Abstract for an Invited Paper
for the DAMOP07 Meeting of
The American Physical Society

**Optical Quantum Imaging, Computing, and Metrology: What's New With N00N States?**

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Information science is entering into a new era in which certain subtleties of quantum mechanics enables large enhancements in computational efficiency and communication security. Naturally, precise control of quantum systems required for the implementation of quantum information processing protocols implies potential breakthoughs in other sciences and technologies. We discuss recent developments in quantum control in optical systems and their applications in metrology and imaging. In this context, we particularly focus on novel schemes for the generation, characterization, and detection of N00N and related entangled states of light.