

# Randy Heiland

## WORK EXPERIENCE

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2003 – PRESENT

Indiana University  
Bloomington IN

Associate Director/Manager/Senior System Analyst/Researcher. Scientific software for bioinformatics, biology, neuroscience, fluid dynamics, cybersecurity, and engineering. Adjunct faculty in Mathematics Dept.

2005 – 2010

President  
Acquired Science LLC

Consulting and scientific software development.

1997 – 2003

Senior Research Scientist  
National Center for Supercomputing Applications (NCSA),  
University of Illinois, Urbana IL

Scientific visualization software developer, including virtual reality (CAVE) and haptics. Taught college course in OpenGL.

1993 – 1997

Computer Scientist  
Pacific Northwest National Lab, Richland WA

Scientific visualization software developer for computational chemistry and image analysis.

JULY 1992 – DEC 1992

Graduate Research Associate  
Los Alamos National Lab, Los Alamos NM

Software developer for data visualization and analysis on HPC.

1985 – 1987

Computer Programmer  
Center for Industrial Research, Oslo Norway

Software developer for computer-aided geometric design.

## EDUCATION

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1992 **M.A., Mathematics**  
(*dynamical systems*)  
Arizona State University, Tempe

1985 **M.S., Computer Science**  
(*computer graphics, CAGD*)  
University of Utah, Salt Lake City

1979 **B.S., Computational Math**  
Eastern Illinois University, Charleston

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🔗 scholar.google.com/...  
🔗 github.com/rheiland?tab=repositories

## SAMPLE OF PROJECTS

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**PhysiCell (physicell.mathcancer.org)**  
An open source physics-based cell simulator

**CTSC (trustedci.org)**  
The NSF Cybersecurity Center of Excellence

**SGCI (sciencegateways.org)**  
Science Gateways Community Institute

**SWIP (cacr.iu.edu/projects/swip)**  
Scientific Workflow Integrity with Pegasus

**CompuCell3D (compucell3d.org)**  
Simulation for multi-cell modeling

**LifeScienceWeb**  
Web services for bioinformatics

**VisBench/VisPort**  
Remote data visualization and analysis

**ECCE (ecce.emsl.pnl.gov)**  
Extensible Computational Chemistry Environment

## SOFTWARE SKILLS

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GOOD LEVEL C/C++, Python(+numerous pkgs), OpenGL, VTK, CMake, ParaView, MATLAB, git,  $\LaTeX$ , Eclipse, gdb, Linux, OSX

INTERMEDIATE Fortran, Java, R, CUDA, OpenCL, OpenMP, ITK, HTML, Xcode

BASIC LEVEL MySQL, MPI, Boost, Django, Mathematica, Javascript, Blender, Windows

## PUBLICATIONS/PRESENTATIONS

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Google Scholar

## REFERENCES

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Available upon request.