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**Academic Qualification-** Ph D (Engg.), Sambalpur University 2001

**Research Area-** Power System

**Experience**- Teaching and research 24 years

**Award**- Fellow, Indian National Academy of Engineering

Fellow Institution of Engineers, India,

Senior Member IEEE, USA,

Young Engineer Award- Indian National Academy of Engineering

## Important Publications (Journals)


1. S. Gajare and A. K. Pradhan, “An accurate fault location method for multi-circuit series compensated transmission lines,” *IEEE Trans. on Power System,* Early Access, 2016.
2. P.K. Nayak. A K. Pradhan and P. Bajpai, “A three-terminal line protection scheme immune to power swing” *IEEE Trans. on Power Delivery,* Early Access, 2016.
3. P. Jena and A. K. Pradhan, “Reducing current transformer saturation effect in phasor measurement unit,” *Accepted in International Transactions on Electrical Energy Systems,* 2016.
4. R. Mohanty, U. S. Mukha Balaji and A. K. Pradhan , "An accurate non-iterative fault location technique for low voltage DC microgrid, " *IEEE Trans. on Power Delivery* , vol. 31, no. . 2, pp 475-481, 2016.
5. S. Gajare, A. K. Pradhan and S,. Brahma, "Model verification of fixed series compensation devices using synchronized data, " *IEEE Trans. on Power Delivery* , vol.31,no.1,pp174-181, 2016.
6. P. Kundu and A. K. Pradhan, "Enhanced protection security using system integrity protection scheme (SIPS), " *IEEE Trans. on Power Delivery* ,vol. 31, no1, pp.228-235, 2016.
7. J. G. Rao and A. K. Pradhan, "Accurate phasor estimation during power swing," *IEEE Trans. on Power Delivery*, vol.31, no.1, pp.130-137, 2016.
8. P. Jena and A. K. Pradhan, “Directional relaying during secondary arc using negative sequence superimposed technique,” *IEEE Trans. on Power Delivery,* vol.30, no.3, pp. 1626 – 1628, 2015.
9. S. Sarangi, and A. K. Pradhan, “Adaptive direct underreaching transfer trip protection scheme for three-terminal line” *IEEE Trans. on Power Delivery,* vol. 30, no.6, pp. 2383 – 2391, 2015.
10. P. Kundu,and A. K. Pradhan, “Online identification of protection element failure using wide area measurements”, *IET Proc.-Gen., Trans. & Distribution,* vol. 9, no.2, pp. 115 – 123, *2015.*
11. J. Ganeswara Rao and A. K. Pradhan, “Power-swing detection using moving window averaging of current signals,” *IEEE Trans. on Power Delivery, ,* vol.30, no1.,pp.368-376, 2015.
12. P.K. Nayak. A K. Pradhan and P. Bajpai, “Secured zone 3 protection during stressed condition,” *IEEE Trans. on Power Delivery,* vol.30, no1.,pp89-96,2015.
13. P. Kundu,and A. K. Pradhan, Wide area measurement based protection support during power swing, *Electrical Power and Energy Systems,* vol. 63, pp 546–554, 2014.
14. P.K. Nayak. A K. Pradhan and P. Bajpai, “Wide-area measurement-based backup protection for power network with series compensation,” *IEEE Trans. on Power Delivery,* vol.29, no.24, pp. 1970-1977, 2014.
15. P. Kundu,and A. K. Pradhan,”Synchrophasor assisted zone-3 operation,” *IEEE Trans. on Power Delivery,* vol.29, no.22, pp. 660-667, 2014.
16. S. Sarangi, and A. K. Pradhan, “Synchronised data-based adaptive backup protection for series compensated line , *IET Proc.-Gen., Trans. & Distribution* , vol. 8, no. 12, pp. 1979–1986, 2014.
17. M. Biswal, B. B. Pati, and A. K. Pradhan, “Directional relaying for double circuit line with series compensation”, *IET Proc.-Gen., Trans. & Distribution*., vol. 7, no 4,pp. 405-413 , 2013.
18. M. Biswal, B. B. Pati, and A. K. Pradhan, “Adaptive distance relay setting for series compensated line,” *Int. Journal of Electrical Power and Energy system, Elsevier Science*, vol. 52, pp. 198-206, 2013.

19. P. Jena and A. K. Pradhan, “Directional relaying during single-pole tripping using phase change in negative-sequence current,” *IEEE Trans. on Power Delivery,* vol. 28, no.3, pp- 1548-1557, 2013.
20. P.K. Nayak. A K. Pradhan and P. Bajpai, “A fault detection technique for the series-compensated line during power swing,” *IEEE Trans. on Power Delivery,* vol. 28, no.2, pp- 714-722,2013.
21. P. Jena and A. K. Pradhan, “Directional relaying in the presence of a thyristor-controlled series capacitor,” *IEEE Trans. on Power Delivery,* vol.28, no.2, pp. 628 - 636, 2013.
22. J. Ganeswara Rao and A. K. Pradhan, “Differential power based symmetrical fault detection during power swing,” *IEEE Trans. on Power Delivery,* vol. 27, no.3, pp- 1557-1564, 2012.
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26. I. Kamwa, A. K. Pradhan, and G. Joos, “Robust detection and analysis of power system oscillations using the Teager-Kaiser energy operator,” *IEEE Trans. on Power System,* vol.26, no.1, pp. 323-333, 2011.
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28. I. Kamwa, A. K. Pradhan, and G. Joos, "Adaptive phasor and frequency tracking schemes for wide-area protection and control" *IEEE Trans. on Power Delivery,* vol-26, no.2, pp. 744 – 753, April 2011.
29. S. K. Meher, A. K. Pradhan, “Fuzzy classifiers for power quality event analysis”, *Electric Power Systems Research*, vol. 80, no. 1, pp. 71-76, January 2010.
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33. A. K. Pradhan, A. Routray and G. S. Madhan, “Fault direction estimation in radial distribution system using phase-change in sequence current”, *IEEE Trans. on Power Delivery,* vol. 22 , pp. 2065 – 2071, 2007.
34. I. Kamwa, A. K. Pradhan and G. Joos, “Automatic segmentation of large power systems into fuzzy coherent areas for dynamic vulnerability assessment”, *IEEE Trans. on Power System,* vol. 22, pp. 1974 - 1985 Nov. 2007.
35. A. K. Pradhan and G. Joos, “Adaptive distance relay setting for lines connecting wind farms”, *IEEE Trans. on Energy Conversion,* vol. 22, pp.206-213, 2007.
36. A. K. Pradhan, A. Routray and S. Mohanty, “A moving sum approach for fault detection of power systems”, *Electric Power Components and Systems,* vol. 34, pp. 385-399, 2006.
37. A. K. Pradhan, S. K. Meher and A. Routray, “Communication channel equalization using wavelet network”, *Elsevier-Digital Signal Processing*, , vol. 16, pp. 445-452, 2006.
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52. P. K. Dash, A. K. Pradhan, G. Panda and A. C. Liew, "Adaptive relay setting for flexible ac transmission systems (FACTS)," *IEEE Trans. on Power Delivery*, vol.15, no.1, pp.38-43, 2000.
53. P. K. Dash, A. K. Pradhan and G. Panda, "Frequency estimation of distorted power system signals using extended complex Kalman filter," *IEEE Trans. on Power Delivery*, vol.14, No.3, 1999, pp.761-766.

**Book Chapters**- (1) A. Routray and A.K. Pradhan, Power System Frequency Measurement and Estimation, Research Monographs on Frontiers of Measurement and Instrumentation, ANE Books 2008, New Delhi, India.

(2) A K Pradhan, ‘Intelligent Techniques for transmission line fault classification’, Computational Intelligence in Power Engineering, Springer, 2010.

(3) P. Jena and A K Pradhan, ‘Network Protection Systems Considering the Presence of STATCOMs’, Static Compensators (STATCOMs) in Power Systems, Springer, 2015.

## Sponsored Research and Consultancy-

1. Advanced communication and control for the prevention of blackouts, UK- India Collaborative Research 2014-2017.
2. High energy and power density solutions to large energy deficits, UK-India Collaborative Research 2014-2017.
3. Intelligent Tools for Smart Electrical Grids, MHRD, New Delhi, 2013-2017
4. Low Tension Cable Fault Location in CESC System, CSEC Kolkat
5. A Study on Hunting and its Mitigation in CESC Power System, CESC Ltd.
6. Kolkata Protecting Power Systems using Wide area measurements- DST, New Delhi – 2009- 2013.
7. Survey and Evaluation of Solar PV Home Lighting System in West Bengal, WBREDA, Kolkata 2009.
8. Development of Substation Automation Phase – 1: Monitoring” For Damodar Valley Corporation, Kolkata, 2008.
9. Remedial Measures To Mitigate Voltage Dip Problem At CTPS Bus , Damodar Valley Corporation, Maithan, Jharkhand, 2008.

10. Development of Decision Support Tools for Secure Energy Management (2004-06), CPRI, Bangalore.
11. Modernization of Relay Laboratory (2004-05), MHRD, New Delhi.
12. Design and Development of Multifunctional Relays for Power System Using Advanced Signal Processing Techniques-(2003-04), IIT Kharagpur.
13. Application of Advanced Signal Processing Techniques to Fault Diagnosis of Power System Elements (2001-03), AICTE, New Delhi.