1. Record Nr. UNINA9910692851303321

Titolo	Continuous portal monitoring [[electronic resource]]
Pubbl/distr/stampa	[Alexandria, Va.] : , : Defense Threat Reduction Agency, , [2002]
Collana	Fact sheet
Soggetti	Arms control - United States Arms control - Russia (Federation) Nuclear nonproliferation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from title screen (viewed on Feb. 3, 2003).

2. Record Nr. UNINA9910789570703321

Titolo	Perception beyond inference : the information content of visual processes / / edited by Liliana Albertazzi, Gert J. van Tonder, and Dhanraj Vishwanath
Pubbl/distr/stampa	Cambridge, Mass., : MIT Press, ©2010
ISBN	0-262-30932-7 1-283-11912-9 9786613119124 0-262-29555-5
Descrizione fisica	1 online resource (462 p.)
Altri autori (Persone)	AlbertazziLiliana Van TonderGert J. <1970-> VishwanathDhanraj <1967->
Disciplina	152.14
Soggetti	Visual perception Cognitive neuroscience
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.

Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Cover; Contents; Preface; Acknowledgments; Introduction; 1 Vision and Information; I Time and Dynamics; 2 Riddle of the Past, Puzzle for the Future; 3 Extending Pragnanz; 4 Informing through an Imperfect Retina; 5 Perceptual Organization in the Visual Cortex; II Color, Shape, and Space; 6 The Perception of Material Qualities and the Internal Semantics of the Perceptual System; 7 Visual Information in Surface and Depth Perception; 8 Good Continuation in Layers; 9 Illusory Contours and Neon Color Spreading Reconsidered in the Light of Petter's Rule; III Language and Perception 10 From Grouping to Visual Meanings11 The Perceptual Roots of Metaphor; IV Perception in Art, Design, and Computation; 12 Becoming Information; 13 Becoming; Contributors; Author Index; Subject Index; Insert
Sommario/riassunto	Proposing a new paradigm for perceptual science that goes beyond standard information theory and digital computation. This book breaks with the conventional model of perception that views vision as a mere inference to an objective reality on the basis of "inverse optics." The authors offer the alternative view that perception is an expressive and awareness-generating process. Perception creates semantic information in such a way as to enable the observer to deal efficaciously with the chaotic and meaningless structure present at the physical boundary between the body and its surroundings. Vision is intentional by its very nature; visual qualities are essential and real, providing an aesthetic and meaningful interface to the structures of physics and the state of the brain. This view brings perception firmly in line with ethology and modern evolutionary biology and suggests new approaches in all disciplines that study, or require an understanding of, the ontology of mind.The book is the joint effort of a multidisciplinary group of authors. Topics covered include the relationships among stimuli, neuronal processes, and visual awareness. After considering the mind-dependent growing of information, the book treats time and dynamics; color, shape, and space; language and perception; perception, art, and design.

3. Record Nr. UNINA9910736015703321

Autore	Chothani Nilesh
Titolo	Advancement in Power Transformer Infrastructure and Digital Protection / / by Nilesh Chothani, Maulik Raichura, Dharmesh Patel
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	9789819938704 9819938708
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (331 pages)
Collana	Studies in Infrastructure and Control, , 2730-6461
Altri autori (Persone)	RaichuraMaulik PatelDharmesh
Disciplina	621.381044
Soggetti	Power electronics Artificial intelligence Power Electronics Artificial Intelligence Intelligence Infrastructure
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Acknowledgments -- Key Features of the Book -- Contents -- About the Authors -- Abbreviations -- List of Figures -- List of Tables -- 1 Transformer Infrastructure for Power Grid -- 1.1 Introduction -- 1.2 Role of Large Power Transformers in the Electric Grid -- 1.3 Power System Infrastructure -- 1.4 Three-Phase Transformer Interconnections -- 1.5 Transformer Technology Development -- 1.5.1 Design Technology -- 1.5.2 Testing of Transformer -- 1.6 On-Load Tap Changer (OLTC) of Transformer -- 1.6.1 Where to Employ the OLTC on Transformer -- 1.6.2 Classification of OLTC Based on Its Construction -- 1.6.3 Advantages of OLTCs -- 1.6.4 Disadvantages of OLTCs -- 1.7 Dissolved Gas Analysis for Transformer Monitoring and Protection -- 1.7.1 How Gases Generated in Transformer -- 1.7.2 Identification of Faults by Gas Analysis -- 1.7.3 Methods for DGA -- 1.7.4 Advantages of Performing DGA -- 1.8 Condition Monitoring of the Transformer -- 1.8.1 Working Condition Monitoring -- 1.8.2 Emergency Condition Monitoring -- 1.9 Real-Time Operation and Protection of Power Transformer -- 1.10

Smart Transformer for Smart Grid Operation -- 1.11 Advanced Transformer Infrastructure (ATI)-Various Benefits -- 1.12 Conclusion -- References -- 2 An Overview of the Protection of Power Transformers -- 2.1 Protection Basics -- 2.1.1 Unit and Non-unit Protection -- 2.1.2 Primary and Backup Protection -- 2.2 Problem Statements and Basics -- 2.3 Investigation Targets -- 2.4 Introduction -- 2.5 Different Faults/Abnormalities Observed in Transformer -- 2.5.1 Internal Fault -- 2.5.2 Sources of Internal Fault in Transformer -- 2.6 External Fault for the Transformer -- 2.7 Abnormalities in the Transformer -- 2.8 Different Transformer Protective Schemes Used in Field -- 2.8.1 Overcurrent (OC) Protection.
2.8.2 OC (Overcurrent) Protection with Harmonic Restrain Unit (HRU) -- 2.8.3 REF (Restricted Earth Fault) Protective Scheme -- 2.8.4 Unit-Type Protection of Transformer (Differential Protection) -- 2.9 General Magnetizing Inrush Phenomenon -- 2.10 Over-Fluxing Condition -- 2.11 Inter-Turn Fault Protection -- 2.12 Non-electrical Protection -- 2.12.1 Thermal Relay -- 2.12.2 Temperature-Based OTI and WTI Relays -- 2.12.3 Buchholz Relay -- 2.12.4 Pressure Relays (PRs) -- 2.13 Generalized Protections Applied to Transformer -- 2.14 Adverse Effect of Single Phasing on Three-Phase Transformer -- 2.14.1 Basic Magnetic Circuit -- 2.14.2 Observation and Confirmation of the Theoretical Approach -- 2.14.3 Remarks of Single Phasing Supply to Three-Phase Transformer -- 2.15 Different Research Techniques Used in Transformer Protection -- 2.16 Examples -- 2.17 Conclusion -- References -- 3 Introduction to Magnetic Inrush of Power Transformer -- 3.1 Basic of Magnetic Inrush -- 3.2 Various Classifier Techniques to Identify Inrush States -- 3.2.1 Discriminative Technique Depending on Harmonics Content (Which Contains DC Offset) -- 3.2.2 Electrical Quantity's Wave Pattern-Based Techniques -- 3.2.3 Discriminative and Decomposing Schemes -- 3.2.4 Morphological-Based Analysis -- 3.2.5 Power Utilization-Dependent Techniques -- 3.2.6 Flux-Based Methodologies -- 3.2.7 Methodology for Mitigation of Level of Inrush Current -- 3.3 The Proposed Technique for Inrush Stimuli Discrimination -- 3.4 System Modeling -- 3.5 Anticipated Algorithm -- 3.6 Obtained Results Discussion -- 3.7 Magnetic Inrush Case -- 3.8 Interior Type of Fault Case -- 3.9 Interior Type of Fault Followed by Inrush Case -- 3.10 Conclusion -- 3.11 Question and Answer -- Appendices -- Appendix 1 -- Appendix 2 -- References -- 4 Current Transformer Infrastructure and Its Application to Power System Protection.
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External Fault Without CT Saturation -- 4.10.3 External Fault with CT Saturation -- 4.11 Conclusion -- Appendices -- Appendix 1 -- Appendix 2 -- References -- 5 Impact of Transitory Excessive Fluxing Condition on Power Transformer Protection -- 5.1 Introduction -- 5.2 Modeling of System Diagram -- 5.3 Problem Declaration and Algorithm Suggestion -- 5.4 Investigation of the Obtained Results -- 5.4.1 Performance Evaluation of the Projected Scheme for the Period of Normal State/Exterior Fault State of the Transformer -- 5.4.2 Performance Evaluation of the Projected Scheme While Insider Fault State of the Transformer.
5.4.3 Performance Evaluation of the Projected Scheme for Excessive Fluxing State of the Considered Transformer -- 5.5 Elaboration of Hardware Arrangement and Result Conversation -- 5.5.1 Current Wave Pattern While Interior Fault Case of Transformer -- 5.5.2 Current Wave Pattern While Exterior Fault Case of the Transformer -- 5.5.3 Current Wave Pattern While Continuous and Temporary Excessive Fluxing State of the Considered Transformer -- 5.6 Advantages of the Presented Scheme Over the Conventional Scheme -- 5.7 Conclusion -- 5.8 Question and Answer -- References -- 6 Total Harmonic Distortion-Based Improved Transformer Protective Scheme -- 6.1 Introduction -- 6.2 Modeling of Power Structure -- 6.3 Presented Technique for Inrush and Fault Discrimination -- 6.4 The Outcome of the Proposed Technique -- 6.4.1 Initial Inrush -- 6.4.2 Internal Fault Condition -- 6.4.3 Energization of Transformer in Existence of Faulty Condition -- 6.4.4 Fault Case While CT Saturates -- 6.5 Hardware Test Arrangement for Different Result Investigation -- 6.5.1 Preliminary Inrush Situation -- 6.5.2 Sympathetic Type of Inrush Condition -- 6.5.3 Recovery Type of Inrush Condition -- 6.5.4 Exterior Fault Cases -- 6.5.5 Exterior Fault with CT Saturation Cases -- 6.5.6 Interior Fault Case -- 6.5.7 Interior Fault While CTs Saturates -- 6.5.8 No-load Current with Its Harmonics -- 6.6 Conclusion -- 6.7 Question and Answer -- References -- 7 Adaptive Biased Differential Protection Considering Over-Fluxing and CT Saturation Conditions -- 7.1 The Preamble of Idea Generation -- 7.2 Problem Declaration and System Diagram Descriptions -- 7.3 Projected Algorithm for Adaptive Transformer Differential Protection -- 7.3.1 Modified Full Cycle DFT (MFCDFT) Algorithm for Phasor Estimation -- 7.3.2 Setting of Biased Percentage Differential Relaying Scheme.
7.3.3 Detection of Magnetizing Inrush in Transformer -- 7.3.4 Adaptation in Basic Pickup Setting -- 7.3.5 Vavg/f Transformer Protection or Transformer Over-Fluxing Protection -- 7.3.6 Current Transformer Saturation Detection -- 7.4 Various Result Exploration with Argument -- 7.4.1 Normal Load, Overloading, and External Fault State -- 7.4.2 Transformer Inrush Detection -- 7.4.3 A Fault Within the Internal Premises of the Transformer -- 7.4.4 External Fault with CT Saturation Condition -- 7.4.5 Discrimination of Over-Fluxing in Transformer Protection -- 7.4.6 Inception of Internal Fault in the Existence of Over-Fluxing Situation -- 7.5 Laboratory Setup for Hardware Test Results -- 7.5.1 The Inrush of Transformer on Hardware -- 7.5.2 Normal Load, Overloading, and External Fault Situation -- 7.5.3 Internal Fault Situation -- 7.5.4 Over-Fluxing Situation -- 7.5.5 Saturation of CT During External Fault -- 7.5.6 Very Severe External Fault in the Existence of Over-Fluxing Condition -- 7.6 Conclusion -- 7.7 Question and Answer -- Appendix -- References -- 8 Convolution Neural Network and XGBoost-Based Fault Identification in Power Transformer -- 8.1 Brief Introduction About the Work -- 8.2 Combined CNN-XGBoost Technique -- 8.2.1 Convolutional Neural Network (CNN) -- 8.2.2 Extreme Gradient Boosting (XGBoost) -- 8.3

Power System Network -- 8.3.1 Training and Testing Data Generation -- 8.4 Algorithm of the Proposed XGBoost Scheme -- 8.4.1 Parameter Setting in Algorithm -- 8.5 Result in Discussion on Fault Classification -- 8.6 Hardware Setup for Various Result Analyses -- 8.7 Conclusion -- 8.8 Questions and Answers -- Appendices -- Appendix 1 -- Appendix 2 -- References -- 9 Sequential Component-Based Improvement in Percentage Biased Differential Protection of a Power Transformer -- 9.1 Introduction.
9.2 Projected Transformer Differential Protection Performance.

Sommario/riassunto

This book provides an overview of a power transformer infrastructure and comprehensive digital protection of it. It presents various protective methodologies available to protect the transformer from disturbances by taking care of mal-operation due to external disturbances and providing fine protection to the transformer. Though there are many protection methodologies available in the practice. However, these existing methodologies may mal-operate during external disturbances such as inrush, over-fluxing and short circuits. Hence, further research is needed in addition to the existing methods of protection in terms of more fault prediction accuracy, speedy operation, and lower protection cost with zero error in the detection of faults. The book will be useful reference for practitioners from academia and industrial applications. .