

# **2020 2nd International Conference on Mathematics and Information Technology (ICMIT 2020)**

**Adrar, Algeria  
18 – 19 February 2020**



**IEEE Catalog Number: CFP20N01-POD  
ISBN: 978-1-7281-2581-7**

**Copyright © 2020 by the Institute of Electrical and Electronics Engineers, Inc.  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP20N01-POD
ISBN (Print-On-Demand):	978-1-7281-2581-7
ISBN (Online):	978-1-7281-2580-0

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

# Table of Contents

<b>Stability, Boundedness And Square Integrability Properties Of Fourth Order Neutral Differential Equations With Variable Delay</b>	<b>1</b>
<b>On Stability, Boundedness And Square Integrability Of Solution Of Vector Delay Differential Equation Of Neutral Type</b>	<b>9</b>
<b>On Stability, Boundedness And Square Integrability For A Kind Of Third Order Neutral Delay Differential Equations</b>	<b>15</b>
<b>New Conditions On The Stability, Boundedness And Square Integrability For Some Third Order Neutral Differential Equations</b>	<b>21</b>
<b>Caputo Type Fractional Differential Equation With Katugampola Fractional Integral Conditions</b>	<b>25</b>
<b>Numerical Solution For Nonlinear Time-Fractional Partial Differential Equation With Variable Coefficient Using Reproducing Kernel Hilbert Space Method</b>	<b>32</b>
<b>Controllability For Semilinear Fractional Integro-Differential Systems With Deviated Argument In Banach Spaces</b>	<b>37</b>
<b>Controllability Results Of Fractional Non-Instantaneous Impulsive Semilinear Differential Inclusions With Infinite Delay</b>	<b>44</b>
<b>Dynamical Analysis Of A Non-Linear Game Model With Memory</b>	<b>50</b>
<b>Bias And RMSE Of Archimedean Copula Using Moment And L-Moments Methods</b>	<b>55</b>
<b>Impulsive Functional Differential Inclusions On Unbounded Domain</b>	<b>59</b>
<b>Exponential Decay For A Porous Thermoelastic System With Second Sound</b>	<b>68</b>
<b>Fixed Point For Reich G-Contraction In B-Metric Space Endowed A Graph</b>	<b>74</b>
<b>Some Fixed-Point Theorems For Block Operator Matrix</b>	<b>80</b>
<b>Inference and Tests in Co-Integrated Models</b>	<b>86</b>
<b>Asymptotic Analysis Of A Kernel Estimator For Stochastic Differential Equations Driven By A Mixed Sub-Fractional Brownian Motion</b>	<b>91</b>
<b>A Framework For Automatic Development Of Embedded System</b>	<b>98</b>
<b>Functional Local Linear Relative Regression</b>	<b>102</b>
<b>Two-Dimensional Jet Emerging From The Channel Against A Vertical Obstacle</b>	<b>109</b>

<b>On Testing Changes in Parameters of Contaminated AR(1) Model</b>	<b>113</b>
<b>Existence Of Solution Of Nonlinear Integral Equation In <math>L^1(\mathbb{R}^+)</math></b>	<b>117</b>
<b>Numerical Solution Of Flows Over A Trapezoidal Obstacles</b>	<b>121</b>
<b>FPGA-Based Car-Like Robot Path Follower with Obstacle Avoidance</b>	<b>125</b>
<b>A Fast K-means Clustering Algorithm for Separation of Brain Tissues in MRI</b>	<b>132</b>
<b>A Comparison Analysis Of Pan-Sharpening Methods On Alsat-2A Images</b>	<b>138</b>
<b>Machine Learning Approach for Energy Consumption Prediction in Datacenters</b>	<b>142</b>
<b>Sentiment Analysis for Health Monitoring on Social Media</b>	<b>149</b>
<b>A Method for Transforming Object-Relational to Document-Oriented Databases</b>	<b>154</b>
<b>ANN based MPPT Algorithm Design using Real Operating Climatic Condition</b>	<b>159</b>
<b>Statistical Study To Detect Emergent Behaviours</b>	<b>164</b>
<b>Indexing and Image Search by the Content According to the Biological Base of the Cognitive Processing of Information Using a Neural Sensor</b>	<b>169</b>
<b>The use of Ontologies for Enterprise Modeling and Evaluation</b>	<b>175</b>
<b>Ranking Queries Optimization Over External Data Sources</b>	<b>180</b>
<b>Toward A New Way Of Minimizing The Loss Of Information Quality In The Dynamic Anonymization</b>	<b>186</b>
<b>A Differential Evolution Based Clustering and Routing Protocol for WSN</b>	<b>190</b>
<b>Using Cross-Layer Interaction To Prolong The Life Cycle Of Wireless Sensor Networks</b>	<b>196</b>
<b>A Hybrid Approach for Optimal Clustering in Wireless Sensor Networks using Cuckoo Search and Simulated Annealing Algorithms</b>	<b>202</b>
<b>Measuring Documents Similarity using Finite State Automata</b>	<b>208</b>
<b>Modeling Losses of Mobile Networks by Artificial Intelligence Techniques</b>	<b>212</b>
<b>Simulated Annealing Approach for Clustering in Wireless Sensor Networks</b>	<b>216</b>
<b>Arabic Text Segmentation using Contextual Exploration and Morphological Analysis</b>	<b>220</b>
<b>Image Compression using Principal Component Analysis</b>	<b>226</b>