



IUPUI

**SCHOOL OF INFORMATICS
AND COMPUTING**

DEPARTMENT OF HUMAN-CENTERED COMPUTING

Indiana University-Purdue University
Indianapolis

Grant Information:

Albert William

School of Informatics Indiana University Purdue University Indianapolis

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Biography:

Albert William is a Lecturer in the Media Arts and Science Program. He specializes in three-dimensional design and animation of scientific and medical content.

He received the 2003 Silicon Graphics Inc. award for excellence in computational sciences and visualization. He received the 2016 award for Excellence in the Scholarship of Teaching, The 2018 Service and Community Engagement Award and the 2019 IUPUI Trustees Teaching Award.

Albert has also led a service learning study abroad program to Greece from 2015-2019 that documented cultural and historical artifacts by creating videos that include photography, 3D reconstructions of ancient sites, and virtual reality.

Research Interests:

- 3D Animation for education
- AI training
- Cultural Heritage Documentation
- Stereoscopic Production and Displays
- Virtual Reality

PROFESSIONAL HONORS AND AWARDS:

2019 IUPUI Trustees Teaching Award

2018 IUPUI School of Informatics and Computing Excellence in Engagement and Service

2018 Best Medical Video at The American Thoracic Society Conference San Diego May 2018
“Measurement of Transpulmonary Pressure with Esophageal Balloon to Titrate PEEP”

2017 IUPUI OVPIA Global Engagement Award

2016 IUPUI School of Informatics and Computing Excellence in the Scholarship of Teaching award

2011 "A Universe of Questions" won best of Best of the Fest 3D Short at the LA Film and Music Festival

2003 Silicon Graphics Inc Award for excellence in Computational Sciences and Visualization at Indiana University.

Education:

Bowling Green State University, Bowling Green, OH, BS Biology 1984

Indiana University Purdue University at Indianapolis, Indianapolis, IN MS Informatics Media Arts and Science 2002

Appointments & Positions:

August 2003 - Present- Indiana University -Purdue University Indianapolis, Indianapolis, Indiana. School of Informatics, Human Centered Computing, Media Arts and Science, Lecturer

January 2009 - January 2013- Indiana University -Purdue University Indianapolis, Indianapolis, Indiana. Joint appointment with UITS Advanced Visualization Laboratory

January 2003 - May 2003- Indiana University -Purdue University Indianapolis, Indianapolis, Indiana. School of Engineering. Associate Faculty Member

August 2001 - December 2001- Indiana University Purdue University Indianapolis, Indianapolis, Indiana. School of Informatics, Department of New Media. Adjunct Professor.

Primary Classes:

N243- Introduction to 3D

N341- Lighting and Materials

N342- 3D Animation

N343 -3D Modeling

N437 -SciFi in Virtual Reality

N441- 3D Team Production

N444- Stereoscopic Production and Display Technologies

N485- Gencon Pilot 3D Group

N490 Undergraduate Independent Study

N499- Undergraduate Capstone Project

N506- Graduate Capstone Project

N553- Graduate Independent Study

Selected Projects, Presentations, & Grants and Synergistic Activities:

Co-PI (with Dr. Lauren Christopher of ECE) on the \$348,000 Office of Naval Research grant
Naval Imagery Infrastructure Revitalization Awarded Aug 2020

Co-PI (with Dr. Lauren Christopher of ECE) on the \$100,000 Scientific Applications
International Corp grant *3D Threat Detection using Virtual-Environment Assisted Deep
Network Training*. Awarded Jan 2019

Co-PI (with Dr. Lauren Christopher of ECE) on the \$237,000 Office of Naval Research grant
*STEM: 3D Visualization of RF Signals in Electronic Warfare (EW) to Enhance Warfighter
Training*.

Co-PI (with Andrea Copeland, Ayoung Yoon, and Zeb Wood) on Bethel AME VR \$50,000.

Co-PI (with Edgar Huang, Andrew Townsend, Zeb Wood) on IUPUI VR Bicentennial Grant
\$35,000.

“Mr Bubbles and the Tangled Web”- N441 Team Production project - three minute animation
on worldwide oceanic plastic pollution Dec 2020

Study Abroad Program to Paros, Greece *Documenting the Historical and Cultural Artifacts of
Paros, Greece*

School of Informatics Study Abroad Page with associated produced works:

<http://soic.iupui.edu/undergraduate/greece-study-abroad/>

“StressTest”- a PSA for student stress. N441 Team Production class. Dec 2019

“MAS Commercial”. N441 Team Production project Dec 2019

Madame Walker Theater Historical VR Project. N441 Team Production project. Dec 2018

Historic Washington Street VR. N441 Team Production project, this VR project allows users to
experience the look and feel of Washington St in Indianapolis, In in the year 1927 Dec 2017

Bethel AME VR. A historic recreation of the African American church in Indianapolis, In. N441
Team Production project May 2017

Created all 3D graphics for the School of Nursing DVD “*Time to ACT: Approaches
to Colon Testing*”. This DVD was distributed to thousands of patients in the Midwest. Feb 2017

“Cyanostars” Cover art for the international Royal Society Of Chemistry Journal of Chemical Communications. July 2014

“Iggy’s Adventure in Science” – N441 Team Production project. This animation was created for, and in collaboration with, Kristie Satterfield, the fourth grade teacher at Brandywine Elementary School in Hancock County, for use in the science curriculum there. May 2014

Developed a workflow to create MRI derived data of scapular structures, create jigs using 3D software and 3D print all components for use in surgical situations. April 2014

"Visualizing the Dynamic Process of an Artificial Lesion in Human Enamel". IU School of dentistry November 2012

"Molecular Simulations of the Dynamic Properties of Wild Type and Mutated 14-3-3 Sigma Protein". School of Medicine Toxicology Department. October 2012

“Investigating Hidden Worlds” AVL Teragrid Educational Outreach Program. August 2012

"A Universe of Questions" AVL Teragrid Educational Outreach Program. This stereoscopic piece won best of shorts film at the 3D film fest in Los Angeles; Sept 28, 2011 December 2010

"Leading the Way into the Future" AVL Teragrid Educational Outreach Program. July 2010

Autologous Transplant Information, and Allogeneic Transplant Information. Indiana University School of Nursing Jan 2010

“Disorderd Proteins in the Wint Pathway” Center for Computational Biology. This two minute animation was designed to show a model of protein interaction and folding that is a ground breaking theory being pursued by Dr. Keith Dunker. December 2009

“What is Cancer” - Simon Cancer Center Website Mar 2009

Created all computer generated animation for the PBS series “Mastering Your Health” April 2009

“Animating a Novel Parkinson’s Disease Model: An Educational Tool for Medical Researchers and the Public” with Dr. Richard Nass of the Department of Toxicology, IU School of Medicine. Sept 2008

“Therapies for Idiopulmonary Fibrosis” - Immuneworks June 2007

Presented “Stereoscopic Visualization of Scientific and Medical Content” at ACM SIGGRAPH 2006 in Boston

“Innovative Approaches to Tailored Therapies for Cancer” for the Enzastaurin team at Eli Lilly and Co. October 2006

“PKC β Implications in Diabetic Retinopathy” for the Ruboxistaurin team at Eli Lilly and Co. January 2006

“Hip and Knee Replacement Surgery” - Operation Walk Celebration in April 2005

Ruth Lilly Health Education Center series of stereoscopic health education movies 2003-2007.