

## RESUME

## DANIELA HASENBRING

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DANIELA@KOSHIGAYA.DE  
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### Expertise

- In-depth C/C++ experience (20 years) including plug-in development for Maya, Katana, Nuke and more.
- Expert in Realtime Rendering using OpenGL, Vulkan and Metal since OpenGL 1.2.
- Experienced in GPU Acceleration (e.g. OpenCL, CUDA), CPU Intrinsics and Multithreading.
- Excellent knowledge in Maya API (14 years) and many other APIs.
- Great ability to design and build pretty and intuitive User Interfaces for a great User Experience.
- In-depth knowledge of most commonly used Image Formats.
- Shader writing for MentalRay (1 year), Vray (2 years) and GLSL (10 years).
- Scripting in Python (12 years), MEL (6 years) and PHP (10 years).
- Cross platform development for Windows, macOS, Linux and iOS.
- Experienced in R&D and strong at "Problem Solving".
- Great Team Player with excellent communication skills, able to meet challenging deadlines.
- Excellent in working closely with artists, understanding their problems and fulfilling their needs.
- Operator experience in Maya (16 years), Nuke (4 years) and Photoshop (10 years).
- Strong in web design with HTML5, Java Script, CSS with a WSGI backend (>10 years).

### Achievements

- Received the Sony Outstanding Engineer Award, the highest form of individual recognition for Sony Group engineers, in 2020.
- Developed Sony Pictures Imageworks' next-generation in-house Hair and Fur Grooming software *Fyber*. Used as primary grooming tool by many artists on all live-action and animated shows since 2020.
- Developed Sony Pictures Imageworks' in-house software *Sprout*, a Maya plug-in for efficient creation, manipulation and rendering of large scale environments.
- Presented *Sprout* at Siggraph 2017 ("Interactive Environment Creation with *Sprout*") and *Fyber* at Siggraph 2021 ("Hair Grooming with Imageworks' *Fyber*", also available on YouTube).
- Developed a complex pipeline with software bindings (e.g. Nuke) used by Scanline VFX in all steps of production like I/O, Compositing, Simulation, Rendering, HR and Management - greatly improving their workflows.
- Developed a plug-in for Nuke which allows compositors to completely relight a scene by adding and tweaking common lightsources known from 3D packages like Maya in post production without having to re-render the scene in 2008.
- Created a short film using Motion Capturing - doing all the necessary production steps like directing the actress, editing and cleaning the data using "Motion Analysis EVaRT" and "Autodesk Motion Builder".
- Developed an around 2006 widely used Script Suite for Maya including tools for Modeling, Rigging, Animation and Rendering known as the "Koshigaya Script Suite".

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Work experience

|                                 | Client / Company                              | Position / Project   |
|---------------------------------|---|--|
| Since<br>April 2022             | NVIDIA Corporation<br>Vancouver, Canada       | Senior Software Engineer, IC5<br>Omniverse   |
| August 2019<br>- April 2022     | Sony Pictures Imageworks<br>Vancouver, Canada | Principal Software Engineer <ul style="list-style-type: none"> <li>• Developed <i>Fyber</i> (see "Achievements"), a standalone hair and fur grooming software with plug-ins for Maya, Katana and Houdini.</li> </ul>   |
| October 2014<br>- August 2019   | Sony Pictures Imageworks<br>Vancouver, Canada | Senior Software Engineer <ul style="list-style-type: none"> <li>• Developed <i>Sprout</i> (see "Achievements") and many other Maya plugins, e.g.:</li> <li>• Playblast with support for deformation motion blur.</li> <li>• Custom texture projection shader with support for shadowing.</li> <li>• Texture blending shader with a custom tool to efficiently paint vertex masks on very high resolution geometry.</li> <li>• and many more .. :)</li> </ul> |
| August 2013<br>- September 2014 | Topalsson<br>Munich, Germany                  | Senior Software Engineer <ul style="list-style-type: none"> <li>• Development of a car-configurator in Unreal Engine 4 and Unigine.</li> </ul>   |
| November 2011<br>- August 2013  | Scanline VFX<br>Munich, Germany               | Senior Software/Pipeline Engineer<br>Several feature and tv movies [NDA] <ul style="list-style-type: none"> <li>• Development and Maintenance on the new production pipeline.</li> <li>• Writing of Vray shaders and 3ds Max plugins.</li> <li>• Development of Nuke effect plugins.</li> </ul>  |
| June 2011<br>- November 2011    | Dr. D Studios<br>Sydney, Australia            | Motion Capture Pipeline TD<br>Happy Feet 2 [feature] <ul style="list-style-type: none"> <li>• General pipeline development for animation and moedit.</li> <li>• Development of Tools for Shotgun and Tank.</li> </ul>  |

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Work experience  
(continued)

|                                   | Client / Company                              | Position / Project   |
|-----------------------------------|---|--|
| May 2009<br>- June 2011           | Scanline VFX<br>Munich, Germany               | Senior Software/Pipeline Engineer<br>Several feature and tv movies [NDA] <ul style="list-style-type: none"> <li>• Development of a new production pipeline, replacing the old one.</li> <li>• Writing of Vray shaders and 3ds Max plugins.</li> <li>• Development of Nuke effect plugins.</li> </ul>   |
| February 2009<br>- April 2009     | Parasol Island GmbH<br>Düsseldorf, Germany    | Software/Pipeline Engineer, Rigging TD<br>Audi R8 [commercial] <ul style="list-style-type: none"> <li>• Development of a complex Car-Setup.</li> <li>• Developed and introduced an OpenEXR pipeline.</li> </ul>  |
| May 2008<br>- December 2008       | PIXOMONDO IMAGES<br>Ludwigsburg, Germany      | Software/Pipeline Engineer<br>Ninja Assassin [feature]<br>2012 [feature] <ul style="list-style-type: none"> <li>• Development of the production pipeline.</li> <li>• Writing of 3ds Max plugins used for crowd caching.</li> </ul>   |
| March 2008<br>- April 2008        | Cine plus vision GmbH<br>Ludwigsburg, Germany | Software/Pipeline Engineer, Effects TD<br>Prisoners of the Sun [feature] <ul style="list-style-type: none"> <li>• Fluid simulations of smoke and dust.</li> <li>• Development of an OpenEXR pipeline.</li> </ul>   |
| January 2007<br>- February 2008   | Elektrofilm<br>Stuttgart, Germany             | Software/Pipeline Engineer, Effects TD<br>Armageddon - The longest night [tv]<br>Hafen der Hoffnung - Die letzte Fahrt der W. Gustloff [tv]<br>Lamborghini [commercial] <ul style="list-style-type: none"> <li>• Fluid simulations for Fire, Smoke and Water.</li> <li>• Development of tools to shatter windows.</li> <li>• Development of a crowd tool for Maya.</li> <li>• Development of a pipeline for fast interaction between Maya and Fusion.</li> </ul> |
| September 2006<br>- November 2006 | Berliner Film Company<br>Berlin, Germany      | Cloth TD / Effects TD<br>Happily N'Ever After [feature] <ul style="list-style-type: none"> <li>• Cloth simulation for the main characters.</li> <li>• Fluid simulations for Smoke and Dust.</li> </ul>   |

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### Education

|                                    |  |   |
|------------------------------------|--|---|
| September 2003<br>- September 2006 | The German Film School<br>Berlin (Elstal), Germany | German diplom (equiv. to masters) as "Digital Artist" |
| September 1999<br>- August 2002    | Max-Eyth Gymnasium<br>Kassel, Germany              | Abitur (HSC)  |

### Knowledge & Skills

|                  |  |
|------------------|--|
| Software         | Maya, Katana, Photoshop, Nuke, 3ds Max, Shake, After Effects           |
| Coding Languages | C++, Python, Java Script, Objective C, Java, Delphi, C#, PHP, MEL      |
| Software APIs    | Maya, Katana, Nuke, Shake, 3ds Max, Vray, MentalRay                    |
| Technologies     | OpenGL, Vulkan, Metal, Qt, HTML5, OpenCL, OpenAL, OpenEXR, Cocoa/Touch |
| Languages        | German (native), English (fluent)                                      |