

---

# **Pawan Takhar UIUC DMP**

*A Data management plan created using the DMPTool*

Creator(s): Pawan Takhar

Affiliation: University of Illinois at Urbana-Champaign

Last modified: May 15, 2015

Copyright information: The above plan creator(s) have agreed that others may use as much of the text of this plan as they would like in their own plans, and customize it as necessary. You do not need to credit the creators as the source of the language used, but using any of their plan's text does not imply that the creator(s) endorse, or have any relationship to, your project or proposal.

# Pawan Takhar UIUC DMP

---

## Expected Data Type

### **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 to 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.

#### **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.

### **Data Format**

### **Data Storage and Preservation**

### **Data Sharing and Public Access**

## **Roles and Responsibilities**

## **Monitoring and Reporting**