**Proposal for a New Journal**

**Proposed Title: Computational Intelligence and Optimization**

**Aims & Scope**

The proposed journal is a multidisciplinary journal. Its aim is to publish research on the analysis and development of computational intelligence-based algorithms and their applications to various real-world optimization problems. It provides a platform for scientists, researchers, and scholars to publish and disseminate their latest findings, methodologies, and applications in these areas and it provides a platform for the publication of both experimental and theoretical research, as well as surveys and impact studies. The journal will cover stochastic as well as deterministic algorithms, covering the following topics but are not limited to:

1. Artificial Neural Network algorithms
2. Computationally intelligent algorithms
3. Swarm and Evolutionary algorithms
4. Genetic algorithms
5. Genetic programming
6. Fuzzy set theory and Fuzzy systems
7. chaos theory
8. Soft Computing
9. Data science
10. Data Mining
11. Machine Learning Algorithms
12. Cloud computing
13. System modelling and optimization
14. Bio-inspired Systems
15. Complexity Theory
16. Continuous optimization
17. Multi-objective optimization
18. Discrete optimization
19. Convex optimization
20. Control optimization
21. Computational intelligence and optimization in engineering like Aerospace engineering, biomedical engineering, chemical and process engineering, civil, environmental, & architectural engineering, electrical engineering, financial engineering, healthcare engineering, industrial and systems engineering, mechanical engineering.
22. Applications in economics, finance, Optimal Control, Optimal Design, Operations Research, healthcare, logistics, etc.
23. Image and video processing,
24. Pattern recognition,
25. Robotics,
26. Network optimization
27. Bayesian networks
28. Hybrid algorithms and intelligent systems
29. Intelligent systems applications
30. Signal or Image Processing
31. Web intelligence and semantic web
32. Software, Benchmarks, Numerical Experimentation and Comparisons,
33. Hybrid Systems of Computational Intelligence
34. Benchmarks
35. Numerical optimization
36. Large-scale optimization
37. Theory and Implementation

**Readership:** The journal aims to cater to a diverse readership, including both academics and industry professionals, can provide a unique platform for the exchange of knowledge and ideas. In academic, readership plays a crucial role in disseminating research findings, advancing knowledge, and contributing to the scholarly community. Academic readership encompasses peers, researchers, students, and policymakers, among others. While, In industry, readership focuses on practical applications and the dissemination of information to professionals, practitioners, and stakeholders within specific fields. The readership in industry is driven by the need for actionable knowledge that can inform decision-making, enhance productivity, and foster professional growth. Additionally, the emphasis on readership underscores the importance of effectively communicating ideas, findings, and practical information to the intended audience.

**Editorial board members:** List of some probable editorial board members:

1. Bansal, Jagdish Chand, South Asian University, New Delhi, India (Editor-in-Chief)
2. Kim, Joong Hoon, Korea University, South Korea
3. Panigrahi, B K, Indian Institute of Technology Delhi, India
4. Deb, Kalyanmoy, Michigan State University USA
5. Vrahatis, Michael N., University of Patras, Greece
6. Acan, Adnan, Eastern Mediterranean University, Cyprus
7. Akay, Bahriye Baþtürk, Erciyes University, Turkey
8. Ali, Montaz, Witwatersrand University, South Africa
9. Blackwell, Tim, Goldsmiths, University of London, UK
10. Coello Coello, Carlos A., CINVESTAV-IPN, Mexico
11. Das, Swagatam, Indian Statistical Institute (ISI), India
12. Engelbrecht, Andries, University of Pretoria, South Africa
13. Evers, George, USA
14. Fernández Martínez, Juan Luis, University of Oviedo, Spain
15. García Gonzalo, Maria Esperanza, University of Oviedo, Spain
16. Gong, Wenyin, China University of Geosciences, China
17. Lim, Meng-Hiot, Nanyang Technological University, Singapore
18. Liu, Hongbo, Dalian Maritime University, China
19. Monmarché, Nicolas, Université François Rabelais Tours, France
20. Pan, Linqiang, Huazhong University of Science and Technology, China
21. Parsopoulos, Konstantinos E., University of Ioannina, Greece
22. Pavone, Mario, University of Catania, Italy
23. Salhi, Said, University of Kent, UK
24. Siarry, Patrick, Université de Paris 12, France
25. Simon, Dan, Cleveland State University, USA

**Associate editor:** List of some probable associate editorial board members:

1. Kalyanmoy Deb, Michigan State University, US
2. Xin-She Yang, Middlesex University, UK
3. Andries P. Engelbrecht, University of Pretoria, South Africa
4. Kay Chen TAN, Department of Computing, Hong Kong
5. Zbigniew Michalewicz, University of Adelaide, Australia
6. Simone Ludwig, North Dakota State University, Fargo, North Dakota, US

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**Competitive Journals:**

1. Applied Mathematics and Computation (Elsevier)
2. Applied Soft Computing (Elsevier)
3. Computational Optimization and Applications (Springer)
4. Computational Intelligence (Wiley)
5. Evolutionary Computation (MIT Press)
6. IEEE Computational Intelligence Magazine (IEEE)
7. IEEE Transactions on Evolutionary Computation (IEEE)
8. Intelligent Automation & Soft Computing (Taylor and Francis)
9. International Journal of Bio-Inspired Computation (Inderscience)
10. International Journal of Computational Intelligence Systems (Atlantis Press)
11. International Journal of Swarm Intelligence (Inderscience)
12. *International Journal of Intelligent Systems (willy)*
13. Journal of Combinatorial Optimization (Springer)
14. Journal of Global Optimization (Springer)
15. Memetic Computing (Springer)
16. Soft Computing (Springer)
17. Swarm and Evolutionary Computation (Elsevier)
18. ARTIFICIAL INTELLIGENCE REVIEW (Springer)
19. Swarm Intelligence (Springer)
20. ENGINEERING OPTIMIZATION
21. COMPUTATIONAL OPTIMIZATION AND APPLICATIONS
22. OPTIMIZATION
23. OPTIMIZATION METHODS & SOFTWARE
24. OPTIMIZATION AND ENGINEERING
25. JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS
26. APPLIED MATHEMATICS AND OPTIMIZATION
27. JOURNAL OF COMBINATORIAL OPTIMIZATION
28. Discrete Optimization
29. International Journal of Computational Intelligence Systems
30. Neural Computing & Applications (Springer)
31. Fuzzy Optimization and Decision Making (Springer)
32. ARTIFICIAL INTELLIGENCE (Elsevier)
33. Neurocomputing (Elsevier)
34. Journal of Heuristics (Springer)
35. Computers & Operations Research (Elsevier)

**Conferences:** List of some conferences whose proceedings are published in Springer.

1. CEC (IEEE Congress on Evolutionary Computation)
2. GECCO (Genetic and Evolutionary Computation Conference)
3. International Conference on Swarm Intelligence (ICSI)
4. International Conference on Artificial Intelligence and Soft Computing (ICAISC)
5. International Conference on Computational Intelligence in Security for Information Systems (CISIS)
6. International Conference on Optimization Problems and Their Applications (OPTA)
7. International Conference on Advanced Computational Intelligence (ICACI)
8. International Conference on Soft Computing and Pattern Recognition (SoCPaR)
9. International Conference on Intelligent Computing (ICIC)
10. International Conference on Computational Intelligence and Security (CIS)
11. International Conference on Metaheuristics and Nature Inspired Computing (META)
12. International Conference on Frontiers of Mathematics and Artificial Intelligence (CFMAI 2023)
13. The IEEE/CVF Conference on Computer Vision and Pattern Recognition
14. International Symposium on Computing and Artificial Intelligence
15. International Joint Conference on Information and Communication Engineering
16. International Conference on Soft Computing for Problem Solving
17. IEEE International Conference on Fuzzy Systems
18. International Conference on Intelligent Systems Design and Applications
19. World Congress on Computational Intelligence (WCCI)
20. International Conference on Artificial Intelligence and Statistics
21. International Conference on Machine Learning
22. IEEE Symposium Series on Computational Intelligence
23. International Conference on Optimization and Learning
24. International Conference on Nature and Biologically Inspired Computing
25. International Conference on Industrial, Engineering & Other Applications of Applied Intelligent Systems (IEA/AIE)

Due to the significant increase in the size and complexity of the problems, computational intelligence and optimization have both become inevitable. However, many publishers publish journals that cover one or two areas of the proposed journal, but none cover computational intelligence, optimization, and their applications to various real-world problems. The proposed journal is extremely important and timely for publishing the latest advancements in AI, IoT, ANN-based methods, and probabilistic optimization methods.

Submitted by

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Brief CV:

**Dr. Jagdish Chand Bansal** is an Associate Professor (Senior Grade) at South Asian University New Delhi, India, and Visiting Faculty at Maths and Computer Science, Liverpool Hope University, UK. Dr. Bansal obtained his Ph.D. in Swarm Intelligence from IIT Roorkee. Before joining SAU New Delhi, he worked as an Assistant Professor at ABV- Indian Institute of Information Technology and Management Gwalior India and BITS Pilani, Pilani India. His Primary area of interest is computational intelligence and allied areas. Recently, he proposed a fission-fusion social structure based optimization algorithm, Spider Monkey Optimization (SMO), which is being applied to various problems in the engineering domain. He has published more than 80 research papers in various international journals/conferences. He is the series editor of three book series, Algorithms for Intelligent Systems (AIS), Studies in Autonomic, Data-driven and Industrial Computing (SADIC), and Innovations in Sustainable Technologies and Computing (ISTC) published by Springer Nature. He is the Section Editor of the journal MethodsX (Section: Mathematics and Statistics) published by Elsevier. He is also an Associate Editor of Engineering Applications of Artificial Intelligence (EAAI) published by Elsevier. He is the general secretary of the Soft Computing Research Society (SCRS). He has also received Gold Medal at UG and PG levels.

Google Scholar: <https://scholar.google.com/citations?user=RBHtt1gAAAAJ&hl=en>