Physics Colloquium

"Solar Data Mining"

Dr. Rafal Angryk
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Friday, September 20, 2013
4:10 – 5:00 pm, 108 EPS

Abstract: The focus of this seminar is on Big Data Analytics of the Solar Dynamics Observatory (www.nasa.gov/sdo/), which is a flagship of NASA's current "Living with a Star" program. The audience will first learn about the importance of solar data analysis, then about the complexity of data maintained on the servers in our Data Mining Lab (http://dmlab.cs.montana.edu/). After that, three ongoing research projects will be introduced with the hope of creating research interests among the audience. We will talk about (1) the Content-based Image Retrieval (CBIR) system for solar data, (2) the development of machine learning techniques for automated validation of NASA's software modules dedicated to the recognition of popular types of solar phenomena, and (3) the search for spatio-temporal co-occurrence patterns among different types of solar activity. Finally, we will briefly talk about the future of our solar databases and data mining works, and the potential for new research funding.

Host: Piet Martens

Refreshments 3:45 p.m.
EPS 2nd Floor Atrium

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