Curriculum Vitae

1. Personal Details

Name	Prof. Dr. Amitava Gupta	
Nationality	Indian	
Date of Birth	22nd June 1968	
Present Affiliation	Professor, Dept. of Power Engg.&Director, School of Nuclear Studies & Applications, Jadavpur University, India	
Postal Address	J.U. Salt Lake Campus, LB-8, Sector 3, Salt Lake Kolkata 700106 India	
Phone & Fax	+91 33 23406163 (Direct) +91 33 23355813 (Office) +91 33 24427700 (Home) +91 9830489108 (Mobile) +91 33 23357254 (Fax)	**Email:** amitava.gupta@jadavpuruniversity.in amitav_gupta@yahoo.com amitg@pe.jusl.ac.in

2. Academics

Degree	University/Institute/Board	Subject/ Department	Marks/Grade	Year
Doctoral	Jadavpur University	PhD(Engg.) Comp Science &Engg		2002
M.Tech	IIT Kanpur	IDP in Nucl. Engg.& Tech.	CPI of 8.55 on 10	1992
B.E	Jadavpur University	Electrical Engg.	77.4 percent 1st Class Hons	1990
*XII*th	West Bengal Council of HS Education	Science	77.8 percent 1st Div. with a star	1986
*X*th	West Bengal Board of Secondary Education	General	80.45 percent 1st Div. with a star	1984

3. Fellowships/Awards/ Prestigious Grants and Affiliations

Sl. No.	Title	Agency	Year
1	**Research Ambassador of the German Academic Exchange Service in India**	German Academic Exchange Service, DAAD	2010-2022
2	Special networking grant for select GermanResearch Alumni	Alexander von Humboldt (AvH) Foundation	2012
3	DAAD short term Fellowship at Universitaet- Bremen, Germany	German Academic Exchange Service, DAAD	1999
4	Fellowship from Department of Atomic Energy/Nuclear Power Corporation ofIndia Ltd. leading to an M.Tech. at IIT Kanpur	Nuclear Power Corporation of India Ltd. , Dept. of Atomic Energy, Govt. of India	1992
5	National Merit Scholarship		1984

4. Academic, Scientific and Administrative Roles

Experience	R&D: 5 yrs. Teaching: 25yrs	
Specializations	Automation and Control (Networked Control Systems, Distributed Real-time Simulation, Control of Nuclear Reactors ,Nuclear Instrumentation)	
Affiliations		
Duration	*Organization*	*Position*
02.12.2014 till date 15.10.2018 – 18.08.2014	Jadavpur University,Kolkata	Director, School of Nuclear Studies and Applications (Addl. Charge)
08.09.2004- 07.09.2006	Jadavpur University, Kolkata	Head (Power Engg.)
01.08.2005 till date	Jadavpur University,Kolkata	Professor (Power Engg.)
31.07.1997 -31.07.2005	Jadavpur University,Kolkata	Reader (Power Engg.)
03-1997 – 07-1997	Center for Development of Advanced Computing (CDAC), Bangalore	Lead Member, CDAC MPI Project
02-1994 -02-1997	Nuclear Power Corporation of India Ltd. Mumbai	Scientific Officer-SD (C&I Division)
02-1992-02-1994	Nuclear Power Corporation of India Ltd. Mumbai	Scientific Officer-C (C&I Division)

5. Research Supervision: Post-Doctoral and Doctoral

A. Post-Doctoral

Name	**Broad Area**	**Status**
Dr. Abhik Hazra	Control of Micro-grids and renewables	2019-2021

B. Doctoral

Name	**Broad Area**	**Status**
Monotosh Das	Networked Control Systems	Degree Awarded
Suman Saha	Fractional Order Control Systems	Degree Awarded
Tapan Kr. Ray	Control of Thermal Power Plants	Degree Awarded
Saptarshi Das	Fractional Order Control	Degree Awarded
SoumyaDasgupta	Networked Control Systems	Degree Awarded
Kaushik Halder	Networked Control Systems	Degree Awarded
Shohan Banerjee	Robust Control using Interval Approach	Degree Awarded
AvikHazra	Renewables and Micro-grids	Degree Awarded
Debayan Bose	Control using Non-linear Dynamic Inversion	Degree Awarded
Deepak Yadav (IIT Kanpur)	Non-linear Control of Nuclear Reactors	Degree Awarded
Surajit Sarkar	Vision Guided Control for lunar landing	Ongoing

6. Courses Taught

Name of the Course	Level	University/Institute
Introduction to Auto. Control	B.E.(Power Engg. III)	Jadavpur University
Sensors and Transducers	B.E.(Power Engg. IV)	Jadavpur University
Power Plant Instr. &Conrol	B.E.(Power Engg. IV)	Jadavpur University
Digital Systems	M.E(Power Rngg)	
Microprocessors	M.E.(Power Engg.)	Jadavpur University
Adv. Power Plant Instr. & Control	M.E.(Power Engg.)	Jadavpur University
Real-time Embedded Systems	M.E.(Power Engg.)	Jadavpur University
Reactor Control	M.E.(Nuclear Engg.)	Jadavpur University
Nonlinear & Adaptive Control	M.E.(Nuclear Engg.)	Jadavpur University
Nuclear& Reactor Instrumentation	M.E.(Nuclear Engg.)	Jadavpur University
Distributed Real-time Systems	Masters Program (Comp. Engg.)	Universitaet Rostock, Germany (2006) &TechnischeUniversitaet, Muenchen, Germany (2009) As DAAD Visiting Professor.
Cluster Computing	Masters Program (Comp. Engg.)	Universitaet Rostock, Germany (2006) &TechnischeUniversitaet, Muenchen, Germany (2009) As DAAD Visiting Professor.

7. Laboratories Developed

Name of the Laboratory	Major Equipment	Funding Agency
Microprocessors (Power Engg. Department)	8086 micro-processor kits with peripherals, Data Acquisition Cards, Digital Storage Oscilloscopes, TI DSP kits, TI MSP Kits, MBED processors, Advantech SBCs, Arbitrary Waveform Generators, Protocol Analyzers, GE-Fanuc Micro- controller based Motor Control Setup, Opal-RT, Workstations , PCs and Printers	Jadavpur University BRNS(DAE), Indian Space Research Organization, Texas Instruments (as donors of hardware)
Simulator Laboratory	Workstations, Servers, PCs, with theYokogawa-Protechsoft CS1000 10 node power plant simulator	DST FIST program (Principal Investigator of the Project nominated by the Dept.)

8. PublicationProfile

A. Summary

Nos. Journal Publications	Nos. Conference Publications	Nos. Book Chapters	Nos. Books	h-index/i-20 index/i- 100 index
35 (selective)	33 (selective -IEEE only reported)	03	01	h-index 21 i-100 index 05
Profile: http://scholar.google.co.in/citations?hl=en&user=z1BR7IgAAAAJ				

B. Journal Publications (Impact factor 1.0 and aboveonly)

1. **K Halder, S Das, DK Panda, S Das, A Gupta,** *QoS aware joint observer and networked PI/PID controller design using LMIs under specified rate of packet dropouts,* **Applied Mathematics and Computation Vol. 401, 2021 ,July 2021**
2. **K.Halder, S.Das** ,**A. Gupta**, *Time delay handling in dominant pole placement with PID controllers to obtain stability regions using random sampling*, **International Journal of Control, 1-22, May 2020.**
3. **Debayan Bose, A. Hazra, S.Mukhopadhyay, A.Gupta,** *A Co-ordinated Control Methodology for Rapid Load-Following Operation of a Pressurized Water Reactor Based Small Modular Reactor*,**Nuclear Engineering & Design,Vol. 367,October 2020**
4. **D.K.Yadav, A.Gupta, P.Munshi,** *Design of NDI-SMC based robust hybrid nonlinear controller for load following operation in pressurized water reactor*, **Nuclear Engineering & Design, Vol. 363 , July 2020** (in Press, digital version available),
5. **Shohan Banerjee, Debayan Bose, AbhikHazra, Sujit Chattopadhyay, Koushik Ghosh, Amitava Gupta**, *Controller design for operation of a 700 MWe PHWR with limited voiding,* **Nuclear Engineering & Design, Vol. 357 , February 2020**V
6. **S Das, K Halder, A Gupta**, *Delay Handling Method in Dominant Pole Placement based PID Controller Design,* **IEEE Transactions on Industrial Informatics, 2019** (in Press, digital versionavailable)**.**
7. **S Das, K Halder, A Gupta**, *Transformation of LQR weights for Discretization Invariant Performance of PI/PID Dominant Pole Placement Controllers,* **Robotica, Cambridge University Press, 2019** (in Press, Digital versionavailable).
8. **K.Halder, D.Bose and A. Gupta,** *Stability and Performance Analysis of Networked Control Systems: A Lifted Sample-Time Approach with L2 Induced Norm***, ISA Transactions, Vol.86, 2019,62-72.**
9. **D.K.Yadav, A.Gupta, P.Munshi**, *Non linear Dynamic Inversion based controller design for load following operations in Pressurized Water Reactors with bounded Xenon oscillations*, **Nuclear Engineering and Design, Vol. 308, 2018,241-254**
10. **S Das, K Halder, A Gupta**, *Performance Analysis of Robust Stable PID Controllers Using Dominant Pole Placement for SOPTD Process Models*, **Knowledge-Based Systems, 2018, Vol. 146,12-43**
11. **Debayan Bose ,Shohan Banerjee, M. Kumar, P. P. Marathe ,Siddhartha Mukhopadhyay, Amitava Gupta, ,** *An Interval Approach to Nonlinear Controller Design for Load-Following Operation of a Small Modular Pressurized Water Reactor***, IEEE Transactions on Nuclear Sciences 64(9), 2017,2474-2488.**
12. **K. Halder, S. Das, S.Dasgupta, S.Banerjee, and A.Gupta.** *Controller design for Networked Control Systems—An approach based on L2 induced norm***, Nonlinear Analysis: Hybrid Systems, Vol.**

19,2016,134-145.

13. **S.Dasgupta, K.Halder, S.Banerjee&A.Gupta,** *Stability of Networked Control System (NCS) with discrete time-driven PID controllers,* **Control Engineering Practice**, **Vol. 42, 2015,41-49.**

14. **S.Banerjee, KHalder, S.Dasgupta, S.Mukhopadhyay,K. Ghosh&A. Gupta,** *An Interval Approach for Robust Control of a Large PHWR with PID Controllers***, IEEE Transactions on Nuclear Science 62(1), 2015,281-292.**

15. **S. Dasgupta, A,Routh, S. Banerjee, K. Agilageswari, R. Balasubramanian, S.G. Bhandarkar, S. Chattopadhyay, M. Kumar, A. Gupta,** *Networked Control of a Large Pressurized Heavy Water Reactor (PHWR) with Discrete Proportional-Integral-Derivative (PID) Controllers***, IEEE Transactions on Nuclear Science 60 (5), 2014, 3879 –3888**

16. **Saptarshi Das, Sumit Mukherjee, Shantanu Das, Indranil Pan, Amitava Gupta,** *Continuous order identification of PHWR models under step-back for the design of hyper- damped power tracking controller with enhanced reactor safety,* **Nuclear Engineering and Design,Vol. 257, 2013,109-127.**

17. **Tapan K Ray, RanjanGanguly, Amitava Gupta,** *Optimal control strategy for minimization of exergy destruction in boiler superheater***, Energy Conversion and Management Vol. 66, 2013,234-245**

18. **Saptarshi Das, Indranil Pan, Kaushik Halder, Shantanu Das, Amitava Gupta**, *LQR Based Improved Discrete PID Controller Design via Optimum Selection of Weighting Matrices Using Fractional Order Integral Performance Index*, **Applied Mathematical Modeling**,**2012.**

19. **Saha, S., Das, S., Das, S. and Gupta, A**, *A master-slave chaos synchronization via optimal fractional order PI $^{\lambda}D^{\mu}$ controller with bacterial foraging algorithm*., **Non-linear Dynamics, 69(4), 2012,2193-2206.**

20. **Saha, S., Das, S., Das, S. and Gupta, A.**, *A conformal mapping basedfractional order approach for sub-optimal tuning of PID controllers with guaranteed dominant pole placement*, **Communications in Nonlinear Science and Numerical Simulation 17 (9), 2012, 3628-3642,.**

21. **Saptarshi Das, Indranil Pan, Shantanu Das and Amitava Gupta,** *A Novel Fractional Order Fuzzy PID Controller and Its Optimal Time Domain Tuning Based on Integral Performance Indices*, **Engineering Applications of Artificial Intelligence,,25 (2) , 2012, 430-442.**

22. **Saptarshi Das, Indranil Pan, Shantanu Das and Amitava Gupta,** *Improved Model Reduction and Tuning of Fractional Order PIλDμ Controllers for Analytical Rule Extraction with Genetic Programming*, **ISA Transactions, 51 (2) , 2011,237-261.**

23. **Saptarshi Das, Shantanu Das and Amitava Gupta ,***Fractional Order Modeling of a PHWR Under Step-Back Condition & Control of Its Global Power with a Robust PI$^{\lambda}D^{\mu}$ Controller*, **IEEE Transactions on Nuclear Science, 58 (5),2011,2431 –2441.**

24. **Pan I, Das S, Gupta A.,***Tuning of an Optimal Fuzzy PID Controller with Stochastic Algorithms for Networked Control Systems with Random Time Delay***, ISA Transactions, 50(1),2011,28-36.**

25. **Saptarshi Das, Suman Saha, Shantanu Das and Amitava Gupta,***On the Selection of Tuning Methodology for FOPID Controllers for the Control of Higher Order Processes***, ISA Transactions, 50(3),2011,376-388.**

26. **Pan I, Das S, Gupta A.,** *Handling Packet Dropouts and Random Delays for Unstable Delayed Processes in NCS by Optimal Tuning of PI$^{\lambda}D^{\mu}$ Controllers with Evolutionary Algorithms* **, ISA Transactions, 50 (4), 2011,557-572.**

27. **Tapan K. Ray, Amitava Datta, Amitava Gupta and RanjanGanguly,** *Energy-based Performance Analysis for Proper O&M Decisions in a Steam Power Plant*,**Energy Conversion and Management, 51(6),2010,1333-1344**.

28. **Suman Saha, Saptarshi Das, Ratna Ghosh, BhaswatiGoswami,R. Balasubramanian, A. K. Chandra, Shantanu Das, Amitava Gupta,** *Design of a Fractional Order Phase Shaper for Iso-Damped Control of a PHWR under Step-Back Condition***, IEEE Transactions on Nuclear Science, vol. 57, issue 3, 2010,1602-1612.**

29. **Suman Saha, Saptarshi Das, Ratna Ghosh, BhaswatiGoswami,R. Balasubramanian, A. K. Chandra, Shantanu Das, Amitava Gupta,** *Fractional order phase shaper design with Bode's integral for iso-damped control system***, ISA Transactions ,49(2),2010,196-206.**

30. **M.Das, R.Ghosh, B. Goswami, R. Balasubramanian, A.K.Chandra, P. Luksch&A. Gupta,** *Multi-loop Networked Process Control: A Synchronized Approach*, **ISA Transactions, 48(1),2009,122-131.**

31. **A. Gupta,** *Book Review: Computational intelligence in time series forecasting: theory and engineering applications, A. K. Palit and D. Popovic, Springer Verlag, London, 2005, ISBN: 1852339489* **Intl. Journal of Robust and Nonlinear Control**, **Volume 17, Issue 4, March 2007,351-354.**

32. **M. Das, A. Banerjee, R.Ghosh, B. Goswami, R. Balasubramanian, A. K. Chandra, A. Gupta,** *A Study on Multivariable Process Control using Message Passing across Embedded Controllers*,. **ISA Transactions Volume 46, Issue 2 , April 2007,247-253.**

33. **M. Das, R.Ghosh, B. Goswami, A. Gupta, A. P. Tiwari, R. Balasubramanian, A. K. Chandra,** *Network Control System applied to a large pressurized heavy water reactor* **IEEE Transactions on Nuclear Science**, **Vol. 53, No. 5, Oct2006.**

34. **Gupta, A. , Ganguly, R. , Chakraborty, S. , Mazumdar, C. and Popovic, D. ,** *Simulating Thermal Power Plant Processes on a Message Passing Environment***, ISA Transactions, 42(3), October 2003,615-630.**

35. **Gupta, A., Mazumdar, C. and Patranobis D.,** *A Distributed Simulation Technique for Multiple Input Multiple Output Systems***, ISA Transactions, 41(4), September 2002, 421- 435.**

C. Chapters in EditedVolumes/Books

1. **Gao, H. , Shmidt, A. , Gupta, A. and Luksch, P.,** *MethWerk:Scalable Mesh-based Simulation on Clusters of SMPs***, published as a book chapter in *High Performance Computing in Science and Engineering, Garching 2004,* Bode, A. & Durst, F.(Eds.), Springer Verlag , ISBN 3-540-26145-2, Berlin, 2004, pp.141-151.**

2. **Mohan, R., Gupta, A.,** *A parallel task assignment using heuristic graph matching***, published as a book chapter in Advances in Parallel Distributed Computing, Volume 203 of the series Communications in Computer and Information Science Springer Verlag, ISBN 978-3-642-24036-2, Berlin, 2011, pp.334-343.**

3. **Gupta, A.,** *Robust Control of Nuclear Reactors with Proportional—Integral-Derivative (PID) Controllers: The Fractional Order (FO) and Interval Approaches* **published as a book chapter in Dynamics and Control of Energy Systems, Springer Verlag, 2019 ISBN978-981-15-0535-5**

D. Books

1. **Gupta, A., Chandra A.K.andLuksch, P.,** *Real-time and distributed real-time systems : theory and applications*, **CRC Press, ISBN978-1-4665-9847-8**

E. Selected Conference Publications

1. **K.Halder, D.Bose, S. Banerjee and A. Gupta,** *L2 induced norm based pole placement controller for networked control system,* **International Conference on Innovations in Electrical, Electronics, Instrumentation and Media Technology (ICEEIMT), Coimbatore, Feb3-4,2017(IEEExplore)**

2. **RanjanDasgupta, Ritwick Mukherjee, and Amitava Gupta,** *A novel approach of sensor data retrieving using a quadcopter in wireless sensor network forming concentric circular topology***, 6th**

International Conference on Automation, Robotics and Applications (ICARA), 2015 pp. 238-245.(IEEExplore)

3. **RanjanDasgupta, Ritwick Mukherjee, and Amitava Gupta,** *Congestion avoidance topology in wireless sensor network using Karnaugh map***, Applications and Innovations in Mobile Computing (AIMoC), 2015, pp. 89-96.(IEEExplore)**

4. **SoumyaDasgupta, Kaushik Halder, Shohan Banerjee, and Amitava Gupta,***Controller design of a NCS with guaranteed exponential stability-a trace minimization approach***, International Conference on Electrical, Electronics, Signals, Communication and Optimization (EESCO), 2015, pp. 1-5.(IEEExplore)**

5. **SoumyaDasgupta, Kaushik Halder, Shohan Banerjee, Souradip Chakraborty, and Amitava Gupta,** *Stability analysis and controller synthesis of networked control system (NCS) with arbitrary packet drop-outs***, 2nd International Conference on Electronics and Communication Systems (ICECS), 2015, pp. 217-222.(IEEExplore)**

6. **Saptarshi Das, Indranil Pan, Kaushik Halder, Shantanu Das, and Amitava Gupta.** *Optimum weight selection based LQR formulation for the design of fractional order PI λ D μ controllers to handle a class of fractional order systems***. International Conference Computer Communication and Informatics (ICCCI), 2013 pp. 1-6.(IEEExplore)**

7. **S.Das, K. Halder, I. Pan, S. Ghosh, A. Gupta,** *Inverse Optimal Control Formulation for Guaranteed Dominant Pole Placement with PI/PID Controllers,* **International Conference on Computer Communications and Informatics(ICCCI'12) 2012,India.(IEEExplore)**

8. **S.Das, I. Pan, K. Halder, S. Das, A. Gupta,** *Impact of fractional order integral performance indices in LQR based PID controller design via optimum selection of weighting matrices***, International Conference on Computer Communications and Informatics(ICCCI'12) 2012,India.(IEEExplore)**

9. **Saptarshi Das, Indranil Pan, Shantanu Das and Amitava Gupta,** *Genetic Algorithm Based Improved Sub-Optimal Model Reduction in Nyquist Plane for Optimal Tuning Rule Extraction of PID and PIλDμ Controllers via Genetic Programming*, **Proceedings of 2011 International Conference on Process Automation, Control and Computing, PACC 2011, Coimbatore, India.(IEEExplore)**

10. **I. Pan, S. Das, S. Ghosh, A. Gupta,** *Stabilizing Gain Selection of Networked Variable Gain Controller to Maximize Robustness Using Particle Swarm Optimization***, Process Automation, Control and Compting (PACC), 2011 International Conference on, art. no. 5978958, Coimbatore, India.(IEEExplore)**

11. **Das, S., Pan, I., Saha, S., Kumar,A., Das, S., Gupta, A.**, *Revisiting oustaloup's recursive filter for analog realization of fractional order differintegrators***Proceedings - 2011 International Conference on Energy, Automation and Signal, ICEAS - 2011 , art. no. 6147190 , pp. 690-695.(IEEExplore)**

12. **Das, S., Kumar, A., Pan, I., Acharya, A., Das, S., Gupta, A.**, *Least square and Instrumental Variable system identification of ac servo position control system with fractional Gaussian noise,* **Proceedings - 2011 International Conference on Energy, Automation and Signal, ICEAS - 2011 , India.(IEEExplore)**

13. **Das, S., Pan, I., Majumdar,B. Das, S., Gupta, A.**, *Control of nuclear reactor power with thermal-hydraulic effects via fuzzy PI$^{\lambda}$D$^{\mu}$ controllers,* **Proceedings - 2011 International Conference on Communication and Industrial Automation,India.(IEEExplore)**

14. **Das, S., Molla, N.U., Pan, I., Pakhira, A., Gupta, A.**, *Online identification of fractional order models with time delay: An experimental study,* **Proceedings - 2011 International Conference on Communication and Industrial Automation, India.(IEEExplore)**

15. **Mukherjee, A., Pakhira, A., Das, S., Pan, I. and Gupta, A,** *Embedded Network Test- Bed for Validating Real-Time Control Algorithms to Ensure Optimal Time Domain Performance,* **Proceedings of 2011 International Conference on Process Automation, Control and Computing, PACC 2011,**

Coimbatore, India.(IEEExplore)

16. **I Pan, A Mukherjee, S Das, A Gupta,** *Simulation studies on multiple control loops over a bandwidth limited shared communication network with packet dropouts*, **IEEE Students' Technology Symposium (TechSym), 2011.(IEEExplore)**

17. **Pan, I. Das, S. Ghosh, S. and Gupta, A.** *Stabilizing Gain Selection of Networked Variable Gain Controller to Maximize Robustness Using Particle Swarm Optimization***, International Conference on Process Automation, Control and Computing, PACC 2011, Coimbatore, India.(IEEExplore)**

18. **S Das, B Majumder, A Pakhira, I Pan, A Gupta**, *Optimizing Continued Fraction Expansion Based IIR Realization of Fractional Order Differ-Integrators with Genetic Algorithm*, **International Conference on Process Automation, Control and Computing, PACC 2011, Coimbatore, India.(IEEExplore)**

19. **S Das, S.Saha, A Mukherjee, I Pan, A Gupta**, *Adaptive Gain and Order Scheduling of Optimal Fractional Order PIλDμ Controllers with Radial Basis Function Neural-Network*, **International Conference on Process Automation, Control and Computing, PACC 2011, Coimbatore, India.(IEEExplore)**

20. **B Majumder, S Das, I Pan, S Saha, S Das, A Gupta,** *Estimation, analysis and smoothing of self-similar network induced delays in feedback control of nuclear reactors,* **International Conference on Process Automation, Control and Computing, PACC 2011, Coimbatore, India.(IEEExplore)**

21. **S Das, B Majumder, I Pan, A Gupta, S Das,** *A new fractional fourier transform based design of a band-pass FIR filter for power feedback in nuclear reactors under noisy environment*, **International Conference on Emerging Trends in Electrical and Computer Technology (ICETECT), 2011, India.(IEEExplore)**

22. **Saptarshi Das, Sumit Mukherjee, Indranil Pan, Amitava Gupta, Shantanu Das,***Identification of the core temperature in a fractional order noisy environment for thermal feedback in nuclear reactors*, **IEEE Students' Technology Symposium (TechSym), 2011.(IEEExplore)**

23. **B Majumder, S Das, I Pan, S Das, A Gupta,** *Denoising SPND signal by discrete wavelet analysis for efficient power feedback in regulating system of PHWRs under noisy environment*, **2nd National Conference on Emerging Trends and Applications in Computer Science, India.(IEEExplore)**

24. **I Pan, A Mukherjee, S Das, A Gupta,** *Real time implementation of a genetic algorithm based optimal PID controller to handle unreliable network conditions in NCS applications,***2nd National Conference on Emerging Trends and Applications in Computer Science, India.(IEEExplore)**

25. **Ray, T.K., Ekbote, P., Ganguly, R., Gupta, A.**,*Second-law analysis in a steam power plant for minimization of avoidable exergy destruction*, **ASME 2010 4th International Conference on Energy Sustainability, ES 2010 1 , pp. 859-868.(IEEExplore)**

26. **D Choudhury, A Angeloski, H Ziah, H Buchholz, A Landsman, A Gupta, T Mitra,** *A MATLAB based Distributed Real-time Simulation of Lander-Orbiter-Earth Communication for Lunar Missions***,38th COSPAR Scientific Assembly 38, Bremen,Germany,2010.**

27. **Saha, Suman; Das, Saptarshi; Ghosh, Ratna; Goswami, Bhaswati; Gupta, Amitava; Balasubramanian, R.; Chandra, A. K.; Das, Shantanu;** *FractionalOrder***Phase Shaper Design with Routh's Criterion for Iso-Damped Control System, Proceedings of Indicon 2009, Dec 18-20, 2009, Ahmedabad, India.(IEEExplore)**

28. **Ray, T.K. Ganguly, R. and Gupta, A.** *Exergy analysis for performance optimization of a steam turbine cycle***, IEEE PES PowerAfrica 2007 Conference and Exposition, PowerAfrica 2007.(IEEExplore)**

29. **Banerjee, A., Das, M., Ghosh, R., Goswami, B. ,Balasubramanian, R. , Chandra, A. & Gupta, A. ,** *A Study on Hardware –in-loop Simulation with Embedded Controllers using TCP/IP and UDP***, Proceedings of the 3rd International Conference on Computing, Control & Communications Technologies, July 24-27, 2005, Austin, Texas, USA, Vol. 3, pp.103-108**

30. **Gao, H. , Shmidt, A. , Gupta, A. and Luksch, P.,** *A Graph-matching based Intra-node Load-Balancing Methodology for Clusters of SMPs***, Proceedings of the 7th World Multi- conference on Systemics, Cybernetics and Informatics (SCI 2003), July 27-30, 2003,Orlando, Florida,USA.**

31. **Gao, H. , Shmidt, A. , Gupta, A. and Luksch, P.,** *Load Balancing for Spatial-Grid-Based Parallel Numeric Simulation on Clusters of SMPs***, Proceedings of the Euromicro PDP2003 Conference, February 5-7, 2003, Genoa, Italy, IEEE Computer Society Publications, pp.75-82.**

32. **Gupta, A. Popovic, D. and Mazumdar, C,** *A Small Signal Parallel Computer Model for Thermal Power Plant Components* **, Proceedings of IEEE International Conference on Industrial Technology 2000 , Goa, India(IEEExplore)**

33. **Gupta, A. and Mazumdar, C,** *A Distributed Simulation Algorithm for multiple Input Multiple Output Systems using Message Passing Interface* **, HPC'Asia98,Singapore , 1998**

9. List of Research Projects

Title of the Project	Funding Agency	Sanctioned Amount	Status	Duration	Role
Development of a PC based Real-time Power Plant Simulator using Parallel Processing Technology	All India Council for Technical Education	INR 5,00,000	Completed	19.5.1998 - 30.11.2000	Principal Investigator
Fault recovery for Numerical simulations on Clusters of Workstations/PCs	TechnischeUniversitaet (TU) Muenchen,Germany	EUR 4,000 (approx.)	Completed	05.11.2003 - 05.05.2004	Principal Investigator
Development of a Tool for De-coupling Control of Multi-variable Processes using Message Passing across EmbeddedControllers	Board of Research in NuclearSciences(BRNS) of the DAE, Govt. of India	INR 26,020,120	Completed	22.6.2004-30.6.2007	Principal Investigator
Performance Monitoring of Large Distributed Systems using Mobile Software Agents	Department of Science &Technology, Govt. of India, under the DST-DAAD PPP scheme		Completed	06-2004 to 06-2006	Co-Investigator
Development of $PI^{\alpha}D^{\beta}$Controllers	Board of Research in NuclearSciences(BRNS) of the DAE, Govt. of India	>INR 20,00,000	Completed	04-2007 to 03-2010	Principal Investigator
A joint exploratory study on the applicability of NetworkedControl Systems for critical Multi-variable Systems	DST-NSF	Mobility costs and local hospitality of USScientists	Completed	2008	Principal Investigator
Application of WCAN technology for Networked Control of TE Reactor	DST, Govt. of India (Indo-Tunisian PPP)	INR 500000	Completed	2009-2011	Principal Investigator

Development of PID Controllers for Networked Control of Process Plants with Packet drop-out and Data Loss	Board of Research in NuclearSciences(BRNS) of the DAE, Govt. of India	INR 28,83,000	Completed	21-10-2009	Principal Investigator
Development of discrete optimal controller for a load following pressurized water reactor (PWR)module	Board of Research inNuclearSciences(BRNS) of the DAE, Govt. of India	INR 24,93,700	Completed	09- 2014-2018	Principal Investigator

Contd.

Title of the Project	Funding Agency	Sanctioned Amount	Status	Duration	Role
Vision guided Auto-lander for Planetary Missions	Indian Space Research Organization (ISRO)	INR 26,32,000	Completed (Report submission In progress)	2019-2022	Principal Investigator
Indigenously Developed Spectroscopic Radiation Portal Monitor for National Security	IMPRINT program of the MHRD Govt. of India and Defense Research & Development Organization (DRDO)	INR 65,40,000 (Jadavpur University's Share)	Completed (Report submission In progress)	2018-2022	Co-Investigator (Collaborative program with IIT Kanpur)

10. International Exposure

A. Invited Talks in International Venues

Sl.No.	Date	Place	Event	Role
1	September 2022	**London(UK)**	NUPP2022	Invited Speaker (Delivered Online)
2	June 2020	**Montreal Canada** (Digital Platform)	OPAL-RT's 12th Conference on Real-time Simulation RT-20	Invited Speaker (Delivered Online)
3	August 2019	City University, **Hong Kong**	CCTA 2019	Tutorial Speaker
4	December 2018	Dhaka University, **Dhaka, Bangladesh**	ICIET 2019	Keynote Speaker
5	November 2017	Bangladesh University of Engineering & Technology(BUET), **Dhaka,Bangladesh**	Short Course on Nuclear Power Engg. Nov 22-26 2017	Invited Speaker
6	October 12,2017	TU-Muenchen, **Munich Germany**	InvasIC Seminar,http://invasic.informatik.uni-erlangen.de/en/activities.php	Invited Speaker
7	August 2015	**IAEA, Vienna**	Annual Meeting of the International Nuclear Security Network(INSEN)	Invited Speaker
8	September 2012	Universitaet Rostock, **Rostock, Germany**	Invited Lecture at VHR, Uni-Rostock (Prof. P. Luksch)	Invited Speaker
9	May 2009	Universitaet Rostock, **Rostock, Germany**	Invited Lecture at VHR, Uni-Rostock (Prof. P. Luksch)	Invited Speaker
10	June 2007	NC State University, **Raleigh, USA**	IEEE IECS Lecture (Prof. M.Y.Chow)	Invited Speaker
11	September 2003	**Poland**	PPAM2003 http://www.ppam.pcz.pl/ppam2003/program.htm	Tutorial Lecture with Prof. P. Luksch (delivered by Prof. Luksch.)

12	November 2002	UniversitaetBremen, **Bremen, Germany**	Invited Lecture at IAT (Prof. D. Popovic)	Invited Speaker

B. Visiting Scientist Position/ Visiting Professorship /Special Programs Attended/Co-ordinatorship of International Programs

Sl.No	Position	Organization	Duration	Sponsor
1	Attendee and presenter for the Annual Meeting of the International Nuclear Security Educators' Network (INSEN)	International Atomic Energy Agency (IAEA), Vienna, **Austria.**	August 2015	Dept. of State, United States Govt.
2	Co-ordinator for AREVA Sponsored Doctoral Fellowship program at Jadavpur University	School of Nuclear Studies & Applications(SNSA), Jadavpur University, Kolkata, **India**	2013-2018	M/s AREVA France
3	DAAD Visiting Professor (DAAD Gastdozentur)	Institute for Informatics, TU-Muenchen,**Germany**	Nov-2009-Feb-2010	German Academic Exchange Service, DAAD
4	DAAD Visiting Professor (DAAD Gastdozentur)	Universitaet-Rostock**Germany**	Apr-2006-Jul-2006	German Academic Exchange Service, DAAD
5	Guest Scientist (Gastwissenschaftler) of the KONWIHR program at the TU-Muenchen, Germany	Institute for Informatics,TU-Muenchen, **Germany**	Jan-2002-May- 2003	KONWIHR Program, Bavaria, Federal Republic of Germany

11. Visibility at National/Regional Level

A. Selected Invited Lecture at National Venues

Sl.No.	Date	Place	Event	Role
1	January 6th 2023	Kolkata	National Seminar on De-Mystifying Industry 4.0	Invited Speaker
2	September 2021	NIT Trichy	SPARC Online Workshop on Nuclear Energy & Measurement	Invited Speaker
3	December 2019	NIT Uttarkhand	STC titled Fractional Calculus: Applications in Science & Engineering	Invited Speaker
4	September 2019	PDPU Gandhinagar	PDPU-WINS-Los Alomos	Invited Speaker
5	August 2019	NIT Silchar	STC on Fractional Order Systems& Applications (FOSTA 2019)	Invited Speaker
6	July 2019	JBNSTS Kolkata	58th DST Inspire Camp	Invited Speaker
7	December 2018	IIT Bombay	Indo-US Science and Technology Forum (IUSSTF) Symposium on Advanced Sensors and modelling Techniques on Nuclear Reactor Safety	Invited Speaker
8	February 2017	CID Headquarters, BhavaniBhavan, Kolkata	Seminar on Dirty Bombs	Invited Speaker
9	February 2017	Variable Energy Cyclotron Centre, Kolkata	Dept. of Atomic Energy-BRNS Theme Meeting on V&V of ControlSystems	Invited Speaker
10	November 2016	German Consulate, Kolkata	Science Lecture Series	Invited Speaker

Invited Lecture at National Venuescontd…				
11	November 2016	IISER Pune	3rd Indo-German Dialogue on Excellence in Research & Education http://www.dwih.in/content/3rd- indo-german-dialogue-excellence-research-and-education-iiser-pune	Invited Speaker
12	January 2016	IIT Hyderabad	Indian Control Conference(ICC) 2016 http://icc.org.in/2016/tutorials/	Tutorial Speaker
13	October 2015	SAC, Indian Space Research Organization (ISRO), Ahmedabad	Invited Lecture	Invited Speaker
14	October 2015	Institute of Plasma Research (IPR), Gandhinagar	IPR Colloquium http://www.ipr.res.in/documents/ colloquium255.html	Invited Speaker
15	January 2015	KIT Bhubaneswar	CINE 2015	Tutorial Speaker
16	December 2014	JBNSTS Centre Kolkata	DST-INSPIRE Internship ScienceCamp	Invited Speaker
17	November 2014	NIT Uttarakhand	NMEICT Workshop 2014	Invited Speaker
18	March 2014	Science City Kolkata	German House of Innovation, Excellence on Tour Program	Invited Speaker
19	November 2013	NIT Rourkela	RAPEC 2013	Invited Speaker
21	May 2013	NIT Rourkela	SRTEAMS 2013	Invited Speaker
22	April 2013	VNIT Nagpur	Invited Talk	Invited Speaker
23	January 2011	IIIT Bombay	Indo-US Framework for Co-operation in Nuclear EngineeringEducation	Panelist
24	July 2007	Dehradun	IICT 2017	Invited Speaker

B. Adjunct Positions/ Member of Boards of Studies/Advisory Committees

Sl. No	Position	Organization	Duration
1	Adjunct Professor	IDP in Nuclear Engg. & Tech. IIT Kanpur	2014-2017
2	Member, Board of Studies	Dept. of Power Engg. GMRIT Rajam	2016-2018
3	Member, Advisory Committee	RCCIIT,Kolkata	2020-

12. Outreach

A. Select list of Conferences/Symposia organized (excludes Refresher and Retraining Courses)

SL.No	Date	Title of theProgram	Supporting Agency
1	November 2019	Workshop titled *Tailoring a Research Proposal*	i. German Academic Exchange Service(DAAD) ii. German Consulate, Kolkata
2	November 2019	Workshop of IP Rights	i. PHD Chamber, Delhi ii. Jadavpur University, Kolkata
3	April 2018	DAAD Falling Walls Lab 2018	i. German Academic Exchange Service(DAAD) ii. Jadavpur University, Kolkata
4	March 2017	Skills@JU	TEQIP-II Program, Jadavpur University
5	September 2013	BRNS Outreach TPDM	i. BRNS,DAE, Govt. of India ii. JadavpurUniversity,Kolkata

B. Membership of Professional Bodies/Committees

SL.No.	Membership Details	Organization
1	Chairman, Digital Outreach Committee	West Bengal Joint Entrance Examinations Board (WBJEEB)2020
2	Member, CII Taskforce for Startup and Innovation	Confederation of Indian Industries (CII)2018-2019
3	Member, International Nuclear Security Educators' Network	International Atomic Energy Agency (IAEA) 2015 onwards

C. Miscellaneous Academic Outreach

SL.No.	Type of Outreach Activity	Associated Organization(s)
1	Resource person for orientation courses/ refresher courses/summer and winter schools	UGC-HRDC, JadavpurUniversity
2	Resource person for FDPs	IEM Kolkata, RTU Kota, TITAgartala and other institutes
3	Member of Doctoral Research Committee	HomiBhabha National Institute (HBNI), IIEST Shibpur etc.
4	Examiner for Dissertations	IIT Kharagpur, IIT Bombay, IIT Kanpur, VNIT Nagpur, NIT Rourkela, IIEST Shibpur etc.
5	Reviewer of Journals	IEEE, IEE, Elsevier, Francis &Taylor, Springer etc.
8	Member, selection committee for faculty recruitment,promotion and entry level selection	Different academic institutes andPSUs.
9	Mentor and Judge for Innovation contests and JBNSTS –DST programs	Texas Instruments. CII etc.

13. Role in Institutional Development

.No	Role	Duration
1	**Chairman**, AICTE Compliance Committee, Faculty of Engg. & Tech. Jadavpur University, Kolkata	2020 till date
2	**Convener**, UG Examination Reforms Committee, Faculty of Engg. & Tech. Jadavpur University, Kolkata	2018 till Date
3	**President**, Institutional Innovations Council(JU)	2019 -2022
4	**Co-ordinator**, Departmental NBA Committee (Power Engg.)	2018 -2019
5	**Co-ordinator**, Committee for Implementation of Common First Year Syllabus	2018
6	**Co-ordinator** , UG De-centralized Admission	2017,2018
7	**Co-ordinator**, University representation at the India Engineering Sourcing Show 2018, Chennai	2018
8	Member, Advisory Committee for Internal Quality Assurance Cell, Jadavpur University	2018 till date
9	Member, Administrative Committee for the Computer Aided Design Centre	2017 till date
10	Member, Internal Core Committee for TEQIP-III program (Industry Interactions and Twinning)	2017 till date
11	**Reporting Centre In-Charge** ,JU Salt Lake Campus, WBJEEE e-counseling	2017
12	Member, Re-admissions Committee	2014 till date
13	Member, Internal Complaints Committee(ICC)	2015-2016
14	**Principal Investigator**, DST- FIST Program(Power Engg.)	2004-2009
15	Member, Students' Placement Board and later Advisory Committee for Students' Placement	2003-2016 (various terms)