



G. CHARMAINE GILBREATH, PH.D.

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OBJECTIVE

Combine fundamentals of engineering and joy of scientific discovery with the power of 3D visualization

EDUCATION

Diploma | The Digital Animation & Visual Effects School, Orlando, FL

Awarded December, 2017 Certificate of Completion in 3D Visual Effects

Doctorate | The Johns Hopkins University

Awarded May, 1990 Degree in Engineering Science

Dissertation on realtime holography using photorefractive crystals.

Masters | The Johns Hopkins University

Awarded June, 1986 Degree in Engineering Science; specialization: optics

Coursework in classical and modern optics as well as standard core curriculum for Electrical Engineering

B.S. | Georgia Institute of Technology

Awarded August, 1982

Major: Physics; Minor: Electronics Awarded August, 1982

EXPERIENCE

Chief Technology Officer | Imaginings, LLC, Orlando, Florida

[2015 - PRESENT]

Technical and artistic consulting in 3D Visualization and in volumetric sensing to include stereoscopic and LIDAR/LADAR based imaging

Student | The Digital Animation & Visual Effects School, Orlando Florida

2016 - 2017

Studied modelling, animation, texturing and lighting, compositing, and 3D matte painting; Final Project: Teamed to complete short film for NASA. My assignment was to model, rig, and texture a satellite, and to model, rig, and create UV maps for the planet Saturn; I also was tasked with creating, animating, and compositing the closing title shot.

Senior Electronics Engineer | U. S. Naval Research Laboratory, Washington, D.C.

1982 – 2015 (RETIRED)

Subject Matter Expert in photonics and optics; Group Head: Photonic Comms; Branch Head: Remote Sensing; Program Management: laser communications; LADAR applications; multi-sensor demonstrations and analysis; Principal Investigator: laser communications; holography; Advisor to NASA and DARPA; Senior Scientist Detail to Intelligence Sector.

SKILLS:



MAYA



PHOTOSHOP



MicroSoft Office



ZBRUSH



VRAY for MAYA



MicroSoft Project



NUKE

- Standard electronics and instrumentation for experimental digital and analog design, testing, and analysis
- Lasers: Nd_YAG; HeNe; laser diodes;
- Lens systems for optical systems to include laser communications; laser radar; LIDAR,
- holography and stereoscopy.

PUBLICATIONS/PATENTS

Over 200 publications and presentations in refereed journals and peer-reviewed conferences and proceedings; five patents; Bibliography available upon request.

AWARDS/RECOGNITION

- Featured in Growing Bolder, online magazine, Nov. 9, 2017, <https://www.growingbolder.com/shes-on-a-quest-and-she-wont-be-stopped/s=gilbreath>
- Fellow of the International Society for Optics & Photonics (SPIE), elevated from Member 2005
- NRL Edison Fellow, 1986-1990
- NRL Berman Publication Awards
- Guest Editor, SPIE Optical Engineering, Special issue on 3D and 4D Imaging

PROFESSIONAL SOCIETIES

- International Society for Optics & Photonics (SPIE) - Fellow;
- Society of Women Engineers;
- American Institute of Aeronautics and Astronautics;
- The Computer Graphics (CG) Society