 

2024 Eighth International Conference on Parallel,

Distributed and Grid computing (PDGC 2024)

**18th - 20th December, 2024**

**Special Session on “Parallel, Distributed and Grid Computing Applications in Bioinformatics, Systems biology, Biomedical and Healthcare”**

**Parallel, distributed, and grid computing plays significant role in advancing bioinformatics, systems biology, biomedical research, and healthcare by enabling the processing and analysis of large datasets, complex simulations, and computationally intensive tasks. These technologies have multifarious applications in multitude of biological, bioinformatics, chemoinformatics, immunoinformatics, molecular evolution, biomedical, clinical and healthcare data management and analysis. It will also cover algorithms, protocols, methods and databases developed in all the mentioned areas using these technologies. It is anticipated that the proposed topic will provide an excellent platform to the academicians and researchers to present and publish their scientific accomplishments. The topics of interest are broad, including but not limited to the related sub-topics listed below:**

* **Genomic Data Analysis and Distributed Genome Assembly**
* **Protein Structure Prediction and Parallel Algorithms for Protein Folding, Distributed Molecular Dynamics Simulations**
* **Phylogenetic Tree Construction and Parallel Phylogenetic Algorithms, Grid Computing for Large-Scale Phylogenetic Analysis**
* **Biological Network Analysis and Parallel Network Simulation, Distributed Analysis of Gene Regulatory Networks and Parallel Computing for Pathway Modeling**
* **Metabolic Pathway Simulation and Grid-Based Metabolic Flux Analysis**
* **Medical Image Processing, Parallel Image Reconstruction (e.g., MRI, CT) and Distributed Image Analysis for Diagnosis**
* **Parallel Virtual Screening and Distributed Drug Interaction Models**
* **Electronic Health Records (EHR) Management and Parallel Processing of EHRs**
* **Personalized Medicine and Parallel Algorithms for Patient Data Analysis**
* **Grid Computing for Genome-Wide Association Studies (GWAS), Computational Infrastructure and Frameworks of Cloud Computing in Life Sciences**
* **Hybrid Cloud Solutions for Healthcare and High-Performance Computing (HPC) in Biomedical Research**

# Details:

Track Name: **Special Session-03 Prof. (Dr.) Tiratha Raj Singh "Parallel, Distributed and Grid Computing Applications in Bioinformatics, Systems Biology, Biomedical and Healthcare**

Track URL: <https://cmt3.research.microsoft.com/PDGC2024/Track/22/Submission/Create>

Track Chair: **Prof. (Dr.) Tiratha Raj Singh**

# Conference Name: 2024 Eighth International Conference on Parallel, Distributed and Grid Computing (PDGC- 2024)(In Hybrid Mode) December 18-20, 2024, Waknaghat, Solan, Himachal Pradesh, India

Conference URL: [**https://www.juit.ac.in/pdgc-2024/index1.php**](https://www.juit.ac.in/pdgc-2024/index1.php)