

**Dr.N.Rajasekar**

Professor

School of Electrical Engineering

Vellore Institute of Technology

Vellore – 632014

Mobile: 9952362301

eMail ID: [natarajanrajasekar@gmail.com](mailto:natarajanrajasekar@gmail.com)**Publication Details:**

- [1] Dharshan B.G, **Dr. Rajasekar N**, Srinivasa Sankarkumar R, “Adaptability Analysis of Particle Swarm Optimization Variants in Maximum Power Tracking for Solar PV Systems”, Intelligent Computing Techniques for Smart Energy Systems, Proceedings of ICTSES 2018, Springer Singapore 2020, pp. 397 – 409
- [2] J. Prasanth Ram and **N. Rajasekar**, “Investigation of Bacterial Foraging Algorithm Applied for PV Parameter Estimation, Selective Harmonic Elimination in Inverters and Optimal Power Flow for Stability”, Nature-Inspired Methods for Metaheuristics Optimization, Modeling and Optimization in Science and Technologies 16, Springer Nature Switzerland AG 2020, pp. 135 – 167.
- [3] Malisetty Siva Sai Nihanth, **N. Rajasekar**, Dhanup. S. Pillai and J. Prasanth Ram, “A New Array Reconfiguration Scheme for Solar PV Systems Under Partial Shading Conditions”, Intelligent Computing Techniques for Smart Energy Systems, Proceedings of ICTSES 2018, Published in Springer Singapore, pp.387 – 396
- [4] Yousri D, Elaziz M.A, Razaee A, Merchaoui M, Rana K.P.S, Babu T.S, Oliva D, Ram P, **Dr. Rajasekar N**, Alam D.F, Eteiba M.B, Kler D, Goswami Y, Kumar V, “Important notes on parameter estimation of solar photovoltaic cell”, Energy Conversion and Management, vol. 201, No. 1, 1 December 2019, pp.112 - 131
- [5] Nihanth M.S.S, Ram J.P, Pillai D.S, Ghias A.M.Y.M, Garg A, **Dr. Rajasekar N**, “Enhanced power production in PV arrays using a new skyscraper puzzle based one-time reconfiguration procedure under partial shade conditions (PSCs)”, Solar Energy, Vol. 194, Dec 2019, pp.209-224
- [6] Pillai D.S, Ram J.P, **Dr. Rajasekar N**, Mahmud A, Yang Y, Blaabjerg F., “Extended analysis on Line-Line and Line-Ground faults in PV arrays and a compatibility study on latest NEC protection standards”, Energy Conversion and Management, Volume 196, 15 September 2019, Pages 988-1001.
- [7] Priya K, **Dr. Rajasekar N**, “Application of flower pollination algorithm for enhanced proton exchange membrane fuel cell modelling”, International Journal of Hydrogen Energy, Volume 44, Issue 33, 5 July 2019, Pages 18438-18449.

- [8] Pillai D.S, **Dr. Rajasekar N**, Ram J.P, Chinnaiyan V.K., “Design and testing of two phase array reconfiguration procedure for maximizing power in solar PV systems under partial shade conditions (PSC)”, *Energy Conversion and Management*, Volume 178, 15 December 2018, Pages 92-110.
- [9] Priya K, Dr. Sathishkumar K, **Dr. Rajasekar N**, “A comprehensive review on parameter estimation techniques for Proton Exchange Membrane fuel cell modelling”, *Renewable and Sustainable Energy reviews*, Volume 93, October 2018, Pages 121-144.
- [10] Dhanalakshmi B, **Dr. Rajasekar N**, “A novel Competence Square based PV array reconfiguration technique for solar PV maximum power extraction”, *Energy Conversion and Management*, Volume 174, 15 October 2018, Pages 897-912
- [11] Pillai D.S, Prasanth Ram J, Siva Sai Nihanth M, **Dr. Rajasekar N**, “A simple, sensorless and fixed reconfiguration scheme for maximum power enhancement in PV systems”, *Energy Conversion and Management*, Volume 172, 15 September 2018, Pages 402-417.
- [12] Pillai D.S, **Dr. Rajasekar N**, “Metaheuristic algorithms for PV parameter identification: A comprehensive review with an application to threshold setting for fault detection in PV systems”, *Renewable and Sustainable Energy Reviews*, Volume 82, Part 3, February 2018, Pages 3503-3525
- [13] Ram J.P, Manghani H, Pillai D.S, Babu T.S, Miyatake M, **Dr. Rajasekar N**, “Analysis on solar PV emulators: A review”, *Renewable and Sustainable Energy Reviews*, Volume 81, Part 1, January 2018, Pages 149-160
- [14] Dhanalakshmi B, **Dr. Rajasekar N**, “Dominance square based array reconfiguration scheme for power loss reduction in solar PhotoVoltaic (PV) systems”, *Energy Conversion and Management*, Volume 156, 15 January 2018, Pages 84-102
- [15] Prasanth Ram J, **Dr. Rajasekar N**, “A Novel Flower Pollination Based Global Maximum Power Point Method for Solar Maximum Power Point Tracking”, *IEEE Transactions on Power Electronics*, Volume: 32, Issue: 11, Nov. 2017, pp. 8486 – 8499.
- [16] Azharuddin Shamshuddin M, Babu T.S, Dragicevic T, Miyatake M, **Dr. Rajasekar N**, “Priority-based Energy Management Technique for Integration of Solar PV, Battery, and Fuel Cell Systems in an Autonomous DC Microgrid”, *Electric Power Components and Systems*, Vol.45, No. 17, 2017, pp. 1881-1891

- [17] Prasanth Ram J, **Dr. Rajasekar N**, “A new robust, mutated and fast tracking LPSO method for solar PV maximum power point tracking under partial shaded conditions”, *Applied Energy*, Volume 201, 1 September 2017, Pages 45-59
- [18] Kumar P, Kannaiah S.K, Choudhury S.R, **Dr. Rajasekar N**, “Genetic Algorithm-based Modeling of PEM Fuel Cells Suitable for Integration in DC Microgrids”, *Electric Power Components and Systems*”, Vol.45, No.10, pp. 1152-1160
- [19] Pillai D.S, Sahoo B, Ram J.P, Laudani A, **Dr. Rajasekar N**, Dr. Sudhakar N, “Modelling of Organic Photovoltaic Cells Based on an Improved Reverse Double Diode Model”, *Energy Procedia*, Volume 117, June 2017, Pages 1054-1061.
- [20] Rajan N.A, Shrikant K.D, Dhanalakshmi B, **Dr. Rajasekar N**, Solar PV array reconfiguration using the concept of Standard deviation and Genetic Algorithm”, *Energy Procedia*, Volume 117, June 2017, Pages 1062-1069.
- [21] Gavhane P.S, Krishnamurthy S, Dixit R, Ram J.P, **Dr. Rajasekar N**, “EL-PSO based MPPT for Solar PV under Partial Shaded Condition”, *Energy Procedia*, Volume 117, June 2017, Pages 1047-1053.
- [22] Ram J.P, **Dr. Rajasekar N**, Miyatake M., “Design and overview of maximum power point tracking techniques in wind and solar photovoltaic systems: A review”, *Renewable and Sustainable Energy Reviews*, Volume 73, June 2017, Pages 1138-1159
- [23] Ram J.P, Babu T.S, Dragicevic T, **Dr. Rajasekar N**, “A new hybrid bee pollinator flower pollination algorithm for solar PV parameter estimation”, *Energy Conversion and Management*, Volume 135, 1 March 2017, Pages 463-476.
- [24] Prasanth Ram J, **Dr. Rajasekar N**, “A new global maximum power point tracking technique for solar photovoltaic (PV) system under partial shading conditions (PSC)”, *Energy*, Volume 118, 1 January 2017, Pages 512-525.
- [25] Sudhakar Babu T, Prasanth Ram J, Sangeetha K, Laudani A, **Dr. Rajasekar N**, “Parameter extraction of two diode solar PV model using Fireworks algorithm”, *Solar Energy*, Volume 140, 15 December 2016, Pages 265-276
- [26] Sangeetha K, Sudhakar Babu T, Dr. Sudhakar N, **Dr. Rajasekar N**, “Modeling, analysis and design of efficient maximum power extraction method for solar PV system”, *Sustainable Energy Technologies and Assessments*, Volume 15, June 2016, Pages 60-70
- [27] Azharuddin M, Babu T.S, Bilakanti N, **Dr. Rajasekar N**, “A Nearly Accurate Solar Photovoltaic Emulator Using a dSPACE Controller for Real-time Control”, *Electric Power Components and Systems*, vol.44, No.7, 2016, pp.774-782

- [28] Sudhakar Babu T, Sangeetha K, **Dr. Rajasekar N**, “Voltage band based improved particle swarm optimization technique for maximum power point tracking in solar photovoltaic system”, Journal of Renewable and Sustainable Energy, Vol.8, No.1, Jan 2016.
- [29] Sudhakar Babu T, Mohammed Azharuddin S, Dr. Nishant Tiwari, **Dr. Rajasekar N**, “A dynamic photo voltaic emulator using dSPACE controller with high accuracy solar photo voltaic characteristics”, Journal of Renewable and Sustainable Energy, Vol.8, No.1, Jan 2016.
- [30] Priya K, Sudhakar Babu T, Dr. Balasubramanian V, Dr. Sathishkumar K, **Dr. Rajasekar N**, “A novel approach for fuel cell parameter estimation using simple Genetic Algorithm”, Sustainable Energy Technologies and Assessments, Volume 12, December 2015, Pages 46-52.
- [31] Sudhakar Babu T, **Dr. Rajasekar N**, Sangeetha K., “Modified Particle Swarm Optimization technique based Maximum Power Point Tracking for uniform and under partial shading condition”, Applied Soft Computing, Volume 34, September 2015, Pages 613-624
- [32] Maheswaran D, **Dr. Rajasekar N**, Priya K, Ashok Kumar L, “Algorithm and Genetic Algorithm for Selective Voltage Harmonic Elimination in PWM Inverter”, Journal of Electrical Engineering and Technology, Volume 10 Issue 3, 2015, pp. .944-951
- [33] Deshkar S.N, Dhale S.B, Mukherjee J.S, Babu T.S, **Dr. Rajasekar N**, “Solar PV array reconfiguration under partial shading conditions for maximum power extraction using genetic algorithm”, Renewable and Sustainable Energy Reviews, Volume 43, March 2015, Pages 102-110
- [34] Babu, T. Sudhakar, Sudhakar Babu T, Priya K, Maheswaran D, Dr. Sathishkumar K, **Dr. Rajasekar N**, “Selective voltage harmonic elimination in PWM inverter using bacterial foraging algorithm”, Swarm and Evolutionary Computation, “Volume 20, February 2015, Pages 74-81