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# Citation of Scientific Software

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Frisco, Colorado, 8-11 July 2014

Attribution for Software and Source Code  
Wednesday 9 July 2014

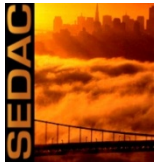


# Why Cite Scientific Software?

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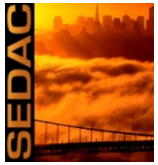
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- **Reproducibility:**
  - Allow others to use the same software to repeat the study
- **Attribution:**
  - Recognize source (creator, publisher or center)
- **Documentation:**
  - Identify software used, enable software reuse
- **Provenance:**
  - Record version and release of the software used



# Attribution: Software Recognized in Grant Proposals

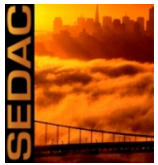


- NSF GPG Instructions for Results from Prior NSF Support
  - "evidence of research products and their availability, including, but not limited to: data, publications, samples, physical collections, software, and models". NSF 14-1, II-10.
- NSF GPG Instructions for Biographical Sketches - Products
  - "Acceptable products must be citable and accessible including but not limited to publications, data sets, software, patents, and copyrights". NSF 14-1, II-12.
- NSF GPG Instructions for Data Management Plans
  - "types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project" NSF 14-1, II-21.

Source: The National Science Foundation Proposal and Award Policies and Procedures Guide: Part 1 - Grant Proposal Guide. 2013. Effective February 24, 2014. NSF 14-1.



# Interpreting Guidance for Referencing Software



	APA	MLA	Harvard
• Author:	✓	✓	✓
• Publication Date	✓	✓	✓
• Title	✓	✓	✓
• Version	✓	✓	✓
• Media or Category	✓	✓	✓
• Distributor		✓	
• Retrieval Date	✓		✓
• Location	✓		✓
• Operating System		✓	
• Size		✓	

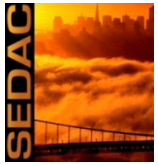


# Citing Different Types of Scientific Software

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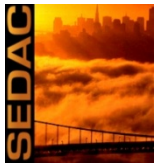
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- Data services
  - Integration, analysis,
- Web services
  - Standards compliant
- Applications (resident & mobile)
  - APIs
- Clients
  - Installed on a specific platform
- Database Management Systems
  - Data Catalogs
  - Archival Services



# Recommendations for Practice



- Software Developers: Include a recommended citation for the software in the software *documentation*.
- Software Users: *Cite* software used for publications, both *in-text* and *referenced* in the list of references.
- Data Centers: Establish and implement policies to *provide guidance* on citing data and scientific software and offer *Recommended Citations* for data products and services, including web services, and apps offered.
- Publishers: Ensure that authors and reviewers are informed that *software should be cited* in-text and referenced in the list of references.