Ondřej Texler

Personal Data

Affiliation: Samsung Research America
Mountain View, California, USA
Place of stay: San Jose, California, USA

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Education

Doctoral degree study (PhD) **2018 – 2021**
Computer Graphics, Czech Technical University in Prague.
Dissertation Thesis: Example-based Style Transfer.

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 – 10/2108**
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)

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**