

Vivekananda Mukherjee, PhD



**Mailing Address:**

Flat No. 404, Sitala Residency,  
Kalyanpur Housing Estate, Asansol,  
Dist. Burdwan, West Bengal, PIN: 713304  
**Mobile No.:** 09474132003/09474512640  
**e-mail id :** vivek\_agamani@yahoo.com

**Personal Details:**

**Date of Birth** : 24.10.1970  
**Marital Status** : Married  
**Sex** : Male  
**Nationality** : Indian  
**Permanent Address** : At + P.O.: Raina, Dist.: Burdwan, West Bengal, PIN: 713421

**Academic Record:**

| Examination Passed            | Board/University       | Year of Passing | % Marks |
|-------------------------------|------------------------|-----------------|---------|
| Madhyamik                     | W.B.B.S.E.             | 1986            | 70.8    |
| Higher Secondary              | W.B.C.H.S.E.           | 1988            | 68.8    |
| B.E. (Electrical Engineering) | University of Calcutta | 1993            | 71.8    |
| M.E. (Power Systems)          | B.E. College (D.U.)    | 1995            | 71.1    |
| M.B.A. (Systems)              | University of Calcutta | 2001            | 58.7    |
| Ph.D.                         | NIT, Durgapur          | 2008            | --      |

**Research Details:**

| Title of Thesis  | Guide, Affiliation  | University                                    |
|--|---|---|
| Application of Evolutionary Optimization Techniques for Some Selected Power Systems Problems | <b>Prof. S. P. Ghoshal,</b><br>Department of Electrical Engineering, NIT-<br>Durgapur (spghoshalnitdgp@gmail.com) | National Institute of<br>Technology, Durgapur |

**Publication Details:**

| Status                 | In Journal |               | In Conference |               | Total |
|------------------------|------------|---------------|---------------|---------------|-------|
|                        | National   | International | National      | International |       |
| Published <sup>1</sup> | 2          | 6             | 5             | 7             | 20    |
| Communicated           | 1          | 1             | --            | --            | 2     |

<sup>1</sup>Details are shown on Pages 3-4

**Papers Reviewed:**

Details are shown on Page 5

**Area of Interest:**

Small signal stability, Restructured power systems, Distributed Generation, and Evolutionary computing techniques

**Experience Details:**

*A. Industry:*

| Sl. No. | Name of the Organization   | Designation                     | Period     |            |
|---------|--|---------------------------------|------------|------------|
|         |  |                                 | From       | To         |
| 1       | <b>NICCO Corporation Limited (Cable Division)</b> , Shyamnagar, 24 Pgs (N), WB | Assistant Manager (Engineering) | 12.05.1995 | 18.08.2002 |

*B. Academic:*

| Sl. No. | Name of the Institution                            | Designation         | Period     |            |
|---------|--|---------------------|------------|------------|
|         |  |                     | From       | To         |
| 1       | <b>Asansol Engineering College</b> , Asansol       | Lecturer            | 19.08.2002 | 31.01.2005 |
| 2       | <b>Asansol Engineering College</b> , Asansol       | Assistant Professor | 01.02.2005 | 18.02.2009 |
| 3       | <b>Asansol Engineering College</b> , Asansol       | Professor           | 19.02.2009 | 28.05.2009 |
| 4       | <b>Indian School of Mines University</b> , Dhanbad | Assistant Professor | 29.05.2009 | Till date  |

**Member of Professional Body:**

Member of The Institution of Engineers (India), Membership No.: M-134049-7, dated 13.04.2007

**Workshop / Short Term Course / Continuing Education Program Attended:**

*Details are shown on Page 6*

**Workshop / Short Term Course Organized:**

| Sl. No. | Title  | Venue                          | Period     |            | Duration |
|---------|--|--------------------------------|------------|------------|----------|
|         |  |                                | From       | To         |          |
| 1       | TEQIP Workshop on Recent Trends in Power System (RTPS-2006)            | Asansol Engg. College, Asansol | 23.03.2006 | 24.03.2006 | 2 Days   |
| 2       | TEQIP Short Term Course on Recent Advances in Power System (RAPS-2006) | Asansol Engg. College, Asansol | 27.06.2006 | 01.07.2006 | 1 Week   |

**Declaration:**

I do hereby declare that the information furnished above is true to the best of my knowledge and belief.

Place: Dhanbad

Date: 04.06.2009

(*Vivekananda Mukherjee*)

**Details of Paper Published/Under Revision:**

***In Journals:***

1. A. Chatterjee, **V. Mukherjee**, and S. P. Ghoshal, "Chaotic ant swarm optimization for fuzzy based tuning of power system stabilizer" under revision *Int. J. Elect. Power and Energy Syst.*
2. A. Chatterjee, **V. Mukherjee**, and S. P. Ghoshal, "Velocity relaxed and craziness-based swarm optimized intelligent PID and PSS controlled AVR system," in press, to be appeared in *Int. J. Elect. Power and Energy Syst.*
3. A. Chatterjee, **V. Mukherjee**, and S. P. Ghoshal, "Velocity relaxed swarm optimized fuzzy intelligent PID controlled AVR system," *J. Inst. Eng. India, pt. EL*, vol. 89, pp. 51-58, Mar. 2009.
4. S. P. Ghoshal, A. Chatterjee, and **V. Mukherjee**, "Bio-inspired fuzzy logic based tuning of power system stabilizer," *Expert Sys. with Applications*, vol. 36, no. 5, pp. 9281-9292, July 2009.
5. **V. Mukherjee**, and S. P. Ghoshal, "Application of capacitive energy storage for transient performance improvement of power system," *Elect. Power Syst. Res.*, vol. 79, no. 3, pp. 282-294, Feb. 2009.
6. **V. Mukherjee**, and S. P. Ghoshal, "Particle swarm optimization-genetic algorithm based fuzzy logic controller for dual input power system stabilizers," *J. Inst. Eng. India, pt. EL*, vol. 88, pp. 36-43, Mar. 2008.
7. **V. Mukherjee**, and S. P. Ghoshal, "Comparison of intelligent fuzzy based AGC coordinated PID controlled and PSS controlled AVR system," *Int. J. Elect. Power and Energy Syst.*, vol. 29, no. 9, pp. 679-689, Nov. 2007.
8. **V. Mukherjee**, and S. P. Ghoshal, "Intelligent particle swarm optimized fuzzy PID controller for AVR system," *Elect. Power Syst. Res.*, vol. 77, no. 12, pp. 1689-1698, Oct. 2007.

***In Proceedings of Conferences:***

9. **V. Mukherjee**, and S. P. Ghoshal, "Craziness based and velocity relaxed swarm optimized intelligent PID controlled AVR system," in *Proc. 2006 IEEE-Power India Conf.*, New Delhi, India, Apr. 2006, [Online]. Available: <http://www.ieeexplore.ieee.org>.
10. S. P. Ghoshal, and **V. Mukherjee**, "PSO/GA-fuzzy logic controller for dual input power system stabilizer," in *Proc. Conf. on AICDIS 2008*, Asansol, India, 3-5 Dec. 2007.
11. **V. Mukherjee**, B. K. Mukherjee, and S. P. Ghoshal, "Design of  $H_{\infty}$  based robust controller for AVR system," in *Proc. Int. Conf. on Modeling and Simulation MS'07*, Kolkata, India, 3-5 Dec. 2007.
12. **V. Mukherjee**, and S. P. Ghoshal, "A comparative study of intelligent fuzzy based AGC coordinated PSS control and PID control of AVR systems," in *Proc. Int. Conf. on Power Syst. (ICPS 2007)*, CPRI, Bangalore, India, Dec. 2007.

13. **V. Mukherjee**, and S. P. Ghoshal, "Towards input selection and fuzzy based optimal tuning of multi-input power system stabilizer," in *Proc. Fourteen National Power Syst. Conf. (NPSC 2006)*, IIT Roorkee, India, Dec. 2006.
14. **V. Mukherjee**, and S. P. Ghoshal, "GA-fuzzy logic controller for dual input power system stabilizer," in *Proc. Fourteen National Power Syst. Conf. (NPSC 2006)*, IIT Roorkee, India, Dec. 2006.
15. **V. Mukherjee**, and S. P. Ghoshal, "Velocity relaxed swarm intelligent tuning of fuzzy based power system stabilizer," in *Proc. 2006 IEEE-Power India Conf.*, New Delhi, India, Apr. 2006, [Online]. Available: <http://www.ieeeexplore.ieee.org>.
16. **V. Mukherjee**, and S. P. Ghoshal, "Swarm optimized intelligent PID controller for AVR system," in *Proc. Int. Conf. Power Transmission Research Interest and Challenges*, CPRI, Bangalore, India, Dec. 2005.
17. **V. Mukherjee**, and S. P. Ghoshal, "Hybrid optimal control of a single input and a dual input power system stabilizer," in *Proc. Int. Conf. Energy and Power Syst. (EPS-2005)*, Krabi, Thailand, Apr. 2005.
18. S. P. Ghoshal, and **V. Mukherjee**, "Hybrid fuzzy logic controller for dual input power system stabilizer," in *Proc. Thirteen National Power Syst. Conf. (NPSC 2004)*, IIT Madras, Dec. 2004, vol. 1, pp. 240-245.
19. **V. Mukherjee**, and S. P. Ghoshal, "Application of genetic algorithm and three varieties particle swarm optimizations to fuzzy based optimal control of a dual input power system stabilizer," in *Proc. IEEE Bangalore Section Annual Symp. 2004 on Power Syst.*, Indian Institute of Science, Bangalore, India, Dec. 2004.
20. S. P. Ghoshal, S. Roy, and **V. Mukherjee**, "Hybrid GA/particle swarm-fuzzy optimized controllers for a dual input power system stabilizer," in *Proc. 2nd Int. Conf. Artificial Intelligence in Science & Technology, Horbart, Tashmania, Australia*, 21-25 Nov. 2004, pp. 165-170.

**Details of Papers Reviewed:**

| <b>Sl. No.</b> | <b>Name of the Journal</b>                                   | <b>Title of the Paper</b>  | <b>Manuscript No.</b> | <b>Status</b> |
|----------------|--|--|-----------------------|---------------|
| 1              | International Journal of Electrical Power and Energy Systems | Adaptive neuro-fuzzy AVR and PSS with hybrid learning algorithm  | IJEPES-D-07-00095     | Completed     |
| 2              | International Journal of Electrical Power and Energy Systems | A novel approach to replace conventional PSS with a genetic tuned PID controller based on different search criterion | IJEPES-D-07-00117     | Completed     |
| 3              | International Journal of Electrical Power and Energy Systems | On the effect of AVR gain on Bifurcations of subsynchronous resonance in power systems                               | IJEPES-D-07-00191     | Completed     |
| 4              | International Journal of Electrical Power and Energy Systems | Stability analysis of power systems considering AVR and PSS output limiters  | IJEPES-D-07-00196     | Completed     |
| 5              | International Journal of Electrical Power and Energy Systems | Enhancement of transient stability by fuzzy logic-controlled SMES considering communication delay                    | IJEPES-D-07-00096     | Completed     |
| 6              | International Journal of Electrical Power and Energy Systems | Robustness of damping control implemented by energy storage systems  | IJEPES-D-08-00231     | Completed     |
| 7              | Information Sciences   | Computational intelligence approaches for a PID controller design using universal model                              | INS-D-07-581R1        | Completed     |
| 8              | Information Sciences   | Design for fuzzy-PID controllers using novel PSO-EP based hybrid algorithm   | INS-D-08-306          | Completed     |
| 9              | Information Sciences   | Computational intelligence approaches for a PID controller design using universal model                              | INS-D-07-581          | Completed     |
| 10             | Information Sciences   | Self-organizing genetic algorithm based tuning of PID controllers  | INS-D-07-537R1        | Completed     |
| 11             | Information Sciences   | Self-organizing genetic algorithm based tuning of PID controllers  | INS-D-07-537          | Completed     |
| 12             | Information Sciences   | Analysis of one and two dimensional Mamdani fuzzy controllers: some new results                                      | INS-D-07-569          | Completed     |
| 13             | Information Sciences   | Design of fuzzy PID controllers using modified triangular membership functions                                       | INS-D-07-175          | Completed     |

| <b>Details of Workshop / Short Term Course / Continuing Education Program Attended:</b> |  |   |                                    |            |            |          |
|---|--|---|------------------------------------|------------|------------|----------|
| Sl. No.   | Title  | Organized By  | Venue                              | Period     |            | Duration |
|   |  |   |                                    | From       | To         |          |
| 1   | Recent Advances in Power System under Deregulated Environment                  | Dept. of EE, College of Engg. & Mgmt., Kolaghat       | College of Engg. & Mgmt., Kolaghat | 05.07.2004 | 16.07.2004 | 2 Weeks  |
| 2   | Gas Insulated System (GIS)   | Power Engg. Chapter, IEEE Calcutta Section            | JU, Calcutta                       | 03.08.2005 | 03.08.2005 | 1 Day    |
| 3   | TEQIP Workshop on Recent Trends in Power System (RTPS-2006)                    | Department of Electrical Engg., Asansol Engg. College | Asansol Engg. College, Asansol     | 23.03.2006 | 24.03.2006 | 2 Days   |
| 4   | TEQIP Short Term Course on Recent Advances in Power System (RAPS-2006)         | Department of EE, Asansol Engg. College               | Asansol Engg. College, Asansol     | 27.06.2006 | 01.07.2006 | 1 Week   |
| 5   | Computer Based Relaying  | Department of Electrical Engg., IIT-Roorkee           | IIT-Roorkee                        | 27.07.2006 | 31.07.2006 | 1 Week   |
| 6   | Recent Advances in Control Systems & Its Application                           | Department of Electrical Engg., Asansol Engg. College | Asansol Engg. College, Asansol     | 16.10.2006 | 20.10.2006 | 1 Week   |
| 7   | Evolutionary Computing & Advanced DSP  | Department of Electronics Engg., NIT Rourkela         | NIT Rourkela                       | 11.05.2007 | 19.05.2007 | 2 Weeks  |
| 8   | AICTE Sponsored National Seminar on Environmental Management                   | Department of EE, Asansol Engg. College               | Asansol Engg. College, Asansol     | 26.07.2007 | 28.07.2007 | 2 Days   |
| 9   | Non-linear Dynamics and Chaos in Engineering Systems                           | Department of Electrical Engg., Tehno India           | Saltlake, Kolkata                  | 21.07.2008 | 26.07.2008 | 1 Week   |
| 10  | Power Electronic Converter-based Adjustable Speed Drives                       | Department of EE, Asansol Engg. College               | Asansol Engg. College, Asansol     | 25.09.2008 | 26.09.2008 | 2 Days   |
| 11  | Integrated Operation of Large Scale Modern Power Systems                       | Department of Electrical Engg., NIT Durgapur          | NIT Durgapur                       | 12.01.2009 | 24.01.2009 | 2 Weeks  |
| 12  | Operation, Control, Stability and Power Quality Issues in Modern Power Systems | Department of Electrical Engg., NIT Durgapur          | NIT Durgapur                       | 26.03.2009 | 28.03.2009 | 2 Days   |

Place: Dhanbad

Date: 04.06.2009

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