

# Introduction to Visual Medicine: Techniques, Applications and Software



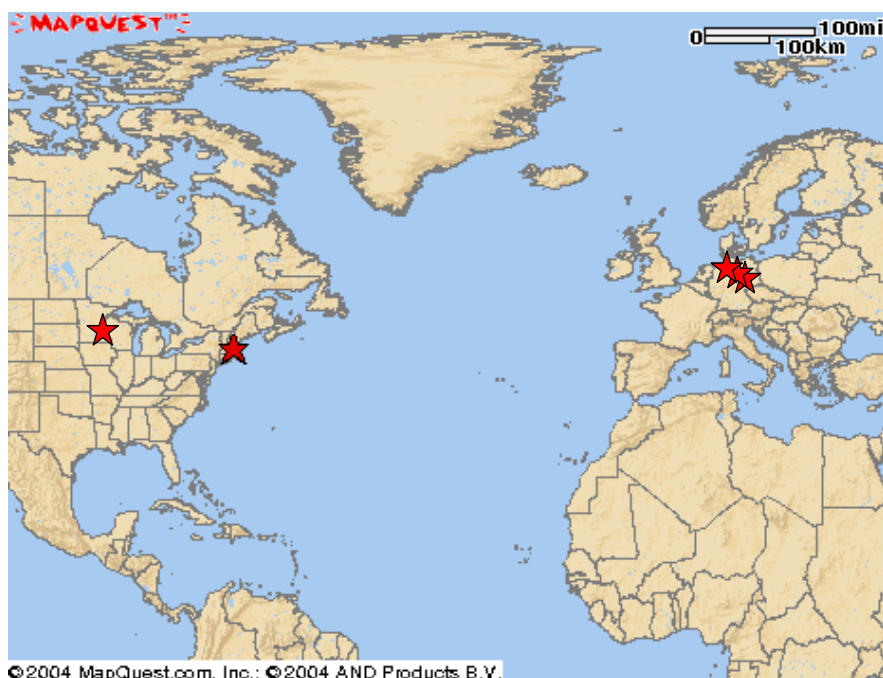
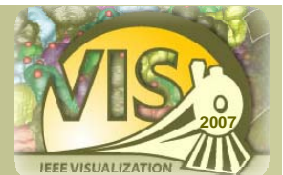
B. Preim, D. Bartz, K. Mueller, F. Ritter, K. Zuiderveld

## Introduction

*Bernhard Preim*

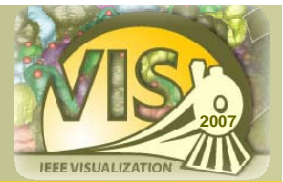
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University of Magdeburg, Germany  
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## Cross-Atlantic Speakers



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# Speakers from Germany



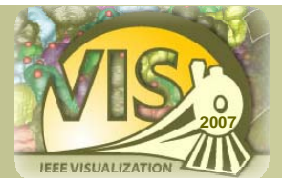
**Felix Ritter**  
Post-Doc. Research  
Fellow, MeVis  
Research, Bremen

**Bernhard Preim**  
Prof. for Vis',  
Univ. of Magdeburg,  
Magdeburg

**Dirk Bartz**  
Associate Prof.,  
ICCAS, Univ. of  
Leipzig



# Dirk Bartz

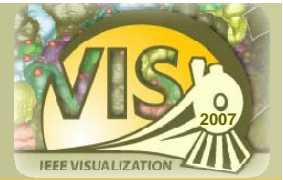


Associate Prof. for  
Computer-Aided Surgery  
and Head of Research  
Group on Visual Computing,  
ICCAS Institute, Univ. of  
Leipzig, Germany

**iccas**  
innovation center  
computer assisted surgery



# Felix Ritter

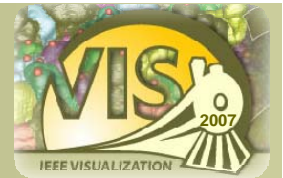


**MeVis**  
RESEARCH

Post-Doc. Research  
Fellow, MeVis Research,  
Bremen, Germany



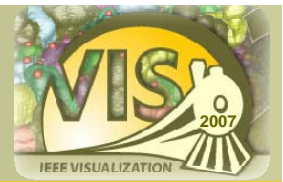
# Bernhard Preim



Prof. for Visualization,  
Univ. of Magdeburg,  
Magdeburg, Germany



# Speakers from the United States



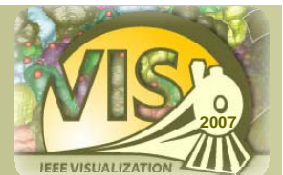
**Klaus Mueller**  
Associate Prof.,  
Center of Visual  
Computing, Stony  
Brook University,  
Stony Brook, NY

**Karel Zuiderveld**  
Director of Core  
Technologies at  
Vital Images,  
Minnetonka, MN



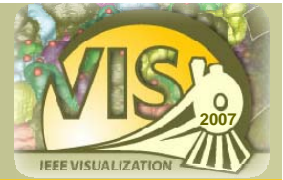
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## Klaus Mueller



Associate Prof., Center  
of Visual Computing,  
Stony Brook University,  
Stony Brook, NY

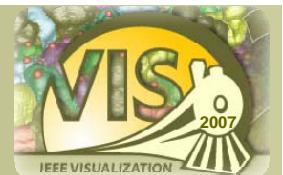




Director of Core Technologies  
at Vital Images, Minnetonka, MN



## Outline



**8:30am-12:20pm**

### **Introduction (Preim), 10min**

- Data-Preprocessing (Segmentation, Classification, Registration, and Fusion) *Bartz*, (45 minutes)
- Visualization and Navigation Techniques (Indirect and direct volume rendering, interaction and navigation models), *Mueller* (45 minutes)
- Visual Programming for Prototyping of Medical Imaging Applications, *Ritter* (35 minutes)
- Medical Visualization in Radiology, *Preim* (20 minutes)
- Visualization in clinical practice - a vendor's perspective, *Zuiderveld* (25 minutes)

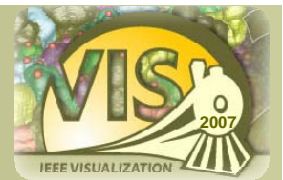
**Questions and Answers (All), 15min**



### **Conference DVD contains additional material:**

- Videos for illustration purposes
- Links to related papers (to avoid copyright clashes ...)
- and the slides, of course

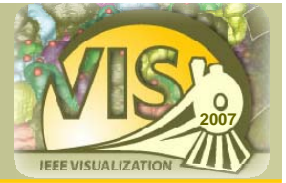
## Updates of Tutorial Notes



### **New and updated material will be available at:**

<http://www.isg.cs.uni-magdeburg.de/cvcms/de/tutorials>

# Prerequisites



Basic 3D graphics

(polygons, triangles, shading, ...)

(Very) basic medical-imaging knowledge

Scientific visualization helps as well