CURRICULUM VITAE
Ganesh Kumar Venayagamoorthy, PhD, MBA, FIEEE, FIET, FSAIEE, FAAIA, SMINNS

DEGREES

- PhD in Electrical Engineering - University of Natal, Durban, South Africa, February 2002.
  Dissertation Title: Adaptive Critic Based Neurocontrollers for Turbogenerators in a Multimachine Power System.
  ***Advisor: Late Ronald G. Harley**, FIEEE, Duke Power Company Distinguished Professor, School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, USA.*
- MBA in Entrepreneurship and Innovation – Clemson University, USA, August 2016.
- MScEng in Electrical Engineering - University of Natal, Durban, South Africa, April 1999.
  Thesis Title: An Implementation of a Continually Online Trained Artificial Neural Network Controller for a Turbogenerator.
  ***Advisor: Late Ronald G. Harley**, FIEEE, Duke Power Company Distinguished Professor, School of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, USA.*
- BEng (First Class) Honours degree in Electrical and Electronics Engineering - Abubakar Tafawa Balewa University, Nigeria, March 1994.

PROFESSIONAL EXPERIENCE

1. January 2012 to Date – **Duke Energy Distinguished Professor of Power Engineering**, Department of Electrical and Computer Engineering, Clemson University, Clemson, SC, USA.
2. March 1, 2025 to Date – **Extraordinary Professor,** Department of Electrical, Electronic and Computer Engineering, University of Pretoria, South Africa.
3. January 2012 to Date – **Professor**, Department of Electrical and Computer Engineering, Clemson University, Clemson, SC, USA.
4. January 2012 to Date – **Founder** & **Director**, Real-Time Power and Intelligent Systems Laboratory, Clemson University, Clemson, SC, USA.
5. May 2002 to December 2014 – Department of Electrical and Computer Engineering, Missouri University of Science and Technology, Rolla, MO, USA:
   - September 2011 to December 2011 – **Professor;** September 2006 to August 2011 – **Associate Professor** & May 2002 to August 2006, **Assistant Professor**

PROFESSIONAL AFFILIATIONS & LEADERSHIP ACTIVITIES

Professional Society Memberships

1. **Fellow** (since January 1, 2021) – Institution of Electrical and Electronics Engineering (IEEE), USA. *Citation: for contributions to the applications of artificial intelligence to power systems*. **Senior Member** – 2002 to 2020, **Member** – 1997 to 2002 and **Student Member** – 1991 to 1997.
2. **Fellow** (since September 2008) – Institution of Engineering and Technology (IET), UK, **Member** (1997 to 2007).
3. **Fellow** (since February 2009) – South African Institute of Electrical Engineers (SAIEE), **Member** (1999 to 2008).
4. **Fellow** (since September 2021) – Asia-Pacific Artificial Intelligence Association (AAIA).
5. **Senior Member** (since 2008) – International Neural Network Society. **Member** (1999 to 2007).

INNS Leadership

6. **Vice-President for Industry Relations** – 2023 to Date.
7. **Member of the Board of Governors** – 2023 to 2025, 2012-2014 & 2009 to 2011 (3 terms, 9 years).
8. **Section Chair** – AI for Critical Infrastructures (AICI), 2024 to Date.
9. **Editor** – Neural Networks (2012).
10. **Guest Editor/Co-Editor** –Neural Networks Journal, Vol. 78, June 2016 – special issue on “Neural Network Learning in Big Data’; Neural Networks Journal, Vol. 22, no. 7, July 2009 & Neural Networks Journal, Vol. 16, no. 5-6, July 2003.

INNS Conference/Symposium Leadership

11. **General Chair** – 2027 International Joint Conference on Neural Networks (IJCNN), Cape Town, South Africa, June 14-18, 2027.
12. **Program Committee co-Chair** – 2015 INNS Conference on Big Data, San Francisco, USA.

13. **Technical Program Chair** – 2009 International Joint Conference on Neural Networks, Atlanta, USA.
14. **Program Co-Chair** – 2003 International Joint Conference on Neural Networks, Portland, OR, USA.

SELECTED PUBLICATIONS (of over 600), KEYNOTES (of 37) & WORKSHOPS/TUTORIALS (of 45)

Keynotes

1. Intelligent Computing for Smart Grids*, 2025 IEEE PES ISGT Latin America,* Panama City, Panama, September 16-19, 2025*.*
2. Cellular Computational Networks for Distributed Artificial Intelligence in Smart Grids, *2025 IEEE-INNS International Joint Conference on Neural Networks (IJCNN)*, Rome, Italy, June 30 - July 5, 2025.
3. Why Artificial Intelligence for Handling Complexity of Modern Power Systems? *7th International Conference on Electric Power and Energy Conversion Systems (EPECS 2024),* Sharjah, UAE, November 12th, 2024.
4. Distributed Artificial Intelligence for Modern Power System Operations and Management, *33rd Australasian Universities Power Engineering Conference (AUPEC),* Ballarat, Australia, September 25th, 2023.
5. Distributed Artificial Intelligence for Smart Grids, *IEEE Symposium on Computational Intelligence Applications in Smart Grid*, Singapore, December 7th, 2022.

Publications

1. Venayagamoorthy GK, "Cellular Computational Networks for Sustainable Artificial Intelligence", *IEEE Conference on Artificial Intelligence* (*CAI*), Santa Clara, CA, US, May 5-8, 2025.
2. Wei Y, Venayagamoorthy GK, "Cellular Computational Generalized Neuron Network for Frequency Situational Intelligence in a Multi-machine Power System", *Neural Networks,* Vol. 93, September 2017, pp. 21-35.
3. Luitel B, Venayagamoorthy GK, "Cellular Computational Networks – a Scalable Architecture for Learning the Dynamics of Large Networked Systems", *Neural Networks*, Vol. 50, February 2014, pp. 120-123.
4. Luitel B, Venayagamoorthy GK, "Quantum Inspired PSO for the Optimization of Simultaneous Recurrent Neural Networks as MIMO Learning Systems", *Neural Networks*, Vol. 23, No. 5, June 2010, pp. 583-586.
5. Cai X, Venayagamoorthy GK, Wunsch DC, "Evolutionary Swarm Neural Network Game Engine for Capture Go", *Neural Networks*, Vol. 23, Issue 2, March 2010, pp. 295-305.
6. Kulkarni R, Venayagamoorthy GK**,** "Generalized Neuron: Feedforward and Recurrent Architectures", *Neural Networks*, Vol. 22. No. 7, September 2009, pp. 1011-1017.
7. Venayagamoorthy GK, Bashyal S, "Effects of Spectral Radius and Settling Time in the Performance of Echo State Networks", *Neural Networks*, Vol. 22, No. 7, September 2009, pp. 861-863.
8. Johnson C, Venayagamoorthy GK, Mitra P, "Comparison of a Spiking Neural Network and an MLP for Robust Identification of Generator Dynamics in a Multimachine Power System", *Neural Networks*, Vol. 22, Issue 5-6, July-August 2009, pp. 833-841.
9. Xu R, Venayagamoorthy GK, Wunsch DC, "Modeling of Gene Regulatory Networks with Hybrid Differential Evolution and Particle Swarm Optimization", *Neural Networks*, Vol. 20, Issue 8, October 2007, pp. 917-927.
10. Venayagamoorthy GK, "Online Design of an Echo State Network Based Wide Area Monitor for a Multi-machine Power System", *Neural Networks*, Vol. 20, Issue 3, April 2007, pp. 404-413.

Selected Workshop/Tutorial Organizer and Presenter at INNS and IEEE CIS Sponsored Conferences

1. Workshop on AI for Critical Infrastructure, *International Joint Conference on Neural Networks, Rome, Italy, June 30-July 5, 2025.*
2. Workshop on AI for Energy, *IEEE Conference on Artificial Intelligence*, June 25-27, 2024, Singapore.
3. Advanced Neural Network Applications for Smart Grid Operations, *in Proc. 2017 IEEE International Joint Conference on Neural Networks (IJCNN)*, Anchorage, Alaska, USA, May 14-19, 2017.
4. "Computational Intelligence Techniques for Smart Grids," *IEEE World Congress on Computational Intelligence*, Brisbane, Australia, June 9-14, 2012.
5. "Adaptive Critic Designs", *IEEE-INNS International Joint Conference on Neural Networks*, San Jose, CA, USA, July 31- August 5, 2011.
6. "Applications of Adaptive Critic Designs", *IEEE-INNS International Joint Conference on Neural Networks*, Atlanta, GA, USA, June 14-19, 2009.