Rouslan Lyubomirov Dimitrov

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My expertise is in computer architecture and rendering algorithms.
My honor code is to be friendly and reliable.

Experience

2007-2016 **GPU Architect at NVIDIA Corp., Santa Clara, USA**

- Designed 4 of the core GPU features for GeForce GTX 1080 (to be released in 2016), spanning Raster, SLI (multi-GPU) and memory subsystem.
- Led team of 7 engineers to implement the graphics performance simulator for GPU design.
- Devised the NVIDIA G-SYNC (high impact and profitable product line for NVIDIA).
- Invented the popular horizon based ambient occlusion technique (HBAO) used in multiple AAA games: Battlefield, Far Cry, Tomb Rider.
- Invented view-independent fluid rendering in screen space.
- Researched multi-GPU Physics simulations.
- Filed 20 Patents.

2012 – 2014 **Satellite Designer / Founding Member at SkyCube.org**

- We (team of 3) launched a nano-satellite in low earth orbit.
- I designed the main board containing the CPU, flash, RTC, I/O, power electronics.
- I designed the solar panel systems (using Spectrolab's TASC).

Education

Imperial College London, UK
- M.Sc. in Visual Information Processing.
- Projects: *Brain Fiber Tractography: Tracing and Visualization* and *Portfolio Optimization with Profit Prediction* (Finance).

Jacobs University Bremen, Germany
- B.Sc. in Computer Science and Electrical Engineering.
- Thesis: *Solid Environment Reconstruction on the GPU*.

American College of Sofia (secondary school), Bulgaria
- Computer Science and Mathematics Profile.
- Senior Project: *Virtual Reality Campus Tour System*.

Skills

Programming: C/C++, x86 (+ SIMD) assembly, OpenGL, GLSL, Direct3D, HLSL, CUDA.
Win32 API, Posix, Linux Kernel, Networking Stack and Protocols.
Hardware, Driver and BIOS.
Experience with: HTML, Java, PHP, Perl, Python, and SQL.