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**200 USD (With proceedings)**

Here's where you can reach us: [oraj@oraj2023.org](mailto:oraj@oraj2023.org) (or) [coraj\\_conf@yahoo.com](mailto:coraj_conf@yahoo.com)

### **Accepted Papers**

#### **Lehmer Property for Some Integer Sequences**

Ala'a Al-Kateeb and M.K. Sahukar, Department of Mathematics, Yarmouk University, Irbid, Jordan

### **Abstract**

In this note, we prove that there is no number with the Lehmer property in the sequences of Jacobsthal or Jacobsthal-Lucas numbers, the Balancing and Balancing-Lucas numbers.

### **Keywords**

Lehmer property, Jacobsthal numbers, Jacobsthal-Lucas numbers, Balancing numbers, Balancing-Lucas numbers, Euler's function.

### **Markov Chains and Covid**

Alessio Drivet<sup>1</sup>, 1GeoGebra Institute of Turin, Italy

### **Abstract**

The text aims to show the use of Markov chains for modelling the Covid-19 pandemic. After a brief general introduction, a simulation of the phenomenon is presented, starting from some transition hypotheses and using a spreadsheet for the calculations.

### **Keywords**

Covid-19, Markov chains, Model, Spreadsheet.

### **Application of Fuzzy Topsis for Prioritizing Barriers to Circular Economy Doption in the Automotive Sector: a Study in an Emerging Country**

Tiago F. A. C. Sigahi, Institute of Science and Technology, Federal University of Alfnas, Poços de Caldas, Brazil

### **Abstract**

Acknowledging the substantial economic, social, and environmental impacts of sustainability and circular economy (CE) practices, their imperative role in the automotive industry cannot be overstated. Despite this significance, there is a lack of studies addressing these critical themes within the automotive sector. This paper aims to bridge this gap by providing an examination of the barriers hindering the adoption of CE principles, with a specific focus on the Brazilian automotive industry. A survey, involving 41 experts comprising 21 academics specializing in sustainability and CE, 16 experienced managers, and 4 directors with substantial automotive industry expertise, was conducted. The study identified and evaluated 12 barriers to CE adoption in the automotive sector based on the experts' assessment using Fuzzy TOPSIS. The study's findings underscore the scarcity of professionals with sufficient knowledge and expertise, the absence of supportive public policies, and the inadequate commitment from leadership as the top three priority barriers. The research recommends targeted actions for companies, policymakers, and universities to collaboratively contribute towards overcoming these identified barriers and fostering a sustainable and circular trajectory for the automotive industry.

### **Keywords**

Fuzzy logic, Multicriteria decision making, Circular economy, Automotive industry, Barriers.