

## BRAD GRANTHAM

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### SUMMARY

I'm an experienced GPU software engineering team lead who can write code; drive a project; guide engineers; interface with HW/SW partners and standards bodies; and write and give a presentation.

### PROFESSIONAL EXPERIENCE HIGHLIGHTS

#### Team Lead, LunarG, Inc, May 2019 – Present

- Member of the Board of Directors, *Dec 2021-Present*
- Member of Business Leadership Team, *Dec 2021-Present*
  - Product and business development
  - Technology investigations – WebGPU, AI LLM capabilities, Ray-tracing
- Tech Lead for GFXReconstruct graphics API capture/playback tool, *May 2021-Present*
  - Vulkan, Direct3D 12
  - Lead engineering team of 7, delegate tasks, manage client relationships and priorities
  - Write and review design docs, C++ and Python, and review and edit pull requests
- OpenXR project lead, *August 2019 – May 2021*
  - Managed client relationship; research and planning; API Layer implementing XR\_EXTX\_over\_lay using RPC over shared memory with Direct3D 11; represented client on OpenXR Working Group

#### Staff Software Engineer, Google LLC, August 2018 – March 2019

- Stadia (was Project Stream) Vulkan Driver Stack Tech Lead
- GPU partner relationship

#### Principal Graphics Architect, ARM Inc., April 2010 – April 2018

- ARM representative to Khronos OpenXR open VR/AR API working group
- OpenGL shaders for convolutional neural network investigation
- OpenGL tests/benchmarks, patent applications for proposed GPU hardware features
- Managed port and bringup of Unreal Engine on 64-bit Android with Mali GPU – ISV relationship and directed two additional engineers. “MoonTemple” demo at GDC 2015 with Epic Games
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#### Senior Software Engineer, AMD, January 2008 – April 2010

- Worked on-site with ISVs and partners; wrote tests, samples, and benchmarks for OpenGL

#### Senior Software Engineer, Applications Engineering, Silicon Graphics, January 2002 – September 2005

- Wrote IRIX, Linux, Windows OpenGL samples, benchmarks, tests; white papers, presentations
- US Patent 7460126 for multithreaded 4K video player using 4 OpenML video devices and RAID

#### Member of Technical Staff, Silicon Graphics, June 1995 - April 1999

- Design & implementation for Fahrenheit Scene Graph, OpenGL Optimizer, Cosmo 3D
- US Patent 6933941 describing an object-oriented 3D scene representation (Cosmo 3D)

### OTHER EXPERIENCE

SPIR-V shader core using RISC-V RV32IF; wrote Verilog and C++ emulator for RISC-V core -

<https://github.com/bradgrantham/alice5> , [Slide Presentation](#)

Transform/lighting/clipping library, reference rasterizer, I2C, schematic capture, PCB routing for handheld computer for graphics demos - <http://lkesteloot.github.io/alice/alice4/>

Wrote GLSL ray-tracer using fragment program incl PBR, BVH <http://plunk.org/~grantham/wrt/>

Presented portion of SIGGRAPH 2002-2004 *Performance OpenGL* course

### SAMPLING OF SKILLS

Software schedule planning, client management, C, C++17, Python, Git, Windows, Linux, MacOS, OpenGL, GLSL, Vulkan, Direct3D 12, KiCAD, STM32, ARM Cortex M, Embedded Systems, Verilog, Javascript

### EDUCATION

Graduated 1992 from Virginia Tech with B.S. in Computer Science.