Annotated Bibliography of Ethical Issues in Physics: Data Management

Marshall Thomsen
Eastern Michigan University, jthomsen@emich.edu

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Ethical Issues in Physics
Bibliography assembled by
Marshall Thomsen
Eastern Michigan University
February 2012
Data Management

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Science and Engineering Ethics
Volume 16, Number 4 / December 2010, pp. 639-667
Manipulation of Scientific Digital Images
Douglas W. Cromey
The author proposes twelve guidelines for the proper use of digital images in scholarly publications, and provides a rationale for each of the guidelines.

Science and Engineering Ethics
Volume 16, Number 4 / December 2010, pp. 669-673
Generalizing on Best Practices in Image Processing: A Model for Promoting Research Integrity
Commentary on: Avoiding Twisted Pixels: Ethical Guidelines for the Appropriate Use and Manipulation of Scientific Digital Images
Dale J. Benos and Sara H. Vollmer
New tools make it easier now to detect image manipulation.

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The Essential Nature of Sharing in Science
Beth A. Fischer¹,² and Michael J. Zigmond
An extensive discussion of the issues associated with sharing data, including a look at how the scientific community benefits from sharing, what data should be shared, and what barriers to sharing exist.

Sharing Data is a Shared Responsibility
Commentary on: “The Essential Nature of Sharing in Science”
Joe Giffels
The author points out that sharing data can be a resource intensive process.

Image Manipulation as Research Misconduct
Debra Parrish and Bridget Noonan
This brief article looks at ORI cases involving manipulation of images prior to publication.
North Carolina institute offers to archive old astronomy data
Toni Feder
This news article raises issues about what to do with older data stored on outdated media.

A 21st-century vision for geophysical data management
Daniel N. Baker
The tradition in geophysics is to make data as widely and freely available as possible. The author discusses changes that are needed to uphold this tradition in light of rapid technological development.

The authors studies 45 cases of misconduct by examining records at the Office of Research Integrity. They focused on misconduct by students or post-docs and concluded that the mentors often had not set explicit standards for the students to follow.

The author examines the question of whether or not Millikan committed fraud in his oil drop paper. Included is a review of historical standards as well as of current standards for data analysis and presentation.