

Rabiah Badar

Address: Matloob Hussain S/O Gulzar Hussain

Main Bazar Dhudial. District Chakwal. Punjab, Pakistan.

Mobile: +92 3005787710

Email: rabiahbadar@ciit.net.pk, rabiah.badar@gmail.com

LEVEL: GRADUATE - OBJECTIVE

To contribute for the growth of a progressive institution by utilizing the knowledge and skills that I have attained during the course of my academic qualification and avail the opportunity for research and skill development.

Present status: PhD in Electrical Engineering at COMSATS IIT, Abbottabad.

Course work completed: 3.69 CGPA

Doctoral thesis approved after foreign evaluation.

PROFESSIONAL TRAINING AND WORK EXPERIENCE

Center for Advance Studies in Telecommunication (CAST), Islamabad.

- Research student, Research paper writer

MS Research Thesis, Research paper writing 2009

Ministry of Defense (CAA), Rawalpindi.

- Internee

Electrical & Mechanical Section 2007
Office Management 2007

Secretariat Training Institute, Islamabad.

Chakwal Grammar School, Chakwal.

- Senior teacher, Member examination committee.

Physics, Math, Computer 2006-07

The Educators, Chakwal.

- Senior teacher, Member sports committee.

Physics, Math, Computer 2006

National Institute of Electronics, Islamabad.

- Web Graphics and Animation

Flash, Fireworks, Swish 2006

- Extra coaching classes of Mathematics for F.Sc. and B.Sc. (2005-2007)

- Overall 4 years teaching and research experience.

- **Reviewer International Journal of Electrical Power & Energy Systems (Elsevier: I.F.=3.432)**

- **Reviewer Electric Power System and Components Journal (Taylor & Francis: I.F.=0.681)**

- **Reviewer IGI Global Publishing**

- **Member Technical Committee Journal of Future Technologies and Communications (JFTCOM)**

- **Member Editorial board of Global Journal of Optimization and Technology.**

EDUCATION

COMSATS Institute of Information Technology, Islamabad.

MS Computer Engineering 3.75 CGPA 2009

Quaid-I-Azam University, Islamabad.

M.Sc. Electronics 70.1% 2005

Govt. Post Graduate College for Women, Rawalpindi.

B.Sc. Math A, Math B, Physics 66.9% 2002

Govt. Post Graduate College for Women, Chakwal.

F.Sc. Pre-Engineering 74.9% 2000

DISTINCTIONS

- COMSATS IIT Research productivity award winner for the year 2013
- COMSATS IIT Research productivity award winner for the year 2012
- Research paper presentation in UPEC 2012 London by winning HEC travel grant.
- Top position in MS Computer Engineering.
- HEC indigenous scholarship for MS leading to PhD.
- 3rd position in 1st semester of M.Sc. Electronics, Q.A.U. Islamabad.
- Merit scholarship on fifth position in Mathematics in Rawalpindi board.
- First position in F.Sc. Pre-Engineering group in college.
- Scholarship holder in higher secondary school and F.Sc.

PUBLICATIONS

MS Thesis: Performance Analysis of Turbo Code Techniques (2009).

Doctoral Thesis: Adaptive Soft Computing Synergistic Paradigms for VSC based FACTS Damping Controls. (Submitted)

Journal Publications

1. L. Khan, S. Anjum, and **R. Badar**, "Standard fuzzy model identification using gradient methods", *World Applied Sciences Journal*, vol. 8, no. 1, pp. 1-9, 2010. (ISI-Indexed)
2. L. Khan, M. Umair Khan, and **R. Badar**, "Soft computing techniques for system identification using Matlab/Simulink", *Australian Journal of Basic and Applied Sciences*, vol. 4, no. 6, pp. 1527-1541, 2010. (ISI-Indexed)
3. **R. Badar** and L. Khan, "Nonlinear adaptive NeuroFuzzy wavelet based damping control paradigm for SSSC," *Advances in Electrical and Computer Engineering (AECE)*, vol. 12, no. 3, pp. 97-104, 2012. (IF: 0.552)
4. **R. Badar** and L. Khan, "Hybrid Neuro-fuzzy Legendre-based adaptive control algorithm for Static Synchronous series Compensator," *Electric Power Components and Systems*, vol. 41, no. 9, pp. 845-867, 30 May 2013. (IF: 0.62)
5. L. Khan and **R. Badar**, "Hybrid adaptive NeuroFuzzy Bspline based SSSC damping control paradigm using online system identification," *Turkish Journal of Electrical Engineering & Computer Sciences*. (IF: 0.555)
6. **R. Badar** and L. Khan, "Power system oscillations damping using HABsW based FACTS-SSSC," *Journal of Intelligent and Fuzzy Systems: IOS press* (accepted) (IF: 0.78).
7. **R. Badar** and L. Khan, "Coordinated adaptive control of multiple FACTS using MIMO NeuroFuzzy damping control paradigms," *Electric Power Components and Systems* (accepted) (IF: 0.62).
8. **R. Badar** and L. Khan, "Fully adaptive control of multi-type FACTS using MIMO NeuroFuzzy Legendre wavelet based damping control," *Electric Power Components and Systems* (under review).
9. **R. Badar** and L. Khan, "Legendre Wavelet Embedded NeuroFuzzy Algorithms for multiple FACTS," *International Journal of Electrical Power and Energy Systems* (under review).
10. **R. Badar** and L. Khan, "Comparative evaluation of Lyapunov based fully adaptive MIMO hybrid soft computing damping control paradigms," (under preparation).

Conference Publications

1. S. Kahkshan, **R. Badar**, and A. Mahboob, "Optimizing the performance of Turbo codes HDL model for rapid prototype," In *Proc. International Conference on Emerging Technologies*, IEEE, Islamabad, Pakistan, pp: 352-357, 2009.
2. **R. Badar**, and N. Z. Azeemi, "AWGN and Rayleigh channel response for turbo codes and iterative decoding," In *Proc. Frontiers of Information Technology*, ACM, Abbottabad, Pakistan, pp: 450-457, 2009.
3. S. R. Naqvi, N. Z. Azeemi, A. Hameed, **R. Badar** and T. Rasool, "Improving Accuracy of Non-Invasive Glucose monitoring through Non-local data denoising," (2008) *Proc. IEEE Cairo International Biomedical Engineering Conference (CIBEC 2008)*, Cairo, Egypt.
4. **R. Badar**, and L. Khan, "Adaptive NeuroFuzzy Legendre based damping control paradigm for SSSC", *47th International Universities' Power Engineering Conference (UPEC)*, pp. 1-6, IEEE, UK, London, September 2012.
5. **R. Badar** and L. Khan, "Online adaptive NeuroFuzzy wavelet based SSSC control for damping power system oscillations," *IEEE International Conference on Emerging Technologies (ICET-2012)*, IEEE, Islamabad, Pakistan, October 2012.

6. **R. Badar** and L. Khan, "Hybrid NeuroFuzzy B-spline wavelet based SSSC control for damping power system oscillations," *The 15th International Multi-Topic Conference (INMIC-2012)*, pp. 80-87, IEEE, Islamabad, Pakistan, 15 December 2012.
7. S. Ali, **R. Badar** and L. Khan, "Performance evaluation of adaptive NeuroFuzzy Type-2 control strategy for STATCOM," *The 15th International Multi-Topic Conference (INMIC-2012)*, pp. 185-191, IEEE, Islamabad, Pakistan, 15 December 2012.
8. **R. Badar** and L. Khan, "Adaptive NeuroFuzzy wavelet based SSSC damping control paradigm," *Frontiers of Information Technology (FIT-2012)*, Islamabad, Pakistan, 17-19 December 2012.
9. **R. Badar** and L. Khan, "Indirect adaptive NeuroFuzzy based MIMO control for multi-type FACTS controllers," *International Conference on Modeling and Simulation (ICOMS)*, Islamabad, Pakistan, pp. 108-114, 2013.
10. **R. Badar**, L. Khan, "Adaptive NeuroFuzzy damping control for power system stability enhancement," *IEEE International Conference on Emerging Technologies (ICET-2013)*, Islamabad, Pakistan, Dec. 09-10, 2013.
11. **R. Badar** and L. Khan, "Online adaptive Legendre wavelet embedded NeuroFuzzy damping control algorithm," *16th IEEE international multi topic conference (INMIC)*, UET Lahore, Pakistan, pp. 7-12, 2013.
12. **R. Badar** and L. Khan, "NeuroFuzzy Based Fully Adaptive Indirect Controls for SSSC: A Comparative Analysis," *11th International Conference on Frontiers of Information Technology (FIT)*, Islamabad, Page 95, Pakistan, 16-18 December, 2013.
13. S. Ahmed, **R. Badar** and L. Khan, "Power system stability enhancement using adaptive NeuroFuzzy control for UPFC," *IEEE international Conference on Emerging Technologies (ICET-2013)*, Islamabad, Pakistan, 2013.

Book Chapters

1. L. Khan, **R. Badar**, and S. Qammar, Adaptive fuzzy wavelet NN control strategy for full car suspension system, In: *Fuzzy Logic- Emerging Technologies and Applications*, (Ed.) Elmer P. Dadios, pp: 147-174, InTech Open, 2012.
2. L. Khan and **R. Badar**, Hybrid adaptive NeuroFuzzy bspline based SSSC damping control paradigm: power system dynamic stability enhancement using online system identification, In: *Soft Computing Intelligent Algorithms in Engineering, Management, and Technology*, (Ed.) P. Vasant, vol. 2, pp. 787-828, PCOIGI Global.
3. L. Khan, **R. Badar** and S. Mumtaz. Generators maintenance scheduling using music-inspired harmony search algorithm. *Meta-heuristics optimization algorithms in engineering, business, economics, and finance*. IGI Global, 2012. 448-483. Web. 1 Oct. 2012. doi:10.4018/978-1-4666-2086-5.ch015.
4. L. Khan, **R. Badar**, S. Ali and U. Farid, Power system dynamic stability enhancement using hybrid adaptive neurofuzzy based SSSC damping controls: A comparative evaluation, In: *Artificial Intelligent Algorithms and Techniques for Handling Uncertainties: Theory and Practice*, (Ed.) P. Vasant, PCOIGI Global (In press).

RESEARCH INTERESTS

Power System Stability and Control, FACTS controllers, Nonlinear Adaptive Control, Hybrid Intelligent Systems, Channel Coding, FPGAs, Digital Logic Design, Digital Signal Processing.

MAJOR COURSES

- | | |
|--|---|
| <ul style="list-style-type: none"> • Advance Digital System Design • Applied Mathematics I&II • Digital Control System • Power System Dynamics • Flexible AC Transmission Systems • Advanced Topics in Control Systems • Advanced Topics in Power Systems Engineering | <ul style="list-style-type: none"> • Advance Computer Architecture • Electronics I & II • Advance Digital Image Processing • Advance Digital Communication System • Wireless Communication • Verilog HDL • Advance Digital Signal Processing |
|--|---|

GENERAL EXPERTISE

C/C++, MATLAB/SIMULINK, Verilog, Xilinx/ModelSim, Latex, Pspice, MS office, MS Visio.

PERSONAL

Info.

Date of Birth: December 16, 1983. **Nationality:** Pakistani. **Status:** Single, **Gender:** Female, **Languages:** Urdu, English.