GeoComputation 2009

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May 25–27, 2009 • Baton Rouge, Louisiana, USA

History

- The **Workshop on GeoComputation** has been held in conjunction with the International Conference on Computational Science (ICCS) in
  - Amsterdam (2002),
  - St. Petersburg (2003),
  - Krakow (2004),
  - Atlanta (2005),
  - Reading (2006),
  - Beijing (2007),
  - Krakow (2008),
  - **Baton Rouge** (2009),
  - and ...

What is GeoComputation?

- GeoComputation is about using various types of geographical and environmental data and developing relevant tools within the overall context of a computational scientific approach.
- It applies new computational techniques, algorithms, and paradigms that are dependent upon and can take advantage of Grid Computing.
- Relevant techniques include spatial data analysis, dynamic modeling, simulation, space-time dynamics, and visualization and virtual reality.
- This year the **Workshop on Data Mining in Earth Sciences** merged with GeoComputation, adding in techniques for feature extraction, model-data comparison, and validation/verification on very large Earth Science data sets.

Schedule - W25a: GeoComputation

D - Paramount Room Tue, 26 May 2009, 15:45–17:25

1. **GeoComputation 2009**
   Author(s): Y. Xue, F.M. Hoffman, D.S. Liu
   Presenter: Y. Xue, IRSA, CAS
2. **Grid Workflow Modeling for Remote Sensing Retrieval Service with Tight Coupling**
   Author(s): J.W. Ai, Y. Xue, J. Guang, Y.J. Li, Y. Wang
   Presenter: Y. Xue, Chinese Academy of Sciences
3. **An Asynchronous Parallelized and Scalable Image Resampling Algorithm with Parallel I/O**
   Author(s): Y. Ma, L.J. Zhao, D.S. Liu
   Presenter: Y. Ma, Center for Earth Observation and Digital Earth, Chinese Academy of Sciences
4. **Design and Implementation of a Scalable General High Performance Remote Sensing Satellite Ground Processing System on Performance and Function**
   Author(s): J. Li, D. Liu
   Presenter: J. Li, Center for Earth Observation and Digital Earth, Chinese Academy of Sciences

Schedule - W25b: GeoComputation

D - Paramount Room Wed, 27 May 2009, 10:50–12:30

1. **Incremental Clustering Algorithm For Earth Science Data Mining**
   Author(s): R.R. Vatsavai
   Presenter: R.R. Vatsavai, Oak Ridge National Laboratory
2. **Overcoming Geoinformatic Knowledge Fence: An exploratory of intelligent geospatial data preparation within spatial analysis**
   Author(s): J. Wang, C.J. Zhao, F.Q. Niu, Z.Q. Wang
   Presenter: J. Wang, National Engineering Research Center for Information Technology in Agriculture
3. **Spatial relations analysis by using fuzzy operators**
   Author(s): M. Salamat, M. El-hadi Zahzah
   Presenter: M. Salamat, University of la Roche, Laboratoire de Mathématiques, Images et Applications. Avenue M Crèpeau La Rochelle 17042, France
4. **A Parallel Nonnegative Tensor Factorization Algorithm for Mining Global Climate Data**
   Author(s): Q. Zhang, M.W. Berry, B.T. Lamb, T. Samuel
   Presenter: Q. Zhang, Wake Forest University

Schedule - W25c: GeoComputation

D - Paramount Room Wed, 27 May 2009, 13:45–15:25

1. **Querying for Feature Extraction and Visualization in Climate Modeling**
   Author(s): C.R. Johnson, M. Glatter, W. Kendall, J. Huang, F. Hoffman
   Presenter: C.R. Johnson, University of Tennessee
2. **Applying Wavelet and Fourier Transform Analysis to Large Geophysical Datasets**
   Author(s): B.J. Brooks
   Presenter: B.J. Brooks, Iowa State University
3. **Seismic wave field modeling with graphics processing units**
   Author(s): T. Danek
   Presenter: T. Danek, AGH - University of Science and Technology

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