

PERSONAL DATA

Affiliation: [Samsung Research America](#)
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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 Šýkora](#)

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

REVIEW
SERVICES

WACV 2023, IEEE/CVF Winter Conference on Applications of Computer Vision
TVCG 2022, IEEE Transactions on Visualization and Computer Graphics
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