

## IGOR SKLIAR

Technical reel: <https://vimeo.com/137675715> password: igorsklyar

### SUMMARY

**Roles:** Shader Writer and Rendering R&D (7+ years), Pipeline R&D (7+ years)

**Fields:** Feature Film, Animation Film, Animation Series.

### EXPERIENCE

#### **Moving Picture Company - MPC Film** (<http://moving-picture.com>)

*London, UK*

**Senior Software Developer - Shader Writer | Apr 2016 - current**

Developing and supporting studio shader library for Pixar Renderman RIS technology: bxdf's, patterns, volume and rendering integrators. Developing lighting and shading tools for The Foundry Katana. Solving artist requests for new tools and technical problems. Work with CG Supervisor and Look Dev artists to address show-specific shading/lighting R&D needs. Work with artists to improve shaders and lighting tools. Make recommendations and provide solutions to improve quality, efficiency, and workflow. Research the latest shading, rendering trends and technologies and implementing them into the studio shading library.

#### **One Animation (<http://oneanimation.com>)**

*Singapore*

**Senior R&D Technical Director | Dec 2014 - March 2016**

Developing and supporting a custom Mantra physically plausible generic shading system based on full blending & layering of shading components. Implementing and supporting of custom shading models such as: optimised 3-layered SSS; improved importance sampling for GGX distribution according to visible normals; Disney BRDF. Investigating the latest shading trends and implementing them into the studio shading system. Providing technical setup and support of shading and lighting processes. Design, development and support of project environment system. Setup and support render pipeline and render farm distributing system. Design, development and support of R&D work flow and tools for deploying and installing studio plugins and solutions. Organise and support studio source code repositories. Inventing of strict rules for committing, branching, deploying and installing studio's developments.

**CG Factory (<http://www.cgfww.com>)*****Moscow, Russian Federation*****Shader Writer, Pipeline TD | Jan 2013 – Dec 2014**

Developing and supporting a custom Mantra physically plausible generic shading system. Implementing custom shading models by using sampling and evaluating functions as CVEX BSDF functions, based on GGX, Phong, Beckmann distributions. Extending mantra path tracing engine. Improved SSS. Design and implementing layered coating. Investigating the latest shading trends and implementing them in the studio shading system. Implementing studio palettes system. Designing VEX shadeops and custom Houdini DSO (C++). Writing auxiliary render scripts (Python, Hscript). Development & support of projects environments. Design, development and support of R&D work flow and tools for deploying and installing studio plugins and solutions. Broadening Houdini SOHO functionality. Providing technical setup, support and troubleshooting of shading and lighting processes. Look development. Procedural texturing. Supporting render farm distributing system.

**Renovatio Entertainment Studio*****Moscow, Russian Federation*****Shader Writer, Pipeline TD | Feb 2012 – Dec 2013**

Full length animation projects, movies. Design and writing Mantra VEX shaders, Renderman RSL shaders. Design additional RSL and VEX shadeops (C++). Writing of auxiliary render scripts (Python, Hscript). Design an extra Houdini SOHO and modification of existing Houdini SOHO. Design a project file structure. Providing a technical setup, support and troubleshooting of shading and lighting processes.

**First Row Film Studio*****Tyumen, Russian Federation*****Shader Writer, Pipeline TD | Feb 2010 – Jan 2012**

Real estate advertisements and documentary. Design and writing Renderman shaders, and procedural primitive DSO. Develop of Houdini-Renderman render pipeline. Writing Python, Hscript auxiliary render scripts. Develop of project file structure and automatic geometry archiving system. Create an extra Houdini SOHO and modify existing Houdini SOHO. Render farm setup and development of Python scripts for generating Pixar Alfred hierarchical tasks. Providing a technical setup, support and troubleshooting of shading and lighting processes.

**Airplane Studio*****Moscow, Russian Federation*****Shader Writer, Pipeline TD, Lighter | Jul 2008 – Nov 2009**

The Masha and Bear animation project / series. Development of a render pipeline. Developing studio generic shading system, and project automation scripts. Design and writing Renderman shaders, slim templates. Development and support of render pipeline for Maya-Renderman. Maya MEL, RAT TCL, Python scripting for automation of processes and artist's tools. Technical setup, support and troubleshooting of shader networks. Fur setup, shading, lighting.

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## EXPERIENCE

### Animation Film Studio

*Moscow, Russian Federation*

**Lighter, 3D Artist Generalist | 2008**

Animation projects. Shading, lighting, rendering. Modeling of characters. Render farm setup.

### BS Graphics studio

*Moscow, Russian Federation*

**3D Artist Generalist | 2006 – 2008**

Full length animation project. Character modeling, character setup, MEL scripting, UV layout, texturing. Making of some dynamic works.

## SKILLS

**Maths:** Strong knowledge of differential, integral calculus, vector algebra, numerical methods, probability & statistics. Full understanding of bidirectional path tracing and multiple importance sampling techniques. Deep knowledge of micro-facet theory and production experience of practical implementation of BSDFs and subsurface scattering. A deep understanding of a wide range of rendering technologies, such as light transport algorithms, importance sampling, volume rendering, realistic material models, shading, and geometry processing. Constant interest to research new technologies and new rendering algorithms, such as light transport: path tracing with importance sampling and metropolis light transport.

**Pixar Renderman:** Deep understanding and production experience of development and support for RIS technology: developing and extending BxDF's, pattern, volume and rendering integrators. Developing and supporting physically based shading and energy conserving shaders. RIX API C/C++

Shaders writing – surface, displacement, light, volume shaders (RSL 1.0 and RSL 2.0); shader classes co-shaders, structs; point-cloud API; C/C++ Renderman DSO, Linux development: procedural DSO, RSL DSO shadeops. RAT, writing Slim templates, MTOR scripting, RAT Alfred scripting. Shading, Lighting.

**Sidefx Mantra & Houdini:** Developing custom BSDFs and extending of path tracing engine. Customising and improving of subsurface scattering. Writing SOHO and broadening existing functionality (eg. implementation of prman LOD and using pixar pfilter); writing additional plug-ins SOP, VRAY mantra procedural, VOP, VEX, ROP, UI using Python, Houdini SDK; writing of auxiliary scripts for archiving geometry; development of project structure and automation of render association operations; development of extra tools (Python, Hscript, HDK); writing Mantra vex surface, light, displacement, volume shaders from scratch (mantra shading language); VEX shadeops development (HDK); and Digital Assets.

**Mitsuba:** Research all latest render trends and techniques. Investigating render core architecture and optimisations.

**Katana:** Extending functionality; creating custom tools for studio and show specific needs; Python and Lua scripting.

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## SKILLS

**Autodesk Maya:** Modeling, UV mapping, character setup; Python, MEL scripting.

**Nuke:** Compositing , scripting: Python, TCL.

**Design Software:** Houdini, Maya, Katana, Nuke, Z-Brush, Adobe Photoshop.

**Languages:** C/C++, RIS API, Renderman Shading Language: RSL, RSL-2; Mantra Vex, Python, Lua, Linux Shell programming: bash, zsh, csh; TCL, Hscript, Maya MEL.

**Platforms:** Linux: Gentoo, Ubuntu, Debian, Slackware, CentOS, Open Suse; Mac OS X. Strong knowledge of Unix/Linux system administration, command line interface. Render farm setup, distributed process application (Pixar Alfred, Sidefx Hqueue, Open Source Software).

**Development software:** VIM, Mercurial, GIT, SVN version control. Valgrind, strace, GDB.

## EDUCATION

**National Research University of Electronic Technology – MIET, (<http://eng.miet.ru>) | 2001 – 2006 (5 years)**

Department of Electronic Technologies, Materials and Equipment.

*Moscow, Russian Federation*

Graduated as an Engineer of Electronic Mechanical Engineering.

**School of Art | 1992 – 2000**

*Moscow, Russian Federation*

Graduated as a visual artist with distinction.

**Real Time School | 2005, 2007**

*Moscow, Russian Federation*

Certificate courses in Renderman, Maya, and Character Animation.

## LANGUAGES

Russian Native language.

English - excellent communication skills, reading, writing. **Total IELTS score is 6.5 (5'th December 2015)**

## REFERENCES

Available on request

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## PROJECTS

### MPC FILM

2017 - **Pirates of the Caribbean: Dead Men Tell No Tales**

[http://www.imdb.com/title/tt1790809/?ref\\_=nv\\_sr\\_1](http://www.imdb.com/title/tt1790809/?ref_=nv_sr_1)

2017 - **Alien: Covenant**

[http://www.imdb.com/title/tt2316204/?ref\\_=nv\\_sr\\_1](http://www.imdb.com/title/tt2316204/?ref_=nv_sr_1)

2017 - **Ghost in the Shell**

[http://www.imdb.com/title/tt1219827/?ref\\_=nv\\_sr\\_1](http://www.imdb.com/title/tt1219827/?ref_=nv_sr_1)

2016 - **Fantastic Beasts and Where to Find Them**

[http://www.imdb.com/title/tt3183660/?ref\\_=nv\\_sr\\_1](http://www.imdb.com/title/tt3183660/?ref_=nv_sr_1)

2016 - **Passengers**

[http://www.imdb.com/title/tt1355644/?ref\\_=nv\\_sr\\_1](http://www.imdb.com/title/tt1355644/?ref_=nv_sr_1)

### One Animation

2015 - **Oddbods** (animation series)

[http://www.imdb.com/title/tt6229656/?ref\\_=nv\\_sr\\_1](http://www.imdb.com/title/tt6229656/?ref_=nv_sr_1)

2015 - **Insectibles** (animation series)

<http://oneanimation.com/show/insectibles/>

### GCF LLC

2015 - **Dragon** (feature film)

<http://www.cgfww.com/cgi-bin/show.pl?option=FullWork&id=66>

2014 - **Heart of the capital** (commercial)

<http://www.cgfww.com/cgi-bin/show.pl?option=FullWork&id=41>

2014 - **Yolki 1904** (feature film)

<http://www.cgfww.com/cgi-bin/show.pl?option=FullWork&id=56>

2013 - **Sherlock Holmes** (feature film)

<http://www.cgfww.com/cgi-bin/show.pl?option=FullWork&id=5>

2013 - **Chagall-Malevich** (feature film)

<http://www.cgfww.com/cgi-bin/show.pl?option=FullWork&id=31>