Curriculum Vitae

Professor Mahdi Banejad

B.E.E., M.E.E and Ph.D.

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(Last Update: Feb. 2025)

EDUCATION

1. **Ph. D. (**Electric Power Engineering**)**

2000 to 2004, Queensland University of Technology (QUT), Australia.

2. **M.E. Eng (**Electric Power Engineering**)**

1991 – 1993, Tarbiat Modares University, Iran.

3. **B.E. Eng (**Electric Power Engineering**)**

1984-1989, Ferdowsi University of Mashhad, Iran.

THESES

1. B.E. Eng Thesis: "Coordination of over Current relays in Power systems", 1989.
2. M.E.Eng Thesis, "Identification of Parameters of Synchronous Generators", 1993.
3. Ph.D. Thesis, " Identification of Damping Contribution from Power System Controllers ", 2004.

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ACADEMIC/TEACHING EXPERIENCE

1. Part time lecturer at Tehran University, Iran, 1992-1993.
2. Lecturer in Electrical Department at Shahrood University, Iran, 1994-2000.
3. Tutor in the school of Electrical and Electronic Systems Engineering at QUT, Australia, 2000-2004.
4. Academic Member in Electrical Engineering at Shahrood University of Technology, Shahrood, Iran, 2005-date.

   Courses taught:

   a.) Doctorate Program

   - Power System Dynamics II
   - Special Topics in Power Systems
   - Ph.D. Thesis
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   b.) Master Program

   - Power System Dynamics I and II
   - Reactive Power Control
   - Power System Reliability
   - Seminar
   - Master Thesis

   c.) Bachelor Program

   - Electric Circuits 1
   - Electric Circuits 2
   - Electric Machines 1
   - Electric Machines 2
   - Electromagnetic
   - Industrial Electronics

- Computer Programming (C and Pascal Languages)
- Discrete Control systems
- Electric Measurements
- Foundations of Electrical Engineering
- Design of Electric Installations
- Power Systems 1
- Power Systems 2
- Final Year Project
- Power System Relaying
- Power Systems and Protection, (QUT), Australia
- Circuit and Measurement Lab, (QUT), Australia
- Industrial Electronics Lab, (QUT),

5. Australia Academics Research Visit at Queensland University of Technology, Brisbane, Australia
    - 2004-2005 (for one year after finishing PhD), Research work in the area of Load Modeling and Distributed Generation
    - 2008-2009 (for about 4 months), Postdoctoral Research Fellowship in the area of Dstatcom Application in Distribution systems
    - 2014 (for about 2 months), Research Fellowship in the Area of Battery Application in Distribution Systems in Unbalanced Situations.
    - 2017 (for about 1 months), Research Fellowship in the area of Distributed State Estimation in Distribution Systems in Distribution Electricity Networks.
6. Head of Power Department, Electrical and Robotic Engineering, Shahrood University of Technology, Shahrood, Iran, Feb 2015 to Feb. 2017.
7. Academics Research Visit at Aalborg University, Aalborg, Denmark, Invited by Prof. Josep Guerrero.

PUBLICATION

a. Conference Papers and Technical Reports

1. **M. Banejad**, H. Seifi, "Identification of Synchronous Generator Parameters using Frequency Response Method", The second Iranian Power System Conference, Tehran, Iran, 1994.
2. **M. Banejad**, "Time Domain Identification of Synchronous Generator Parameters", 12th International Power System Conference, Tehran, Iran, 1997.
3. **M. Banejad**, "Electrical Measurement Laboratory", Lecture Note, Shahrood University, Iran, 1996.
4. **M. Banejad**, "The Foundations of Electrical Engineering", Lecture Note, Shahrood University, Iran, 1998.
5. **M. Banejad**, G. Ledwich, P.O"Shea and E. Palmer, "On Line Determination of Mode Shape of a Power System", The 6th International Transmission and Distribution Conference: Distribution 2001, Brisbane, Australia, Nov. 2001.
6. **M. Banejad**, G. Ledwich, "Correlation-Based Mode Shape Determination of a Power System", 2002 IEEE International Conference on Acoustics, Speech and Signal Processing: ICASSP2002, Orlando, Florida, USA, May 2002.
7. G. Ledwich, **M. Banejad**, "Analysis of Blackwall SVC Action Associated with Braking Resistor Tests for QNI Connection", Report for Powerlink, QUT, Australia, 2001.
8. **M. Banejad**, G. Ledwich, "Correlation-Based Identification of the Effects of the Loads on Oscillatory Modes", Australian Universities Power System Engineering Conference: AUPEC 2002, Melbourne, Australia. Oct. 2002.
9. **M. Banejad**, G. Ledwich, "Quantification of Load Contribution in Damping of a Power System", 17th International Power System Conference, Tehran, Iran, 2002.
10. **M. Banejad**, G. Ledwich, "Analysis of SVC Contribution to Damping of a Power System Including Induction Motor Effects", The 6th International Power Engineering Conference, Singapore, May 2003.

11. **M. Banejad**, G. Ledwich, "On the Effect of SVC Control Design of Damping of Low frequency Oscillations", The 38th Universities Power Engineering conference: UPEC2003, Sep. 2003, Greece.
12. **M. Banejad**, G. Ledwich, "Investigation of Load Contribution in Damping in a Multi-machine power system based on Sensitivity Analysis", Australian Universities Power System Engineering Conference: AUPEC 2003, New Zealand, Oct. 2003.
13. **M. Banejad**, G. Ledwich, M. Kashem "Operation of Power System Islands", Australian Universities Power System Engineering Conference: AUPEC 2005, Hobart, Australia, 2005.
14. **R. Hooshmand**, M. Banejad, "Robust Control Design of Power System Stabilizer Using Artificial Neural Networks", Australian Universities Power System Engineering Conference: AUPEC 2006, Melbolurne, Australia, 2006.
15. **M. Banejad**, R. Hooshmand, "Optimal Design of Coefficients of PID Controller in an AVR System using Fuzzy Particle Swarm Optimization Algorithm" Australian Universities Power System Engineering Conference: AUPEC 2006, Melbourne, Australia, 2006.
16. A. Sarikhani, A. Darabi, **M. Banejad**, "Partial Discharge Locating in Power Transformer by Using of Statistical Analysis of Wavelet Transform of Bushing and Grounded Neutral currents", Australian Universities Power System Engineering Conference: AUPEC 2007, Perth, Australia, 2007 .
17. A. Sarikhani, **M. Banejad**, A. Darabi, "Partial Discharge Locating by Means of Separate Sectional Winding Current Transfer Function", Australian Universities Power System Engineering Conference: AUPEC 2007, Perth, Australia, 2007.
18. **M. Banejad**, R. Hooshmand, M. Torabian, "Design of Parallel TCR for Reactive Power Compensation in Electric Arc Furnaces", Australian Universities Power System Engineering Conference: AUPEC 2007, Perth, Australia, 2007.
19. R. Hooshmand, **M. Banejad**, G. Isazadeh, "Management of Power Flow of Transmission Lines in Disturbed Conditions Using UPFC", Australian Universities Power System Engineering Conference: AUPEC 2007, Perth, Australia, 2007.
20. .R. Hooshmand, **M. Banejad**, M. Moazzami, Evaluation the Effects of the Synchronous Generator Circuit Breaker on the Reliability of Busbar Layout in

Power Plant Substation in Deregulated Electricity Market", The 5th International Conference on the European Electricity Market (EEM08), Lisbon, Portugal, May 2008.

21. R. Hooshmand, **M. Banejad**, A.Haj Mohammadi, ".Economic Load and Reserve Dispatch and Emission with Frequency Constraints in Competitive Power Market", The 5th International Conference on the European Electricity Market (EEM08), Lisbon, Portugal, May 2008.
22. M. Davodi, **M. Banejad**, A. Ahmadyfard, M. Oloomi Buygi, "Coherency Identification Using Hierarchical Clustering Method in Power Systems"; The International Conference on Electrical Engineering, Okinawa, Japan, July 2008.
23. M. Khosravi, **M. Banejad**, "Design of SVC controller Based on Fuzzy Logic for Damping of Low Frequency Oscillations in Power Systems": The International Conference on Electrical Engineering, Okinawa, Japan, July 2008.
24. E. Reihani, M. Oloomi Buygi, **M. Banejad**, "Generation Maintenance Scheduling Using Hybrid Evolutionary Approach"; The International Conference on Electrical Engineering, Okinawa, Japan, July 2008.
25. A. Sarikhani, **M. Banejad**, A. Darabi,and N. Nabizadeh, "Feature Extraction of Power Quality Phenomena Using Wavelet and Fourier Transforms"; The International Conference on Electrical Engineering, Okinawa, Japan, July 2008.
    1. A. Sarikhani, A. Darabi, M. Banejad, and N. Nabizadeh, "Fault Locating on High Voltage Transmission Line by Ratio of Energy "; The International Conference on Electrical Engineering, Okinawa, Japan, , July 2008.
26. A. Ataiikhah, A. Dastfan, **M. Banejad**., "Capacitor Optimal Placement in Distribution System Based on Power Quallitym Using Genetic Algorithm", The 25th International Power System Conference (PSC2010), Tehran, Iran, Nov. 2008, (in Persian).
27. A. M. Dejamkhooy, **M. Banejad**, N. Talebi, "Fuzzy Logic Based UPFC Controller for Damping Low Frequency Oscillations of Power Systheems", The 2nd IEEE International Conference on Power and Energy (PECon 08), 1-3 Dec., 2008, Johor Baharu, Malaysia.
28. A. Vahidnia, A. Dastfan, **M. Banejad**, "Determination Of Hiarmonic Load Characteristics in Distribution Networks Of Cities", The 2nd International

Conference on Power Engineering, Energy and Electrical Drives (POWERENG2009), PP. 442-446, 18-20 March 2009, Lisbon, Portugal.

29. S. Sadeghi, **M. Banejad**, "Siting and Sizing of Distributed Generation Resources in Based on Loading Pattern in Distribution Electricity Network", The 23th International Power System Conference (PSC2010), 8-10 Nov. 2008, Tehran, Iran (in Persian).
30. S. Sadeghi **M. Banejad**, "Comparison Study on Optimal Siting And Sizing Distributed Generation and Shunt Capacitor Units For Loss Reduction", The 6th International Conference on Technical and Physical Problems of Power Engineering, , Tabriz Iran, Sep. 2010.

    M. Khosravi, M. Kheirifard, A. Alfi, **M. Banejad**, "Designing Of Mixed H2 And H∞ Controller For Doubly Fed Induction Generator", The 6th International Conference on Technical and Physical Problems of Power Engineering, Tabriz Iran, Sep. 2010.
31. I. G. Grouhi Sardoo, **M. Banejad**, " Optmal Placement of Line Switches for distribution Automation SystemsUsing Genetic Algorithm", The 51th Annual International Scientific Conference of Riga Technical University (Section of Power and Electrical Engineering), Riga. Latvia, 11–15 Oct. 2010.
32. **M. Banejad**, A.M. Dejamkhooy, "Fuzzy Logic Based Power System Stabilizer Optimization Using C-Means Clustering Method", The 9th International Power and Energy Conference (IPEC 2010), PP. 1056-1051, 27-29 Oct. 2010, Singapore.
33. M. Karimi, **M. Banejad**, H. Hassanpour, H., A. Moeini, "Classification of power system faults using ANN classifiers", The 9th International Power and Energy Conference (IPEC 2010) , PP. 505-508, , Singapore, Oct. 2010.
34. A. Sanchooly, **M. Banejad**, A. Drabi, "Detection of single phase to ground shipboard power system" z, International Conference on Computer and Electrical Engineering 4th (ICCEE 2011), PP. 223-227, Singapore, 14-15 Oct. 2011.
35. S. Ramezani, M. Banejad, A. Hajizadeh, "Planning of Vehicle to grid aggregator in the competitive environment", International Power System Conference (PSC2012), Tehran, Iran, Nov. 2012, (in Persian).

36. S. M. Mohiti, **M. Banejad**, A. Darabi, "Under frequency load shedding in microgrids considering load models "', Power Systems Protection and Control Conference (PSPC), Tehran, Iran, Jan. 2012, (in Persian).
37. N. Amin, **M. Banejad**, "Generalized Formulation for Optimal Placement of PMUs considering Single Unit or Single Branch Outage", 21th Iranian conference in Electrical Engineering-ICEE2013, Mashhad, Iran, May 2013.
38. S.Vahedi, **M. Banejad**, M. Assili " Sub-transmission expansion planning using a heuristic method based on clustering", 23rd Iranaian Conference on Electrical Engineering, ICEE 2015, Sharif University of Technology, Tehran, Iran, April 2015, (In Persian)..
39. S.Vahedi, **M. Banejad**, M. Assili, "Optimal location, sizing and allocation of sub-transmission substation using k-means algorithm", IEEE Power and Energy Society General meeting (IEEE PES GM), USA, July 2015.
40. M. Khosravi, **M. Banejad M. Banejad**, H. Toosian Shandiz, "Robust Dynamic State Estimation of Power System Based on Synchronizing Between Conventional Measurement and Phasor Measurement Units", The 11th International Conference of ICTPE-2015, Bucharest, Romania, Sep. 2015.
41. M. Khosravi, **M. Banejad**, H. Tosian Shandiz, "Online Robust State Estimation of Power System by Employing Principal Component Analysis in Unscented Kalman Filter", 11th International Conference of ICTPE-2015, Bucharest, Romania, Sep. 2015.
42. S.Vahedi, **M. Banejad**, M. Assili, "Pseudo-dynamic substation expansion planning using hybrid heuristic and genetic algorithm", The Fourth International Conference on Electric Power and Energy Conversion Systems (EPECS), Sharjah, United Arab of Emirates, Nov. 2015.
43. H. Hosseini Kordkheili, **M. Banejad**, "Modified local voltage controller design of inverter-based DGs in a microgrid", 7th Power Electronics & Drives, Systems and Technologies Conference (PEDSTC), Iran University of Science and Technology (IUST), Tehran, Iran, Feb. 2016.
44. H. Hosseini Kordkheili, **M. Banejad**, Ali Akbarzaddeh Kalat, "Hierarchical modified droop based local voltage control of microgrids considering intermittent harmonically distorted loads", 4th Iranian Conference on Renewable Energy &

Distributed Generation (ICREDG2016) Ferdowsi University of Mashhad, Mashahd, Iran, March 2-3, 2016(indexed in IEEE).

45. M. Kazeminejad, **M. Banejad**, "The effect of load model on the voltage stability index in the unbalanced four wire three phase distribution system in the presence of distributed generation resources", The 4th Iranian Conference on Renewable Energy & Distributed Generation (ICREDG2016) Ferdowsi University of Mashhad, Mashahd, Iran, March 2016, (In Persian).
46. M. Kazeminejad, **M. Banejad**, "Voltage Stability Improvement unbalanced four wire three phase distribution system using optimal placement distributed generation resources", the 4th Iranian Conference on Renewable Energy & Distributed Generation (ICREDG2016) Ferdowsi University of Mashhad, Mashahd, Iran, March 2016, (In Persian).
47. A. Ghasemi, **M. Banejad**, M. Rahimian, "Energy Probabilistic Panning in Microgrids considering the uncertainties in Renewable Energies", The 31th International Power System Conference (PSC2016), Tehran, Iran, Oct. 2016, (in Persian).
48. M. Asharfi, **M. Banejad**, A. Akbarzadeh Kalat, A. Dsatfan , "Improving Reactive Power Sharing in Islanded Microgrids using Virtual Reactive Impedance", The 31th International Power System Conference (PSC2016), Tehran, Iran, Oct. 2016, (in Persian).
49. M. Kazeminejad, **M. Banejad**, “Load effects on voltage stability in distribution network with considering of distributed generation”, 2017 IEEE 58th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), PP. 1-4, Riga, Latvia, 2017.
50. M. Arabahmadi, **M. Banejad**, A. Dastfan, “Hybrid Railway Traction Power Quality Compensator for Power Rating Reduction of Converter”, 9th Annual Power Electronics, Drives Systems and Technologies Conference (PEDSTC),PP. 306-311, Tehran, Iran, 2018.
51. S. M. Hosseini Jebelli, **M. Banejad**, A. Dastfa, A. Alfi, “PV-Based Multiple D-Statcoms Control Using Integral to Droop Line Controller in Low-Voltage Distribution Network", 5th Iranian Conference and Exhibition on Solar Energy (ICESE2018), , Tehran, Iran, August 2018.

52. S. Khanabdal, **M. Banejad**, F. Blaabjerg, N. Hosseinzadeh, "Virtual Flux Droop Control with Constant Switching Frequency for Power Sharing Between Parallel Inverters in Islanded Microgrids", 27th Iranian Conference on Electrical Engineering (ICEE), Yazd, Iran, May 2019.
53. M.R. Mirjafari, **M. Banejad**, H. Mollaahmdian, "Modeling and Small Signal Stability Analysis using Distributed Control Method", 28th Iranian Conference on Electrical Engineering (ICEE 2020), Tabriz, Iran, 2020 (in Persian).
54. R. Arjmandzadeh, **M. Banejad**, A. Akbarzadeh Kalat, "The effect of Virtual Inertia and Damping on Dynamic Stability in Virtual Synchronous Generator ", 28th Iranian Conference on Electrical Engineering (ICEE 2020), Tabriz, Iran, 2020 (in Persian).
55. F. Farrokh, A. Vahedi, H. Torkman, **M. Banejad**, "Design of a Axial Flux-Switching Flux for Torque Ripple Reduction inS Electric Vehicles", 9th Iranian Conference on Renewable Energy & Distributed Generation (ICREDG2022), Feb.2022, Mashhad, Iran.

b. Journal Papers

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1. **M. Banejad**, G. Ledwich, "Quantification of damping contribution from loads", IEE Proceedings - Generation, Transmission & Distribution 152(3):pp. 429-434, 2004.
2. R. Hooshmand, **M. Banejad**, "Fuzzy Logic Application in Fault Diagnosis of Transformers using Dissolved Gases", Journal of Electrical Engineering & Technology, Vol. 3, No. 3, PP. 293-299, 2008.,
3. R. Hooshmand, **M. Banejad**, M. Torabian Isfahani, "A New Time Domain Model for Electric Arc Furnace", Journal of Electrical Engineering, Vol. 59, NO. 4, 2008, PP. 195-202.
4. R. Hooshmand **M. Banejad**, M. M. Azimi "Voltage Sag Mitigation using a New Direct Control in D-Statcom for Distribution Systems, U.P.B. Scientific Bulletin, Series C, Vol. 71, PP. 49-62, Iss. 4, 2009.

5. **M. Banejad**, R. Hooshmand, M. Torabian Isfahani, "Exponential-Hyperbolic Model for Actual Operating Conditions of Three Phase Arc Furnaces", American Journal of Applied Sciences, Proceedings Of World Academy Of Science, Engineering And Technology Volume 17, Dec. 2009, PP. 147-161.
6. I. Goroohi Sardou, **M. Banejad**, R. A. Hooshmand, A. Dastfan, "Modified Shuffled Frog Leaping Algorithm for Optimal Switch Placement in Distribution Automation System using a Multi-objective Fuzzy Approach", IET Proceedings - Generation, Transmission & Distribution (IET_GTD), Vol. 6, No. 6, PP. 493-502, 2012.
7. M. Rasoulpoor, **M. Banejad**, Alireza Ahmadyfard, "Discrimination Between Inrush and Short Circuit Currents in Differential Protection of Power Transformer Based on Correlation Method Using the Wavelet Transform", Iranica Journal of Energy & Environment, Vol. 2, No. 4, PP. 302-312, 2012.
8. A. Moeini, H. Yassami, **M. Banejad**, M. Owladi, A. Bagheri, M. Ghadiri, "Flexible Distributed Generation Planning in Distribution Systems Considering the Plans Assessment", International Review of Electrical Engineering (I.R.E.E.), Vol. 5, No. 6, , PP. 2737-2744. Nov.-Dec. 2010
9. A. Behniafar, **M. Banejad**, "Protection of Marine Equipment Power System for Single Phase to Ground Fault", International Journal of Information and Electronics, Vol. 2, No. 1, PP. 12-15, 2012.
10. M. Haydari; **M. Banejad**; Amin Hahizadeh, "Optimal Placement of Distributed Generation Resources, "International Journal of Power System Operation and Management and Electronics", Vol. 1, No. 2, PP. 1-5, 2012.
11. M. Rasoulpoor, **M. Banejad**, "A Correlation Based Method for Discrimination between Inrush and Short Circuit Currents in Differential Protection of Power Transformer using Discrete Wavelet Transform: Theory, Simulation and Experimental Validation", International Journal of Electrical Power and Energy Systems (Elsevier -IJEPES), Vol. 51, No. 2, PP. 168-177, 2013.
12. M. Haydari; **M. Banejad**; A. Hajizadeh, "Using the Modified Shuffled Frog Leaping Algorithm for Optimal Sizing and Location of Distributed Generation Resources for Reliability Improvement", Journal of Artificial Intelligence & Data Mining, Vol. 1, No. 2, PP. 103-110, 2013.

13. M. Haydari, **M. Banejad,** "Value-Based Distributed Generation Placements for Reliability Criteria Improvement", Journal of Electrical Engineering Technology, Vol. 8, No. 2, PP. 223-229, 2013.
14. H. Ijadi, M. Banejad, "High impedance Fault Detection: Discrete Wavelet Transform and Fuzzy Function Approximation", Journal of AI and Data Mining, Vol. 2 (2), 149-158.
15. A. Behniafar, A. Darabi, **M. Banejad**, M. R. Baghayipour Detecting the Single Line to Ground Short Circuit Fault in the Submarine's Power System Using the Artificial Neural Network", Serbian Journal of Electrical Engineering, Vol 10 No 3 (2013).
16. F. Abbasi, **M. Banejad**, R. Hooshmand , F. HasanzadehReliability "Ccalculation Algorithm in the Reconfiguration Problem in the Presence of Distributed Generation Resources", Computational Intelligence in Electrical Engineering, 2015, Vol. 6 (1), PP. 39-48, (in Persian).
17. M. Khosravi, **M. Banejad**, H. T. Shandiz, "Forecast Aided Measurements Data Synchronization in Robust Power System State Estimation ", IET Generation, Transmission & Distribution Volume 10, Issue 10, 07 July 2016, p. 2379 – 2388, No. 10, PP. 2379-2388, 2016.
18. M. Khosravi, M. Banejad, H. T. Shandiz, "Robust state estimation in power systems using pre-filtering measurement data, Journal of Artificial Intelligence & Data Mining, Vol. 5, Issue 1, March 2017, Pages 111-125.
19. M. Khosravi, **M. Banejad**, H. T. Shandiz, "Robust Dynamic State Estimation of Power Ssystem using Imperialist Competitive Algorithm", Canadian Journal of Electrical and Computer Engineering (Sponsored by IEEE Canada) , Volume 41, Issue 2, PP. 64-76, 2108.
20. A. Ghasemi, **M. Banejad**, M. Rahimian, "Integrated Energy Scheduling under Uncertainty in a Micro-energy grid", IET Generation, Transmission & Distribution, Volume 12, Issue 12, No. 12, PP. 2887-2896, 2018.
21. A. Ghasemi, **M. Banejad**, M. Rahimian, " Energy Scheduling in a Microgrid with Renewables and Electric Vehicles", Iranian Electric Industry Journal of Quality and Productivity (IEIJQP), Volume 12, Issue 6, No. 12, PP. 46-55, 2018 (in Persian).

22. H. Hosseini Kordkheili, **M. Banejad,** Ali Akbarzadeh Kalat, E. Pouresmaeil, J. PS Catalão, “Direct-Lyapunov-Based Control Scheme for Voltage Regulation in a Three-Phase Islanded Microgrid with Renewable Energy Sources”, Energies,Volume 11, Issue 5, PP. 1-18, 2018.
23. H. Hosseini Kordkheili, **M. Banejad**, Ali Akbarzadeh Kalat, J M. Guerrero, “Primary Control Design Based on Capacity Curves for Inverter-based Microgrids”, Electric Power Components and Systems, PP. 1147-1159, Jan 2019.
24. H. Hosseini Kordkheili, **M. Banejad**, Ali Akbarzadeh Kalat, "Improved Hierarchical Multi-loop Voltage Control based on droop control for Inverter-based DG Units in an Islanded Microgrid", Computational Intelligence in Electrical Engineering, 2017, Volume 8, Issue 2, PP. 45-62, (in Persian).
25. M Kazeminejad, **M Banejad**, U. Annakkage, N Hosseinzadeh, "The Effect of High Penetration Level of Distributed Generation Sources on Voltage Stability Analysis in Unbalanced Distribution Systems Considering Load Model", Journal of Operation and Automation in Power Engineering, Vol 7, Issue 2, Summer and Autumn 2019, PP. 196-205.
26. S. M. Hosseini Jebelli; **M. Banejad**; A. Dastfan; A. Alfi, "PV-Based Multiple D-Statcoms Control in Unbalance Distribution Network", Journal of Solar Energy Research, Article 7, Volume 3, Issue 4, Autumn 2018, PP. 313-323.
27. M. Kazeminejad, **M. Banejad,** N. Hosseinzadeh, U. Annakkage, "Load Pattern based Voltage Stability Analysis in Unbalanced Distribution Networks Considering Maximum Penetration Level of Distributed Generation", IET Renewable Power Generation 14 (13), 2517-2525, 2020.
28. M Kazeminejad, **M Banejad**, “DG Allocation in Distribution Networks with Considering of Voltage Stability Improvement and Loss Reduction”, Journal of Advances in Electrical and Electronic Engineering, Vol. 18, No. 4, pp. 217-227.
29. S. Vahedi, **M. Banejad**, M. Assili, "GIS-based Substation Expansion Planning", IEEE Systems Journal, March 2021, Vol. 18, No. 1, pp. 959-970.
30. S. M. Hosseini Jebelli, **M. Banejad** M, A. Das tfan A, A. Alfi A. "Control Stability Evaluation of Multiple Distribution Static Compensators based on Optimal Coefficients using Salp Swarm Algorithm", Iranian Electric Industry Journal of Quality and Productivity (ieijqp). 2020; 9 (4) , pp. 50-61.

31. A. Ghasemi, **M. Banejad**, M. Rahimian, M. Zarif," Investigation of the Micro Energy Grid Operation under Energy Price Uncertainty with Inclusion of Electric vehicles", Journal of Sustainable Operations and Computers, (Elsevier), 2021, pp. 12-17.
32. F. Shourkeshti, M. Banejad, M. Hoseintabar Marzebali, A. Akbarzadeh Kalat, "Performance Analysis of a DC Microgrid as a Virtual Synchronous Machine in Grid Frequency and Voltage Control", Journal of Computational Intelligence in Electrical Engineering, March 2021 (in Persian).
33. S. Khanabdal, **M. Banejad,** F. Blaabjergb, N. Hosseinzadeh, "A Novel Control Strategy of an Islanded Microgrid Based on Virtual Flux Droop Control and Direct Flux Fuzzy Control", International Journal of Engineering (IJE), Volume 34, Issue 5, Pages 1274-1283, May 2021.
34. M. Arabahmadi, **M. Banejad**, A. Dastfan, "Hybrid Compensation Method for Traction Power Quality Compensators in Electrified Railway Power Supply System", Global Energy Interconnection, Volume 4, Issue 2, Pages 158-168, April 2021.
35. S. Khanabdal, **M. Banejad**, F. Blaabjergb, N. Hosseinzadeh, "A Novel Power Sharing Strategy Based on Virtual Flux Droop and Model Predictive Control for Islanded Low-Voltage AC Microgrids", Energies 2021, 14, 4893.
36. S. Khanabdal, **M. Banejad**, F. Blaabjergb, N. Hosseinzadeh, "Adaptive Virtual Flux Droop Control Based on Virtual Impedance in Islanded AC Microgrids. IEEE Journal of Emerging and Selected Topics in Power Electronics, Volume 10, Issue: 1, Feb. 2022.
37. M. Kazeminejad, **M. Banejad**, N. Hosseinzadeh, " Three-phase Voltage Stability Analysis in an Integrated Transmission-Distribution Network", Electric Power Systems Research, Volume 208, July 2022.
38. M. Asharfi, **M. Banejad**, A. Akbarzadeh Kalat, "Accurate Reactive Power Sharing Using Modified Droop Method Based on Virtual Impedance Control in the Islanded Microgrids" recently accepted for Journal of Computational Intelligence in Electrical Engineering (in Persian).
39. M. R, Mirjafari, **M. Banejad**, H. Mollaahmadian, A. Sedehi, F. Blaabjerg, "Robust Stability Analysis of a Novel Droop-based Distributed Control Scheme

for Islanded Operation of DC Microgrids", Accepted for publication in IET Renewable Power Generation, August 2022.

40. F Farrokh, A Vahedi, H. Torkaman, **M. Banejad**, "Design and Comparison of Dual-stator Axial-field Flux-Switching Permanent Magnet Motors for Electric Vehicle Application", IET Electrical Systems in Transportation 13 (2), e12074.
41. F. R. Tatari, **M. Banejad**, A. A. Kalat, "A Move Blocking Based Direct Voltage Model Predictive Control to Enhance the Dynamic Performance of DC Microgrids Containing Constant Power Loads", IET Renewable Power Generation, 2023.
42. M. Shabdin, **M. Banejad**, Y. Danchi, "Passive Islanding Detection Using Adaptive Threshold Based on Instantaneous Frequency Droop", ", Journal of Computational Intelligence in Electrical Engineering, , Vol 14, Issue 3, 2023.
43. M. Mahdavi, **M. Banejad**, H. Gholizadeh Narm, H. Aminzadeh, "Consensus Based Distributed Secondary Control for Current Sharing And Voltage Restoration Considering Local Loads and Constant Power Loads in Dc Microgrids", International Journal of Modelling and Simulation, Vol 52, Issue 7, July 2024.
44. R. Arjmandzadeh, **M. Banejad**, A. Akbarzadeh Kalat, "Improving the Performance of a VSG in the Distorted Grid Using Third-Order Generalized Integrator", Journal of Applied Research in Electrical Engineering, Jan. 2024**.**
45. F. R. Tatari, **M. Banejad**, A. A. Akbarzadeh Kalat, G. Iwanski, "A Long-Horizon Move-Blocking Based Direct Power Model Predictive Control for Dynamic Enhancement of DC Microgrids", Ain Shams Engineering Journal, Vol. 15, Issue 4, July 2024.
46. F. Farrokh, A. Vahedi, H. Torkaman, **M. Banejad**, V. Zamani Faradonbeh, "A 2D Hybrid Analytical Electromagnetic Model Of The Dual-Stator Axial-Field Flux-Switching Permanent Magnet Motor", IET Electric Power Applications, Vol 18, Issue 2, Feb. 2024.
47. F. Farrokh, A. Vahedi, H. Torkaman, **M. Banejad**, V. Zamani Faradonbeh, "Fast 2-D analytical model for axial-field flux-switching bar-permanent magnet motor", IEEE Transactions on Magnetics, Vol 60, Issue 18, June 2024.

48. F. Farrokh, A. Vahedi, H. Torkaman, **M. Banejad**, A. J. Mahdi, M. J. Mohammed, “Demagnetization and Fault-Tolerance Analysis in Dual-Stator Axial-Field Flux-Switching Permanent Magnet Motor”, IEEE Access, July 2024.
49. M. Mahdavi, **M. Banejad**, H. Gholizadeh Narm, H. Aminzadeh, “Current Sharing And Voltage Restoration Based On Determination Of Transmission Line Resistance Considering Constant Power Loads In Direct Current Microgrids”, International Journal of Circuit Theory and Applications, Vol 52, Issue 7, July 2024.

Supervised Master Theses

1. S. Shademani, "Effects Wheeling Transactions on Local Marginal prices", Oct. 2006, (I acted as the co-supervisor)
2. A. A. Ghanbari, " Optimization and management of loads using of leader-follower theory", Jan. 2007 (I acted as the advisor).
3. A. Ataiikhah, "Optimal Capacitor placement in Dist. Net. Based on Power Quality", July 2007 (I acted as the co-supervisor).
4. 13- H. Ghomi, "Transmission Pricing for Electrical Transmission network of Mazandaran Province", July 2007 (I acted as the co-supervisor).
5. H. Saljoughi, "Design and simulation of a Digital Controller for Liquid Level Control in Power Plants by Adaptive Method with Optimum Performance", 2007, (I acted as the co-supervisor).
6. Moez Davoodi, "Identification of Coherent Generators Based on Fuzzy C Means Clustering ", July 2008.
7. E. Rayhani, "Maintenance Scheduling of Generating Units Using Hybrid Evolutionary Approach", July 2008.
8. F. Babaii, "Transmission Expansion for a Local Network using the Probabilistic Load Flow", Sep. 2008, (I acted as the co-supervisor).
9. A. Sarikhani, "Analysis of Partial Discharge of Power Transformer", July 2008, (I acted as the co-supervisor).
10. A. Vahidnia, "Optimal placement for Reliability Improvement in MV Distribution networks with Distributed Generation", June 2009.

11. S. M. Farashbashi Astaneh, "Optimal Placement and Sizing of DG for Loss Reduction, Voltage Profile Improvement and Voltage Sag Mitigation", 2009 (I acted as the advisor).
12. A. M. Fsakhooy, "Design And Simulation Of Fuzzy Logic Based UPFC Controller To Damp Low Frequency Oscillations in Power System", July 2009.
13. R. Nourozi Zadeh, "Design and Simulation of UPFC Using Matrix Converters", Sep. 2009, (I acted as the Advisor).
14. M. Karimi, "Parallel Fault Classification Using Neural Network", July 2010.
15. H. Ghasemi, "Analysis the Effect of Power Swing on the performance of Distance Relay in Power System", Jan. 2010.
16. M. Owladi, "Optimal Placement of Distribution Substation and Feeders Considering DG", June 2010.
17. I. Goroohi Sardou, "Optimal placement of Switches and Distributed Generations. Distribution Systems using Fuzzy Combination of Genetic Algorithm", January 2011.
18. O. Ghods, " Use of wind power plant in power system considering stochastic security criterion ", July 2011.
19. M. Eskanadir Nassaab, "Optimal Placement of SVC in order to Increase Voltage Stability Based on Normal Form Theory", January 2011.
20. S. Sadeghi, "Determination of Location and Size Of Distributed Generation Resources in Distribution Network in Order to Reduce Losses Using PSO", January 2011.
21. H. R. Ghafouri Gharib, "Harmonic Sources Detection in Distribution System With Considering Influence of Capacitor Banks", 2011, (I acted as the advisor).
22. M. Rasoulpoor, "The effect of Inrush Current on Differential Protection in Power Transformer", Oct. 2012.
23. N. Amin, "The Optimal Placement of Phasor Measurement Units (PMU) in Power Systems", July 2011.
24. A. Behniafar, "Detection of Single Phase to Ground Fault in Shipboard Power System", Oct. 2011.
25. M. Haydari, "The Optimal Placement of DG"s Based on Reliability Indices", Dec. 2011.
26. S. Ramezani, "Frequency Control using Vehicle to Grid", Dec., 2012.
27. S. M. Mohiti, "Load Shedding in Autonomous Microgrids" Dec. 2012.
28. M. Bakhshi Hatkeluee "Protection of Distribution Networks in the Presence of Distributed Generation Resources", Sept. 2013.
29. M. Mazaazmi Goodarzzi," Load Forecasting in Power systems using Neural Network", Dec. 2014.

30. M. Keikhavandi, "Optimization Coordination of Plug-in Electric Vehicles Charging in Residential Grid in Smart Grid to with the aim of Reduction Power Losses", 2013 (I acted as the Advisor).
31. F. Abbasi, "Reconfiguration in Distribution Network in Presence of Distributed Generation Resources with the Aim of Reliability Improvement", Sept. 2013.
32. H. Ijadi, "High Impedance Faultfata Detection in Distribution Electricity NetworK Using Discrete Wavelet Transform", Dec. 2014.
33. S. M. Rasekhi, Capacitor " Optimal Capacitor Placement in Distribution system in Harmonic Environment". Dec. 2014.
34. Moslem Mamizadeh, "Investigation on effects of DG sources on load modeling from the view point of transmission network", 2014, (I acted as the adviser).
35. M. Moazami Goudarzi, "Short Term Load Forecasting Using Artificial Neural Networks ", Jan 2014.
36. M. Kazemi Malek Mahomootdi, "The effect of reactive power in power systems reliability", Jan. 2015.
37. S. Vahedi, " Multi-stage Sub-trasmission Substation Expansion Planning Using Load Clustering Method", Sep.2015.
38. B. Khakbaz, "Investigation of the Small Signal Stability of Microgrids", Sep.2015.
39. S. M. Alizadeh, "Frequency Control Using Demand Using Demand Response", Jan. 2015.
40. M. Haydari Kang, "Distribution Expansion Planning Considering Distributed Generations", Sep. 2016.
41. H. Nadimi, "Droop based Voltage Control in Autonomous Microgrids", Feb. 2016.
42. M. Dadsetan, “Investigation the Possibility of using Renewable Energies in Remote Areas”, Feb. 2017.
43. A. Rasooli, “The Effect of Wind Turbines on Low Frequency Oscillations in Power Systems”, Feb 2017.
44. M. Mozafari Khakestar, “Load Frequency Control in Power Ssytems Based Model Predictive Control”, Feb 2017.
45. S. Askari, “Load Flow in Distribution Network in the Presence of Distributed Energy Resources Considering Load Models”, Feb. 2018.
46. M. Arabahmadi, “Negative Sequence Compensation in Electrified Railway Tractions” Jan 2017.
47. M. Asharafi, ‘The Effect of Virtual Impedance on Power Sharing in Microgrids”, Feb. 2107.

48. B. Abedini, "The effect of distributed generation on the conservation voltage reduction considering the load model", July 2017, (I acted as the co-supervisor).
49. M. Shobeiri, “Load Frequency Control in a Microgrid Including Microturbine, Fuel Cell and Electric Vehicles”, Feb. 2017, (I acted the advisor).
50. M. Shahri, “Use of Droop Characteristics in Load Sharing in DC Microgrids”, July 2018.
51. M. M. Movahedi Monfared, "Design, Simulation and Construction of a Line Impedance Stabilization Network (LISN)", July 2018, (I acted as the co-supervisor).
52. M. Abdollahzadeh" Small Signal Stability Improvement in DC MicroGrids", October 2019.
53. F. Shourkeshti, “Performance Analysis of a DC Microgrids as a Virtual Synchronous Machine in Operation with an AC Microgrid”, July 2020.
54. M. Mohammadreza Mirjafari, “The Application of Distributed Control Method for Power Sharing Improvement in a DC Microgrid”, September 2020.
55. M. Nikkhah, “Considering Droop Optimization for Microgrid Dynamic Performance Improvement”, September 2020.
56. S. Iranmanesh, “Distribution Static Compensator Allocation in order to improvement the Power Quality in Distribution Networks”, Feb. 2022.
57. M. Mahdavi, “Power Sharing and Voltage Restoration in DC Microgrids Based on Secondary Control”, Sep. 2022.
58. F. R. Tatari. “Dynamic Performance Improvement of DC Microgrids Using Model Predictive Control; June 2023.
59. A. Ghoizadeh, "Improving the Utilization of Wind Turbine Resources Connected to the Microgrid Using Energy Storage Resources", Feb 2024.
60. R. Oroui, "Improving Dynamic Stability of DC Microgrid By Means of Virtual Inertia Control", Feb 2024.
61. A. Ghahremani, "Load Sharing in DC Microgrids Using Adaptive Droop Characteristic", Feb 2024.
62. . A. Mahnani, “Optimal Operation of Power Sharing in Droop-based DC Microgrid”, Feb 2025.

Supervised Ph.D. Theses

63. Mohsen Khosravi, “Robust state Estimation of Power Systems (September 2016).
64. Seyed Hadi Hosseini Kord Khili, “Energy Management in Smart Grids in the Presence of Load Uncertainity, (July 2018).

65. Abolfazl Ghasemi, “Energy Management in Smart Grids in the Presence of Electric Vehicles”. (September 2018).
66. Mohammad Kazeminejad, "Voltage Stability Assessment with Considering of Load Modeling ", Jan. 2021.
67. Saheb Khanabadl, " Active and Reactive Power Control Based on Droop Characteristic in an Islanded Microgrid", Oct. 2021.
68. Seyed Mahdi Hossieni Jebelli, “Design and Evaluation of Control Performance of Multiple DStatcom for Unbalanced Conditions in Distribution Networks”, Dec. 2022.
69. F. Farrokh "Optimal Design of Axial Field Flux-Switching Motor with Maximum Torque Density for Electric Vehicle Applications", Feb. 2024. (I acted as the co-supervisor).

Academic Publication

1. Lecture Note: Electric Circuit Measurement Laboratory, Shahrood University of Technology, 1995 (I was co-author)
2. Lecture Note: Foundation of Electrical Engineering, Shahrood University of Technology, 1998,
3. Lecture Note Chapter: Eltectic Machinery, Murdoch University, 2003: (I was the co-author).
4. Book Chapter: Voltage stability of microgrids, IET Press, 2019, (I was co-author).
5. Book: Power System reliability (in Persian), University of Isfahan (to be published), (I am the co-author.)

RELEVANT PROFESSIONAL EXPERIENCE

Part time computing advisor at computer center at Tarbiat Modarress Univerity in multi-disciplinary area, Tehran, Iran, 1992-1994

1. Part time Engineer in time consultant engineer in Shafab Engineering Company, Tehran, Iran, 1993-94, with the following duties

- Design of low voltage distribution panels
- Design of indoor and outdoor illumination for residential and commercial building

3. Advisory Academic member of Iranian Research Organization for Science and Technology, Iran, 1996-1999.

5. Referee of some research projects at Shahrood University, Iran, 1997.

6. Seminar presentation with the title of "Voltage Collapse in Power System", Shahrood University, Iran, 1995.

7. Seminar Presentation with the title of "Load Modeling in Power System", Shahrood University, Iran, 1999.

8. Co-researcher in some universities projects in data analysis by means of SPSS and EXCEL software.

9. Part time research Fellow in the field of Load Modeling and Distributed Generation, Queensland University of Technology, 2004-2005.

10. – Manager of Relation Office Between University and Industry of Shahrood University of Technology 2006-2008.

11. Postdoctoral Research Fellow in the field of D-statcom Application to Support the voltage of Distribution Electricity Network., Queensland University of Technology, Australia, Dec. 2008- Feb. 2009.

12. Research Fellowship in the Area of Battery Application in Distribution Systems in Unbalanced situations, Queensland University of Technology, Australia, July. August. 2014.

13. Research Fellowship in the area of Distributed State Estimation in Distribution Systems in Distribution Electricity Networks, Queensland University of Technology, Australia, July. August 2017.

14. Referee of international journals since 2005.

15. -Referee of master and PhD theses since 2005.

16. Member of Audit Board of Shahrood University of Technology (since March 2023) appointed by the Ministry of Science and Research and Technology of Iran.

17. University wide selected distinguished researcher in 2024.

LICENSES AND CERTIFICATIONS

1. Registered first class engineer of Engineering Disciplinary Organization of Iran, 1994.
2. Certificate in teaching at Iranian universities from the ministry of Culture and Higher Education of Iran, 1994.
3. Certificate of passing the competency test of Annual Faculty of Science Health and Safety Induction program 1 & 2, 4/10/2001, QUT, Brisbane, Australia.

INTERESTED AREA

1. Teaching

a.) Undergraduate Level

- Electric circuits
- Power systems
- Electric machines
- Design of electric installations

b.) Postgraduate Level

- Power System Dynamics (I and II)
- Power System Reliability
- Reactive Power Control
- Renewable energies and Distributed Generation

2. Research

a.) Power Systems

- Stability
- Planning
- State Estimation

b.) Distribution Systems

- DFACTS
- Planning and operation

*Demand response

c.) Microgirds

- Voltage control, load balancing,
- Power sharing among the multiple DGs
- Small signal stability
- Energy management
- Droop based voltage and frequency control

*Damping Enhancement

Please note: The power electronic applications including experimental setup are involved in some parts of Category 3.

INTERESTED AREA

Currently, there are several master and one students under my supervision, working in the following areas (Some of them working practical DC and AC microgrids:

a) Directions of my current PhD Students

*Microgrid Stability

*Droop Control in Balanced and unbalanced three phase system in AC microgrids

* Expansion planning

b) Directions of my current master students

*Droop Control in DC Microgrids

* Stability improvements using virtual impedance in the DC microgrids.

* Virtual inertia and damping control in DC microgrids

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