

# Reproducible Results: Challenges for Computational Science and the Scientific Method

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Efforts are emerging across numerous scientific disciplines to develop practices of really reproducible computational research. Computation is becoming central to the scientific enterprise and standards for communication are including making all details of the computations – data and code – conveniently available, with the published paper. This talk motivates the principle of reproducibility computational science, and parses the multifaceted approach necessary to achieve this goal, including automated tools [1], open source code licensing [2], and best practices from funding agency, journal, and scientists perspectives.

## References

- [1] *Reproducible Research: Tools and Strategies for Scientific Computing*, Applied Mathematics Perspectives Workshop, Vancouver, BC, July 2011. See <http://stodden.net/AMP2011>.
- [2] V. Stodden, “The Legal Framework for Reproducible Research in the Sciences: Licenses and Copyright,” *IEEE Computing in Science and Engineering*, 11(1), January 2009.