

# **OOMMF Workshop 2000**

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National Institute of Standards and Technology  
Gaithersburg, MD 20899, USA

**<http://math.nist.gov/oommf>**

Mike Donahue

Don Porter

Bob McMichael

Jason Eicke (GWU)

# Program

**8:00** Registration (Room A316)

**8:15** Introduction and Opening Remarks

**8:30** Installation Procedure and Architecture Overview

**9:00** Simple Example

- Widget Demo
- Complex Geometries
- Post-Processing: Reading log and data files, making animations

**10:00** Break

**10:15** User Talks

- Xiaobin Zhu, McGill University, “Domain Structures in Patterned Permalloy Films”
- NgocNga Dao, University of New Orleans, “Micromagnetics Simulation of Deep-Submicron Supermalloy Discs”
- Ashwin Sunder, Washington University in St. Louis, “Micromagnetic Simulations of Recording Media Using OOMMF”

- Yi Liu, McGill University, “Magnetic Point Contact”

**11:00** Details of 2D Solver

**11:10** Advanced Examples

- Editing MIF Input Files
- Non-Uniform Applied Fields
- Control Point Specification
- Dynamical Problems
- Using the OOMMF Batch System

**12:00** Lunch

**1:30** The OOMMF Extensible 3D Solver (OXS)

- Introduction
- Example
- Programming a New Energy Term

**2:30** User Supplied Problems

**3:30** Closing Remarks

## Design Criteria

- Portable
  - Tcl/Tk
  - Windows NT/95/98, Unix + X
- Open Design
  - Module level
  - Tcl/Tk script level
  - C++ source code level
- Flexible
  - Simplicity vs. functionality

## Requirements

- Tcl/Tk 7.6/4.2+ (8.0+ recommended)  
Tcl Developer Xchange: <http://dev.scriptics.com>  
Ajuba Solutions: <http://www.ajubasolutions.com>
- Windows NT/95/98 or Unix+X
- TCP/IP networking (on localhost)
- RAM: 32MB
- Disk space: 8/15 MB
- C++ compiler to build from source

## OOMMF Testbed Systems

Platform	Compilers
AIX	Gnu gcc
Alpha/Digital UNIX	Digital C++, Gnu gcc
Alpha/Linux	Compaq C++, Gnu gcc/egcs
Alpha/Windows NT	Microsoft Visual C++
HP-UX	HP C++ (cfront), aC++
Intel/Linux	Gnu gcc/egcs
Intel/Windows NT, 95, 98	Microsoft Visual C++, Cygwin gcc, Borland C++
MIPS/IRIX 6 (SGI)	MIPSpro C++, Gnu gcc
SPARC/Solaris	Sun Workshop C++, Gnu gcc

# OOMMF Directory Layout

**oommf**

**app**

<b>mmarchive</b>	<b>mmhelp</b>	<b>mmsolve2d</b>
<b>mmdisp</b>	<b>mmlaunch</b>	<b>omfsh</b>
<b>mmgraph</b>	<b>mmpe</b>	<b>oxs</b>
<b>mmdatatable</b>	<b>mmsolve</b>	<b>pimake</b>

**config**

<b>cache</b>	<b>local</b>	<b>persons</b>
<b>features</b>	<b>names</b>	

**doc**

<b>giffiles</b>	<b>psfiles</b>
<b>pngfiles</b>	<b>userguide</b>

**ext**

<b>if</b>	<b>net</b>	<b>ow</b>
<b>nb</b>	<b>oc</b>	<b>vf</b>