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### **Design, Synthesis and Comparative Study of Anti-Microbial Activities on Barbituric acid and Thiobarbituric acid Based Chalcone Derivatives Bearing the Pyrimidine Nucleus**

Bhaveshkumar D. Dhorajiya, Bharatkumar Z. Dholakiya

*Department of Chemistry, Gujarat University, India*

*Keywords: Antibacterial activity, Antifungal activity, Babiturates, Chalcones, Structure Activity Relationship.*

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2.

### **Identification System of Image Fusion by Evolutionary Neural Network**

Wei Zhang, Raj Sharma

*Faculty of Computer Science, Technical University of Munich, Germany*

*Keywords: Identification, Image fusion, Neural Network, Genetic Algorithm.*

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3.

### **Wavelet Method for Numerical Solution of Second Order Hyperbolic Equations**

Abdul Hannan Choudhury

*Department of Mathematics, University of Dhaka, Bangladesh*

*Keywords: Newmark schemes, Semidiscrete approximations, Stability, Wave equation, Wavelet-Galerkin method*

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## **Extension of identities due to Preece and Bailey involving product of generalized hypergeometric function ${}_2F_2$**

Medhat A. Rakha, Mohammed M. Awad, Arjun K. Rathie

*Department of Mathematics, Cairo University, Egypt*

*Keywords: Generalized Hypergeometric Function; Preece Identity, Bailey Identity, Kummer Second Summation Theorem*

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## **Effect of Partnership Parenting on the Achievements of Pupils in Elementary Schools**

Dijana Karuovic, Ivan Tasic, Dragana Glusac, Miljana Dimitric

*Faculty of Education, University of Novi Sad, Serbia*

*Keywords: child; family; parent; punishment; reward*

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## **Ranking Innovative Military Education Criteria Applying a Fuzzy Integral Approach**

Alptekin Erkollar, Kerim G  lztepe, Birgit Oberer

*Department of Military Sciences, Turkish War College, Turkey*

*Keywords: Innovation criteria selection, choquet integral, military education*

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## **Giant synovial chondromatosis of Hoffa's body: case report and review of the literature.**

Lorenzo Franco-de la Torre, Mercedes Gonzalez-Hita, Juan Luis Alcala-Zerme  o, Ana Teresa Montes-Leyva, Martin Vargas-Maga  a, Abraham Zepeda-Moreno, Jose Rafael Villafan-Bernal, Sergio Sanchez-Enriquez.

*Department of Orthopedics, University of Madrid, Spain*

*Keywords: Synovial chondromatosis; Arthroscopy; Knee joint; Hoffa's body; Synovial metaplasia*

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**8.**

## **Influence of relative roughness pitch on heat transfer and flow friction in a ribbed rectangular solar air heater**

Anil Singh Yadav

*Department of Mechanical Engineering, Indian Institute of Technology, Kanpur, India*

*Keywords: Solar Energy; Solar Air Heater; Artificial Roughness; Thermal Enhancement Factor.*

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### **A Novel approach to Fault Simulation and Testing in combinational circuits using Differential Evolution**

Dhiraj, Seema Verma, Rajesh Kumar

*Department of Electronics and Communication Engineering, National Institute of Technology, Rourkela, India*

*Keywords: Combinatorial Optimization, Evolutionary Algorithm, Differential Algorithm, Automatic test pattern generator, Fault coverage, Global optimum*

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**10.**

### **Convenient Synthesis of 4-oxoquinoline derivatives**

Carlos Santos, James Wilson, Robert Thompson, Michael Anderson

*Department of Chemistry, University of Toronto, Canada*

*Keywords: Quinoline, glycine, D-glutamic acid, diazomethane, chloromethyl ketone*

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**11.**

### **Synergistic Effects of Metal-Oxide Nanocomposites in Catalytic Hydrogenation Reactions**

Ioannis Papadopoulos, Meiling Zhang, Nuru Jemal

*University of Patras, Patras, Greece; Lanzhou University, Lanzhou, China; Addis Ababa University, Addis Ababa, Ethiopia*

*Keywords: catalysis, nanocomposites, hydrogenation, metal-oxide, palladium, titanium oxide*

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**12.**

### **Understanding the Influence of Climate Change on Ecosystem Dynamics in Diverse Global Biomes**

Jonas Kazlauskas, Meiling Zhao, Ahmed El-Sayed, Gabriela Torres

*Vilnius University, Vilnius, Lithuania; Lanzhou University, Lanzhou, China; University of Patras, Patras, Greece*

*Keywords: ecosystem dynamics, climate change, biodiversity, species distribution, carbon sequestration, nutrient cycling*

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13.

### **Enhanced Pattern Recognition in Large Datasets Using Hybrid Clustering and Classification Techniques**

Hiroshi Nakamura, Aisha Al-Farsi, Juan Carlos Pérez

*Kyungpook National University, Daegu, South Korea; University of Nairobi, Nairobi, Kenya; University of Vermont, Burlington, USA*

*Keywords: data mining, pattern recognition, clustering, classification, k-means, support vector machine, hybrid algorithm*

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14.

### **Exploring Non-Abelian Gauge Theories: Implications for Dark Matter in Particle Physics**

Ezra Mokaya, Caroline Ng, Alejandro Torres, Ibrahim Al-Qadi

*University of Nairobi, Nairobi, Kenya; Universiti Sains Malaysia, Penang, Malaysia; University of Antioquia, Medellín, Colombia*

*Keywords: non-Abelian gauge theories, SU(3) symmetry, dark matter, particle physics, collider experiments, cosmic evolution*

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### **Impact of Soil Microbial Dynamics on Crop Yield in Semi-Arid Regions: A Comparative Study**

Rana Al-Sarraf, Miguel Lopez, Haruto Takahashi

*Ferdowsi University of Mashhad, Mashhad, Iran; University of Tasmania, Hobart, Australia; University of Canterbury, Christchurch, New Zealand*

*Keywords: soil microbiology, crop yield, semi-arid regions, microbial diversity, 16S rRNA sequencing, sustainable agriculture*

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16.

### **Advanced Thermodynamic Cycles for Sustainable Energy Harvesting in Tropical Climates**

Ibrahim Al-Mansouri, Chaska Quispe, Aisha Mwinyimbegu

*Ibrahim Al-Mansouri: University of the South Pacific, Suva, Fiji; Chaska Quispe: Pontifical Catholic University of Peru, Lima, Peru; Aisha Mwinyimbegu: University of Dar es Salaam, Dar es Salaam, Tanzania*

*Keywords: thermodynamic cycles, sustainable energy, tropical climates, Rankine cycle, computational fluid dynamics, energy efficiency*

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**17.**

### **Cross-Cultural Behavioral Patterns: A Comparative Analysis of Social Norms and Adaptations**

Lucie Nováková, Rizky Haryanto, Amina Al-Mansoori

*Palacký University, Olomouc, Czech Republic; Gadjah Mada University, Yogyakarta, Indonesia; University of Zambia, Lusaka, Zambia*

*Keywords: behavioral analysis, cross-cultural study, social norms, cultural psychology, adaptation patterns, interpersonal interactions*

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**18.**

### **Influence of Dietary Components on Gut Microbiome Diversity: A Global Comparative Study**

Lena Müllner, Dae-jung Kim, Amina Al-Sarraf

*Al-Nahrain University, Baghdad, Iraq; University of Concepción, Concepción, Chile; University of Vermont, Burlington, USA*

*Keywords: gut microbiome, dietary components, microbial diversity, high-throughput sequencing, macronutrients, geographical influence*

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