Plan Overview

A Data Management Plan created using DMP Tool

Title: Pawan Takhar UIUC DMP

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Principal Investigator: Pawan Takhar

Data Manager: Pawan Takhar

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Funding opportunity number: 15194

Template: USDA - NIFA: National Institute of Food and Agriculture

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Copyright information:

Pawan Takhar UIUC DMP

Expected Data Type

Describe the type of data (e.g. digital, non-digital) and how they will be generated (lab work, field work, surveys, etc.). Are these primary or metadata?

Data Management Plan

The expected data to be generated during the course of this project include:

Analyzed Data

Written Material: Word and LaTeX files

Spreadsheets: Excel files

Curriculum Materials: Word, LaTeX and PowerPoint files

Digital Images: TIFF, JPEG, Bitmap

Software Files: Comsol mph files, Matlab m files, and Avizo binary files.

The solution methodology, information on solver type, finite element technique, number of elements, method of implementing the equations in software package, step size etc. will be published in the peer-reviewed papers. The developed computer model for solving the equations will also be saved on University of Illinois' storage media discussed below.

Raw Instrumentation Data

This project will generate raw instrumentation data from microbial analysis performed at Ohio State and collaborating institutes.

This data falls under the category of "preliminary analyses" and NSF Data Management Plan guidelines indicate that this is not be included at the basic level of digital data to be archived. However, some of the raw data will also be retained, which include: *SEM* images, thermogram files, X-ray CT generated tiff files.

Proprietary or Restricted Data

The proposal does not involve proprietary or restricted data.

PIs at collaborating Universities will be responsible for the management and retention of research data generated by their groups, in their own labs and in shared facilities.

Period of Data Retention

The data generated for this project will be retained for a period of at least three years after the conclusion of the award or three years after public release, whichever is later.

Data Formats and Dissemination

The data generated under this project will be made available to others in several ways - data contained in thesis will be archived by the graduate schools at both universities; lectures and teaching materials will be stored in departmental storage archives and IDEALS (Illinois Digital Environment for Access to Learning and Scholarship) digital repository at the University of Illinois. IDEALS provides preservation, search, and browsing functions at http://www.ideals.illinois.edu/.

IDEALS is designed to collect, disseminate, and provide persistent and reliable access to the research and scholarship of faculty, staff, and students at the University of Illinois. IDEALS provides a direct deposit mechanism for loading digital content and assigning the appropriate metadata for the content. IDEALS will provide the capability of open access for this project. In addition, the Library is developing a trusted digital repository environment that will be compliant with all preservation and archiving standards.

Metadata for project data will be assigned in accordance with established metadata standards and best practices. The Dublin Core Metadata Initiative specification and standards (http://dublincore.org/) will be investigated and applied whenever possible. Additional discipline specific controlled vocabulary schemes will be used in the assignment of project data metadata. This will be done in consultation and collaboration with Library faculty in the Library Information Technology group and the Grainger Engineering Library Information Center (http://search.grainger.uiuc.edu/top/).

Data Storage and preservation of access

The IDEALS repository is administered by the University Library and operated by the University of Illinois Campus Information Technologies and Educational Service (CITES). The University of Illinois offers a rich and comprehensive cyberinfrastructure environment. IDEALS provides a trusted and effective preservation and archiving environment and the Library is committed to the development and maintenance of a certified digital repository. In addition, the Library Information Technology group and the Grainger Engineering Library digital library group have developed custom access and discovery technologies that will be leveraged and enhanced for this grant project.

Project Data Sharing Between UIUC and Other Institutes Under this Project

The analyzed and raw data will be shared between the collaborating Universities for use in research and outreach activities planned under this project.

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Data Format

For scientific data to be readily accessible and usable it is critical to use an appropriate community-recognized standard and machine readable formats when they exist. The data should preferentially be stored in recognized public databases appropriate for the type of research conducted. Regardless of the format used (notebook, samples, images, spreadsheet, etc.), that data set should contain enough information to allow independent investigators to understand, validate, and use the data.

Question not answered.

Data Storage and Preservation

Scientific data should be stored in a safe environment with adequate measures taken for its long-term preservation. Applicants should describe plans for storing and preserving their data during and after the project and specify the data repositories, if they exist. They should outline strategies, tools, and contingency plans that will be used to avoid data loss, degradation, or damage.

Question not answered.

Data Sharing and Public Access

Describe your data access and sharing procedures during and after the grant. Provide any restrictions such as copyright, confidentiality, patent, appropriate credit, disclaimers, or conditions for use of the data by other parties.

Question not answered.

Roles and Responsibilities

Who will ensure DMP implementation? This is particularly important for multi-investigator and multi- institutional projects. Provide a contingency plan in case key personnel leave the project. Also, what resources will be needed for the DMP? If funds are needed, have they been added to the budget request and budget narrative? Projects must budget sufficient resources to develop and implement the proposed DMP.

Question not answered.

Monitoring and Reporting

Successful projects should monitor the implementation of the DMP throughout the life of the project and after, as appropriate. Implementation of the DMP should be a component of annual and final reports to NIFA (REEport) and include progress in data sharing (publications, database, software, etc.). The final report should also describe the data that was produced during the award period and the components that will be stored and preserved (including the expected duration) after the award ends.

Question not answered.