

## PERSONAL DATA

*Affiliation:* [Samsung Research America](#)  
Mountain View, California, USA  
*Place of stay:* San Jose, California, USA  
*Date of birth:* 9th October 1992  
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*www:* <https://ondrejtexler.github.io>



## RESEARCH SUMMARY

My entire research career has been revolving around generating realistically looking content given certain conditions. During my PhD I focused on research into style transfer – generating realistically looking paintings and animated movies. These days, at Samsung Research America, I do research into computer vision techniques to generate virtual humans with a particular emphasis on photorealism.

## EDUCATION

### **Doctoral degree study (PhD) 2018 – 2021**

Computer Graphics, Czech Technical University in Prague.  
Dissertation Thesis: Example-based Style Transfer.  
Advised by [Prof. Daniel Sýkora](#)

### **Master degree study (MSc) 2016 – 2018**

Computer Science, Czech Technical University in Prague.  
Master Thesis: Digital Image Processing and Image Stylization.

### **Bachelor degree study (BSc) 2012 – 2016**

Computer Science, Czech Technical University in Prague.  
Bachelor Thesis: Architecture design and implementation of a large software system.

### **High school 2004 – 2012**

Mathematics, Physics, and Descriptive Geometry specialization, Gymnasium of Christian Doppler.

## PROFESSIONAL EXPERIENCE

### **Senior Research Scientist, Samsung Research America, California 3/2021 – Present**

*Research & Development.* Research and implementation of computer vision and deep learning techniques related to creating virtual artificial humans. Work with conditional GANs, image-to-image translation networks, and other variants of generative models. Part of the [neonlife.ai](#) project.

### **Intern Research Scientist, Samsung Research America, California 4/2020 – 2/2021**

*Research & Development.* Research and implementation of various image-to-image and video-to-video translation neural networks. Part of the [neonlife.ai](#) project.

### **Intern Research Scientist, Snap Inc., Los Angeles, California 7/2019 – 10/2019**

*Research & Development.* Research of new techniques on training generative adversarial networks for style transfer tasks; focused on a scenario where a minimal amount of data is available, and an interactive response is required. Furthermore, developing a shader-based real-time stylization for human portraits.

### **Remote Collaboration, Adobe Research, USA 9/2017 – 12/2019**

*Research & Development.* Remote collaboration on several research projects, publications, and tech transfer project. Computer graphics; patch-based style transfer; neural-network-based style transfer.

### **Intern Research Scientist, Adobe Research, Seattle, Washington. 7/2018 – 10/2018**

*Research & Development.* Combining neural-network-based and patch-based style transfer methods. Chunk-based style transfer method with a focus on real-time performance.

- Intern Research Scientist, Adobe Research, San Jose, California**      **9/2017 – 12/2107**  
*Research & Development.* Guiding patch-based style transfer method using convolutional neural networks, image harmonization, and histogram optimization. Integrating developed style transfer method into Adobe Photoshop.
- Software Architect and Developer, Dynavix, Prague, Czechia**      **5/2014 – 9/2017**  
*Software Architecture & Development.* The navigation application for smartphones, tablets, and PND devices. C++, Java (Android), JavaEE, Objective-C (iOS), C#.
- Software Developer, World of Warcraft game server, Prague, Czechia**      **2/2013 – 5/2014**  
*Software & Database Development.* The World of Warcraft game server. Extending game mechanics, scripting artificial intelligence, data-mining. C++, C#.

#### PUBLICATIONS

- A. Texler, **O. Texler**, M. Kučera, M. Chai, and D. Sýkora: **FaceBlit: Instant Real-time Example-based Style Transfer to Facial Videos**. In *Proceedings of the ACM in Computer Graphics and Interactive Techniques*, 4(1):14 (I3D'21, April 2021)
- F. Hauptfleisch, **O. Texler**, A. Texler, J. Křivánek, and D. Sýkora: **StyleProp: Real-time Example-based Stylization of 3D Models**. In *Computer Graphics Forum*, 39(7):575–586 (Pacific Graphics 2020)
- O. Texler**, D. Futschik, M. Kučera, O. Jamriška, Š. Sochorová, M. Chai, S. Tulyakov, and D. Sýkora: **Interactive Video Stylization Using Few-Shot Patch-Based Training**. In *ACM Transactions on Graphics*, 39(4):73 (SIGGRAPH 2020, August 2020) **Featured at RealTime Live @ SIGGRAPH 2020, won Best in Show Award.**
- O. Texler**, D. Futschik, J. Fišer, M. Lukáč, J. Lu, E. Shechtman, and D. Sýkora: **Arbitrary Style Transfer Using Neurally-Guided Patch-Based Synthesis**. In *Computers & Graphics*, 87:62–71 (January 2020)
- O. Jamriška, Š. Sochorová, **O. Texler**, M. Lukáč, J. Fišer, J. Lu, E. Shechtman, and D. Sýkora: **Stylizing Video by Example**. In *ACM Transactions on Graphics*, 38(4):107 (SIGGRAPH 2019, Los Angeles, California, July 2019)
- O. Texler**, J. Fišer, M. Lukáč, J. Lu, E. Shechtman, and D. Sýkora: **Enhancing Neural Style Transfer using Patch-Based Synthesis**. In *Proceedings of the 8th ACM/EG Expressive Symposium*, pp. 43–50 (Expressive 2019, Genoa, Italy, May 2019)
- D. Sýkora, O. Jamriška, **O. Texler**, J. Fišer, M. Lukáč, J. Lu, and E. Shechtman: **StyleBlit: Fast Example-Based Stylization with Local Guidance**. In *Computer Graphics Forum*, 38(2):83–91 (Eurographics 2019, Genoa, Italy, May 2019)
- O. Texler** and D. Sýkora: **Example-Based Stylization of Navigation Maps on Mobile Devices**. In *Proceedings of the 22nd Central European Seminar on Computer Graphics.*, (CESCG 2018, Smolenice, Slovakia, 2018)

#### PATENTS

- S. Ravichandran, A. Liot, D. Dinev, **O. Texler**, H.J. Kang, J. Palan, S. Sadi: **Creating Talking Animations from Visemes Audio Features**, *Provisional App. No. 63/349,298*, June 2022
- O. Texler**, D. Dinev, A. Gupta, H.J. Kang, A. Liot, S. Ravichandran, S. Sadi: **Hierarchical Creation of Visual Data for Generating Images of Human Faces**, *Provisional App. No. 63/349,289*, June 2022

SELECTED  
TALKS &  
INTERVIEWS

**SIGGRAPH Now 2021**, invited talk, [link](#)  
**2d3d.ai**, invited talk, 2021, [link](#)  
**BBC News Arabic**, interview, 2020, [link](#)  
**RealTime Live!**, session at SIGGRAPH 2020, [link](#)  
**ECCV 2020**, short oral, [link](#)  
**SIGGRAPH 2020**, paper session, [link](#)  
**Expressive 2019**, paper session  
**EuroGraphics 2019**, paper session  
**CESCG 2018**, paper session

JOURNAL  
REVIEWER

**SIGGRAPH Asia 2022**, ACM Transactions on Graphics  
**SIGGRAPH 2022**, ACM Transactions on Graphics  
**SIGGRAPH Asia 2021**, ACM Transactions on Graphics  
**Pacific Graphics 2021**, Computer Graphics Forum

AWARDS

**Joseph Fourier Prize Laureate**, 2021  
**Best in Show Award**, Real-Time Live, SIGGRAPH 2020

STUDENT  
SUPERVISION

**A. Moravcová**, MSc, CTU in Prague  
**A. Sternwaldová**, MSc, CTU in Prague

COMPUTER  
SCIENCE &  
PROGRAMMING  
SKILLS

**Academic / Research & Development**, conducting research, publishing of scientific papers  
**Computer Graphics / Computer Vision**, conducting research, shaders, CUDA, OpenCV  
**Deep Learning / Convolutional Neural Networks / GANs**, PyTorch, NumPy, SciPy  
**Software Architecture & Development**  
**C/C++11/14**  
**Python**, machine learning, data-science  
**Java**, Desktop and Android  
**C#**  
**Objective-C**