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Department: CSEE  
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## **INFORMED CONSENT FOR PARTICIPATION IN RESEARCH ACTIVITIES**

**Project title: Design and evaluation of visualization methods for scalar, vector, and tensor fields and graphs**

### **I. INTRODUCTION/PURPOSE:**

I am being asked to participate in a research study. The purpose of this study is to compare, understand, or enhance interactive visualization methods to improve human ability to use interactive user interface for knowledge discovery. I am being asked to volunteer because I may help understand how we see and interact with computers. My involvement in this study will begin when I agree to participate and will continue until the end of the study in about an hour. About 25 persons will be invited to participate.

### **II. PROCEDURES:**

As a participant in this study, I will be asked to perform a set of visualization tasks using several interfaces and visualization methods on a computer screen. These tasks consist of viewing several interactive display methods for pathway analysis. I will be asked to fill out a pre-questionnaire relating to my background with such systems. I may be asked take a short test of my visual and spatial abilities and background knowledge in computer uses. My participation in this study will last for about 1.5 hour in a single visit. Audio or video recording or detailed note taking may occur.

My role to the tests is that of evaluator of the software. I will not be evaluated in any way; but be helping evaluate the visualization system. All information that obtained from me will remain anonymous. The time it takes me to do each task and other aspects of my interaction with the system will be measured. I can ask questions during and after the evaluation, in order to clarify my understanding of the experiment.

### **III. RISKS AND BENEFITS:**

My participation in this study does not involve any significant risks and I have been informed that my participation in this research may or may not benefit me personally. I may get to learn the state-of-the-art image processing techniques.

I have been informed that participation in this study may involve no foreseeable risks, beyond those present in routine daily life. All light and sound intensities are well within normal range. The physical components of these tasks are not stressful, and include only head and body turning and pointing. The only foreseeable physical risks are very slight eyestrain caused by the use of a computer monitor. There are no known mental risks.

### **IV. CONFIDENTIALITY:**

Any information learned and collected from this study in which I might be identified will remain confidential and will be disclosed ONLY if I give permission. The investigator (s) will attempt to keep my personal information confidential. To help protect my confidentiality, other than the consent forms, my name will not appear in any other information provided for this study. My responses to various questionnaires will be matched using a participant identification number that has been assigned to me for the duration of this study. The computer saved the performance files will be password-protected. At the conclusion of data collection for this study, the list linking

participant names with participant identification numbers will be destroyed.

Data gathered from the present study will be stored in a secure location in locked filing cabinets for six years, at which time it will be destroyed. Findings will be presented in aggregate form with no identifying information to ensure confidentiality.

Only the investigator and members of the research team will have access to these records. If information learned from this study is published, I will not be identified by name. By signing this form, however, I allow the research study investigator to make my records available to the University of Maryland Baltimore County (UMBC) Institutional Review Board (IRB) and regulatory agencies as required to do so by law.

Consenting to participate in this research also indicates my agreement that all information collected from me individually may be used by current and future researchers in such a fashion that my personal identity will be protected. Such use will include sharing anonymous information with other researchers for checking the accuracy of study findings and for future approved research that has the potential for improving human knowledge.

Additionally, (1) my name will not be included on the surveys and other collected data; (2) a code will be placed on the survey and other collected data; (3) through the use of an identification key, the researcher will be able to link my survey to my identity; and (4) only the researcher will have access to the identification key.

☉ I give permission to record my voice or image and use in scientific publications or presentations.

☉ I do not give permission to record use my voice or image and use in scientific publications or presentations.

**V. SPONSOR OF THE RESEARCH:**

The National Science Foundation and UMBC are sponsoring this research study.

**VI. COMPENSATION/COSTS:**

My participation in this study will involve no cost to me. I will be paid for my participation at \$12 / hour but no more than \$20 total.

**VII. EXPLANATION OF TREATMENT AND COMPENSATION FOR INJURY:**

If I suffer from an injury as a direct result of this research, medical care may be obtained by me in the same manner as I would ordinarily obtain medical treatment. No provision has been made for financial payments or other forms of compensation (such as lost wages, medical cost reimbursement, lost time or discomfort) with respect to such injuries.

**VIII. CONTACTS AND QUESTIONS:**

The principal investigator(s), Jian Chen, has offered to and has answered any and all questions regarding my participation in this research study. If I have any further questions, I can contact Jian Chen at 410.455.8937 or [jichen@umbc.edu](mailto:jichen@umbc.edu).

If I have any questions about my rights as a participant in this research study, contact the Office for Research Protections and Compliance at (410) 455-2737 or [compliance@umbc.edu](mailto:compliance@umbc.edu).

**IX. VOLUNTARY PARTICIPATION**

I have been informed that my participation in this research study is voluntary and that I am free to withdraw or discontinue participation at any time. I have been informed that data

collected for this study will be retained by the investigator and analyzed even if I choose to withdraw from the research. If I do choose to withdraw, the investigator and I have discussed my withdrawal and the investigator may use my information up to the time I decide to withdraw.

*I will be given a copy of this consent form to keep.*

**X. SIGNATURE FOR CONSENT**

The above-named investigator has answered my questions and I agree to be a research participant in this study.

Participant's Name: \_\_\_\_\_ Date: \_\_\_\_\_

Participant's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Investigator's Signature: \_\_\_\_\_ Date: \_\_\_\_\_