Voce Committee, we certify that we have read the dissertation prepared by **Anirban De** entitled "A Novel scheme for DSP based Power Converter Control" and recommend that it may be accepted as fulfilling the thesis requirement for the award of Degree of Doctor of Philosophy.

	7/9/2016
Chairman - Dr. D.K. Srivastava	Date
	07/09/2016
Guide/Convener - Dr. Debranjana Sarkar	Date
	07/09/16
Examiner - Prof. Anshuman Shukla	Date
	07/09/2016
Member 1 - Dr. S.V.G. Ravindranath	Date
	07/09/2016
Member 2 - Dr. Partha Barat	Date
	07/9/2016
Technology Adviser - Shri Submial Saha	Date

Final approval and acceptance of this thesis is contingent upon the candidate's submission of the final copies of the thesis to HBNI.

I hereby certify that I have read this thesis prepared under my direction and recommend that it may be accepted as fulfilling the thesis requirement.


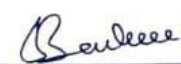



Date: 07/09/2016

Place: Kolkata


Guide

Homi Bhabha National Institute
Recommendations of the Viva Voce Committee

As members of the Viva Voce Committee, we certify that we have read the dissertation prepared by **Biswajit Sarkar** titled "**Localization of mobile robots in indoor environments using laser range data**" and recommend that it may be accepted as fulfilling the thesis requirement for the award of Degree of Doctor of Philosophy.

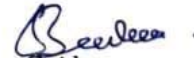
 Chairman: Prof. D. K. Srivastava	08/04/2016 Date:
 Guide/Convener: Prof. Debranjana Sarkar	05/04/16 Date:
 Examiner: Prof. K. Madhava Krishna	5/4/16 Date:
 Member 1: Prof. Alok Chakrabarti	05-04-2016 Date:
 Member 2: Prof. Prabir K. Pal	5.4.16 Date:

Final approval and acceptance of this thesis is contingent upon the candidate's submission of the final copies of the thesis to HBNI.

I hereby certify that I have read this thesis prepared under my direction and recommend that it may be accepted as fulfilling the thesis requirement.

Date: 08/04/2016

Place: Kolkata


Guide