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# Yanir Kleiman

Mobile: **+44 73 053 14271**

Website: **[www.yanirk.com](http://www.yanirk.com)**

Email Address: **[yanirk@gmail.com](mailto:yanirk@gmail.com)**

I am a software developer at DNEG visual effects.

I received my PhD from Tel Aviv University where I was a part of the Computer Graphics lab, followed by a post-doc in Laboratoire d'Informatique (LIX) at École Polytechnique near Paris.

My professional experience spans two years as a 3D artist in visual effects and animation projects, and over 10 years in software development as programmer and team leader.

My research has focused on shape analysis, shape and image similarity, segmentation and shape matching. Recently I have taken an interest in *Deep Learning*. I published a deep learning paper (PCPNet, 2018) and employed deep learning solutions in my current position.

## Professional Experience

- 2018                    **Software Developer, DNEG**  
Developing tools for the "on-set" department which is responsible of taking reference footage on the set of a show.
- Working on tools for browsing massive sets of 100K+ images.
  - Employing a deep learning solution to detect color charts in images.
  - Developing in C++, Python, and MEL script language.
  - Working with Maya, Nuke, Alembic, libraw, OpenEXR, and other common tools of the VFX industry.
- 2016 - 2017           **Post-doc Researcher, Laboratoire d'Informatique**, École Polytechnique, France.  
Part of a computer graphics group lead of Maks Ovsjanikov.
- 2011 - 2016           **PhD Student, Computer Science**, Tel Aviv University, Israel.  
Computer graphics lab, under the supervision of Prof. Daniel Cohen-Or.
- 2010                    **Lighting and Rendering TD / Compositor, Crew 972**  
Worked on "The Looney Tunes Show" for Warner Bros.
- Lighting and set dressing shots in Maya.
  - Creating visual effects (dust, smoke) using dynamics and MEL scripting.
  - Creating render layers and monitoring the render process on a render farm.
  - Final compositing of shots using Nuke.
- 2009                    **3D Artist, Gravity Israel Visual Effects**  
Worked mostly on shading, lighting, and render passes.  
Additional work included modeling and scripting.
- 2009                    **Freelance Effects Artist, "Deus"**.  
"Deus" is a sci-fi TV show in Israel.  
I created visual effects for several shots on the show from start to finish.  
Tracking, modeling, simulation, animation, rendering and compositing.
- 2008 - 2009           **3D Animation and Visual Effects Diploma**, Vancouver Film School, Canada.  
Visual Effects specialization, graduated with honors.
- 2008                    **Algorithms Developer, MutualArt Inc.**  
Developed and implemented automated text categorization and linking algorithms with C# and SQL Server.
- 2005 - 2007           **Development Team Leader, Amobee Media Systems Ltd.**  
Lead a team that developed a web based back-office system that enables advertisers to manage their campaigns and creative ads.
- .NET infrastructures (ASP.NET) and SQL Server development.
  - Management, task planning, recruiting and training.
  - Requirements specification, GUI design (flow and graphic design).
  - Java development.

- 2004 - 2005 **Development Team Leader, IDF.**  
The team developed .NET systems and supported legacy Microsoft DNA systems.
- 2000 - 2004 **Senior Infrastructure Programmer, IDF.**
- 1996 - 2000 **Part Time VB and ASP Programmer, NTR Visual Technologies Ltd.**
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## Academics

- 2016 **PhD in Computer Science**, Tel Aviv University, Israel.  
*Dissertation:* Semantic Similarity and Correspondence of 3D Shapes and Images.
- 2005 **M.Sc. in Computer Science**, Tel Aviv Academic College, Israel  
Graduated with honors.
- 2000 **B.Sc. in Math and Computer Science**, Tel Aviv University, Israel

## Publications

- 2018 **PCPNet: Learning Local Shape Properties from Raw Point Clouds**  
Paul Guerrero, Yanir Kleiman, Maks Ovsjanikov, Niloy J. Mitra  
Computer Graphics Forum (Proceedings of Eurographics), 2018
- 2018 **Robust Structure-Based Shape Correspondence**  
Yanir Kleiman, Maks Ovsjanikov  
Computer Graphics Forum, 2018
- 2017 **Region-Based Correspondence Between 3D Shapes via Spatially Smooth Biclustering**  
Matteo Denitto, Simone Melzi, Manuele Bicego, Umberto Castellani, Alessandro Farinelli, Mario A. T. Figueiredo, Yanir Kleiman, Maks Ovsjanikov  
ICCV 2017
- 2017 **Bundle Optimization for Multi-aspect Embedding**  
Qiong Zeng, Wenzheng Chen, Zhuo Han, Mingyi Shi, Yanir Kleiman, Daniel Cohen-Or, Baoquan Chen, Yangyan Li  
arXiv:1703.09928
- 2016 **Semantic Similarity and Correspondence of 3D Shapes and Images**  
Yanir Kleiman  
PhD Dissertation
- 2016 **Time-varying Weathering in Texture Space**  
Rachele Bellini, Yanir Kleiman, Daniel Cohen-Or.  
ACM Transactions on Graphics (Proceedings of SIGGRAPH), 2016
- 2016 **Toward Semantic Image Similarity from Crowdsourced Clustering**  
Yanir Kleiman, George Goldberg, Yael Amsterdamer, Daniel Cohen-Or.  
The Visual Computer (Proceedings of CGI), 2016
- 2015 **SHED: Shape Edit Distance for Fine-grained Shape Similarity**  
Yanir Kleiman, Oliver van Kaick, Olga Sorkine-Hornung, Daniel Cohen-Or.  
ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia), 2015
- 2015 **DynamicMaps: Similarity-based Browsing through a Massive Set of Images**  
Yanir Kleiman, Dov Danon, Jasmin Felberbaum, Joel Lanir, Daniel Cohen-Or.  
Proceedings of ACM Conference on Human Factors in Computing Systems, 2015
- 2014 **Shape Segmentation by Approximate Convexity Analysis**  
Oliver van Kaick, Noa Fish, Yanir Kleiman, Shmuel Asafi, Daniel Cohen-Or.  
ACM Transactions on Graphics (TOG), 2014
- 2013 **Dynamic Maps for Exploring and Browsing Shapes**  
Yanir Kleiman, Noa Fish, Joel Lanir, Daniel Cohen-Or.  
Computer Graphics Forum (Proceedings of SGP), 2013

- 2011 **Unsupervised co-segmentation of a set of shapes via descriptor-space spectral clustering**  
Oana Sidi, Oliver van Kaick, Yanir Kleiman, Hao Zhang, Daniel Cohen-Or.  
ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia), 2011
- 2007 **Paging with connections: FIFO strikes again**  
Leah Epstein, Yanir Kleiman, Jiri Sgall, Rob van Stee.  
Theoretical computer science, 2007

## Public Talks and Academic Visits

- 2017 **Invited Talk**, Google Zurich, Switzerland.
- 2016 **Invited Talk**, Hebrew University of Jerusalem, Israel.
- 2016 **CGI 2016**  
Toward Semantic Image Similarity from Crowdsourced Clustering.
- 2016 **PhD Dissertation Public Lecture**, Tel Aviv University, Israel.
- 2015 **Visiting Researcher**, Shandong University, China.
- 2015 **SIGGRAPH Asia 2015**  
SHED: Shape Edit Distance for Fine-grained Shape Similarity.
- 2015 **Visiting Researcher**, École Polytechnique, France.
- 2013 **Invited Talk**, Max Planck Institute for Informatics, Germany.
- 2013 **Visiting Researcher**, ETH Zurich, Switzerland.
- 2013 **SGP 2013**  
Dynamic Maps for Exploring and Browsing Shapes.

## Awards and Fellowships

- 2016-2017 **Chateaubriand Fellowship for Postdoctoral Research**
- 2014-2015 **Google Focused Research Award**  
I was partly funded by this grant during my PhD studies.
- 2010 **Animex Visual Effects Award**  
Runner up for Best Visual Effects in Animex 2010 Festival.
- 2005 **Excellence Scholarship - Tel Aviv Academic College**  
Awarded for excellence during my M.Sc. studies.

## Reviewer

SIGGRAPH (2014, 2015, 2016)  
SIGGRAPH ASIA (2014, 2015)  
Eurographics (2015, 2016, 2017)  
Computer Graphics Forum (2014, 2015)  
The Visual Computer (2016, 2017)  
Transactions on Visualizations and Computer Graphics (2017, 2018)  
Graphical Models (2015)  
Computer and Graphics (2013)