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GULF COAST ACADEMIC SUPERCOMPUTING

IMPROVED NETWORK PROVISIONING THROUGH PHYSICAL LAYER MEASUREMENTS IN OPTICAL NETWORKS

Maanasa Madiraju, University of Houston, College of Technology



High bandwidth and low loss characteristics of optical networks have brought them up to commodity status in availability for supercomputing applications. This work is on improved provisioning of optical networks through measurements in the physical layer where cross-layer communication is enabled deeper in the substrate. Initial plans of integration of physical measurements into a control framework will be presented.

This work is supported by GENI infrastructure grants and it will be performed on the Texas regional optical network, LEARN, by integration with one of the Spiral-1 frameworks, namely ORCA.