

# SASHI KUMAR PENTA

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## EDUCATION

**MS** in Computer Science and Eng.

UNC – Chapel Hill (Aug 2008)

**MS by Research (Thesis)** in Computer Science and Eng.  
[Computer Graphics]

IIIT – Hyderabad (Dec 2005)

**B. Tech.** in Computer Science and Eng. [Honors in Visual Informatics]

IIIT – Hyderabad (May 2003)

## SKILLS

- C, C++, Objective C, Java, Python.
- DirectX, OpenGL, CUDA, OpenCL, RenderScript, and OpenCV.
- Windows, Mac, iOS, Android and Linux.

## ACHIEVEMENTS

- Received multiple **Department Recognition Awards** for outstanding contributions at **Intel**.
- Ranked **10** in B.Tech. in the graduating batch 2003 at IIIT, Hyderabad.
- **Dean's List** scholarship given for outstanding academic performance at IIIT, Hyderabad.
- Secured **40<sup>th</sup>** position in **Google India Code Jam 2005**.

## WORK EXPERIENCE

**Intel**, Hillsboro, OR, USA [**Sept 2008 – PRESENT**]

### GRAPHICS SOFTWARE ENGINEER

- Designed and developed **DirectX graphics driver software** that is optimized for Intel graphics hardware by having a deep understanding of hardware, algorithms, and operating systems.
- Designed unified software architecture to work for multiple generations of Gen graphics hardware architectures.
- Developed innovative tools for better development, debugging, and performance analysis of graphics software.
- Worked on Intel Larrabee graphics architecture.

**Siemens Corporate Research**, Princeton, NJ, USA [**May 2008 – Aug 2008**]

### RESEARCH INTERN

- Research and development of fast **object detection** in medical images using graphics hardware and Nvidia **CUDA**.

**Computer Science Department at UNC**, Chapel Hill, NC, USA [**Aug 2006 – May 2008**]

### RESEARCH ASSISTANT

- Research and development of automatically **replacing the background of an image** with a better background [Presented this work as a poster at **SIGGRAPH 2008**].
- Developed **background separation** and **stereo matching** modules for **Fluid-in-video** research project [Published this work at **Eurographics 2008**].

**Microsoft Research**, Redmond, WA, USA [May 2007 – Aug 2007]

**RESEARCH INTERN**

- Research and Development of two **image enhancement** techniques, automatic computation of the angle to correct the horizon of an image, and automatic computation of **bi-lateral filter** parameters to remove the noise in an image. Developed using **DirectX** and **HLSL**.

**Nvidia**, Bangalore, India [Aug 2005 – July 2006]

**SOFTWARE ENGINEER**

- Developed **OpenGL-ES** graphics driver software optimized for Nvidia graphics hardware.
- Added OpenGL-ES extensions to the Nvidia graphics driver software.

**Center for Visual Information and Technology at IIIT-H**, India [May 2002 – Aug 2005]

**RESEARCH ASSISTANT**

- Research and Development of complete **Depth-Image based rendering** system as part of master's thesis work [Presented this work at **ICVGIP 2004** and **3DPVT 2006**].
- Proposed a new method **for compressing depth-images** using geometric proxy [Presented this work at **Pacific Graphics 2005**].

**IIIT-H**, India [Spring 2005]

**LECTURER**

- Taught software technology course for graduate level students. This course consists of various concepts of **Linux**, and utilities including **system calls, process management, file systems, make, lex, yacc, svn, Qt, sed and awk**.

**REFEREED JOURNAL PUBLICATIONS**

- **"Compression of Multiple Depth-Maps for IBR"**  
**Sashi Kumar Penta** and P. J. Narayanan [Appeared in **The Visual Computer and PG 2005**]

**REFEREED CONFERENCE PUBLICATIONS / POSTERS**

- **"Background Replacement"**  
**Sashi Kumar Penta** [Appeared in **SIGGRAPH 2008** (Poster)].
- **"Fluid in Video: Augmenting Real Video with Simulated Fluids"**  
Vivek Kwatra, Philippos Mordohai, Rahul Narain, **Sashi Kumar Penta**, Mark Carlson, Marc Pollefeys, and Ming Lin [Appeared in **Eurographics 2008**].
- **"Depth Images: Representations and Real-time Rendering"**  
Pooja Verlani, Aditi Goswami, P. J. Narayanan, Shekhar Dwivedi and **Sashi Kumar Penta**. [Appeared in **3DPVT 2006**].
- **"Depth+Texture Representation for Image Based Rendering"**  
P. J. Narayanan, **Sashi Kumar Penta** and Sireesh Reddy K [Appeared in **ICVGIP 2004**].

**MISCELLANEOUS ACTIVITIES**

- I am an active member of the ACM **SIGGRAPH**. I spend my leisure time playing with electronics such as Arduino. I like photography, biking, basketball and volleyball.

**REFERENCES ON REQUEST**