

# JANICK MARTINEZ ESTURO

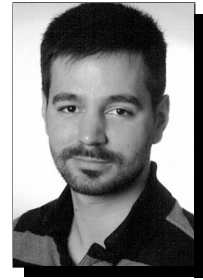
## PERSONAL INFORMATION

*Born in Germany, 29. July 1983*

*Email*                    [janick@jme.pub](mailto:janick@jme.pub)

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Flößergasse 2  
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## RESEARCH INTERESTS

Computer Graphics, Geometry Processing, Computer Vision, and Visualization. In particular, I am interested in interactive tools for shape modeling/editing, computational geometry reconstruction, and geometry-based flow visualization.

## EDUCATION

*Ph.D. Studies ·  
Computer Science*            04/2008–10/2013    Otto–von–Guericke University, Magdeburg

Dr.-Ing. · **summa cum laude (with distinction)**  
Major: Geometric Modeling and Flow Visualization  
Thesis: *Shapes in Vector Fields -  
Methods for Continuous Deformations and Surface-based Flow Visualizations*  
Advisor: Prof. Dr. H. Theisel  
Referees: Prof. Dr. H. Theisel, Prof. Dr. M. Botsch, and Prof. Dr. M. Wardetzky  
Supported by **Excellence Ph.D. Scholarship** — German National Academic Foundation

*Diploma ·  
Computer Science*            04/2004–03/2008    University of Bielefeld

Dipl.-Inform. (M.Sc.) · GPA: 4.0/4.0 (**with distinction**)  
Major: Computer Science in the Natural Sciences and Robotics  
Thesis: *Surface–Optimization using Aligned Characteristic Surface Curves*  
Advisor: Prof. Dr. H. Theisel  
Supported by **Excellence Scholarship** — German National Academic Foundation

*High School  
Diploma*                    1996–06/2003        Immanuel Kant Gymnasium, Bad Oeynhausen

Abitur · GPA: 3.28/4.0 (German Grade: 1.9)  
Advanced Courses: Mathematics and Physics

## WORK EXPERIENCE

<i>Research and Development</i>	01/2016–present	NVIDIA, Munich <i>Automotive Computer Vision Division</i>
<i>Research and Development</i>	10/2014–12/2015	Microsoft Corporation, Redmond <i>Analog.Science Group, Augmented Reality Division (“Microsoft HoloLens”)</i>
<i>Post-Doctoral Researcher</i>	06/2013–08/2014	Max Planck Institute for Informatics, Saarbrücken <i>Feature-Based Data Analysis Group      Computer Graphics Group</i> Head: Prof. Dr. T. Weinkauff                      Head: Prof. Dr. H.-P. Seidel
<i>Researcher and Teaching Assistant</i>	04/2008–05/2013	Otto–von–Guericke University, Magdeburg <i>Visual Computing Group</i> Head: Prof. Dr. H. Theisel
<i>German Military Service</i>	07/2003–03/2004	Herzog von Braunschweig Barracks, Minden Military Unit: <i>Fifth Heavy Pioneer Battalion 160</i> Position: Development of Service Software, Computer Administration

## DISTINCTIONS

10/2014	<b>Best Paper Award</b> - Wang et al. [6] 19th International Workshop on Vision, Modeling and Visualization, Darmstadt
12/2013	<b>Best German Ph.D. Thesis in Computer Science 2013 Award Nomination</b> - German Informatics Society Otto–von–Guericke University, Magdeburg
05/2010–04/2012	<b>Excellence Ph.D. Scholarship</b> German National Academic Foundation (“Studienstiftung des deutschen Volkes”)
11/2008	<b>Best Student of the Year in Computer Science Award</b> Technical Faculty, University of Bielefeld
06/2006–03/2008	<b>Excellence Scholarship</b> German National Academic Foundation (“Studienstiftung des deutschen Volkes”)
06/2003	<b>Excellence Scholar Award</b> German Physics Society

## INVITED TALKS

05/2014	GI Best German Ph.D. Thesis 2013 Colloquium Schloss Dagstuhl - Leibniz Center for Informatics Topic: <i>Geometrische Formen in Vektorfeldern</i>
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02/2013 Feature-Based Data Analysis Group  
Max Planck Institute for Informatics, Saarbrücken, Prof. Dr. T. Weinkauff  
Topic: *Interactive and Automatic Surface-based Flow Visualization*

06/2012 Discrete Differential Geometry Lab  
University of Göttingen, Prof. Dr. M. Wardetzky  
Topic: *On Needles in a Haystack and How to Stay True to Yourself*

PUBLICATIONS (PEER-REVIEWED)

- [1] T. Günther, M. Schulze, **J. Martínez Esturo**, C. Rössl, and H. Theisel. "Opacity Optimization for Surfaces". In: *Comput. Graph. Forum (Proc. EuroVis)* 33.3 (2014), pp. 11–20.
- [2] Y. Kozlov, **J. Martínez Esturo**, H.-P. Seidel, and T. Weinkauff. "Regularized Harmonic Surface Deformation". In: *CoRR* 1408.3326 (2014).
- [3] **J. Martínez Esturo**. "Geometrische Formen in Vektorfeldern". In: *Ausgezeichnete Informatikdissertationen 2013 (German)*. Vol. D-14. LNI - Dissertations. GI, 2014, pp. 131–141.
- [4] **J. Martínez Esturo**, C. Rössl, and H. Theisel. "Smoothed Quadratic Energies on Meshes". In: *ACM Trans. Graph.* 34.1 (2014), 2:1–2:12.
- [5] M. Schulze, **J. Martínez Esturo**, T. Günther, C. Rössl, H.-P. Seidel, T. Weinkauff, and H. Theisel. "Sets of Globally Optimal Stream Surfaces for Flow Visualization". In: *Comput. Graph. Forum (Proc. EuroVis)* 33.3 (2014), pp. 1–10.
- [6] Z. Wang, **J. Martínez Esturo**, H.-P. Seidel, and T. Weinkauff. "Pattern Search in Flows based on Similarity of Stream Line Segments". In: *Proc. VMV*. (Best Paper Award). EG, 2014, (to appear).
- [7] **J. Martínez Esturo**. "Shapes in Vector Fields". PhD thesis. University of Magdeburg, 2013.
- [8] **J. Martínez Esturo**, C. Rössl, and H. Theisel. "Generalized Metric Energies for Continuous Shape Deformation". In: *Springer LNCS (Proc. Curves and Surfaces 2012)* 8177.1 (2013), pp. 135–157.
- [9] **J. Martínez Esturo**, M. Schulze, C. Rössl, and H. Theisel. "Global Selection of Stream Surfaces". In: *Comput. Graph. Forum (Proc. Eurographics)* 32.2 (2013), pp. 113–122.
- [10] **J. Martínez Esturo**, M. Schulze, C. Rössl, and H. Theisel. "Poisson-based Tools for Flow Visualization". In: *Proc. PacificVis*. IEEE, 2013, pp. 241–248.
- [11] **J. Martínez Esturo**, C. Rössl, and H. Theisel. "Continuous Deformations by Isometry Preserving Shape Integration". In: *Springer LNCS (Proc. Curves and Surfaces 2010)* 6920.1 (2012), pp. 456–472.
- [12] **J. Martínez Esturo**, C. Rössl, S. Fröhlich, M. Botsch, and H. Theisel. "Pose Correction by Space-Time Integration". In: *Proc. VMV*. EG, 2011, pp. 33–40.
- [13] **J. Martínez Esturo**, C. Rössl, and H. Theisel. "Continuous Deformations of Implicit Surfaces". In: *Proc. VMV*. EG, 2010, pp. 219–226.

- [14] J. Martinez Esturo, C. Rössl, and H. Theisel. "Multiple Aligned Characteristic Curves for Surface Fairing". In: *Springer LNCS (Proc. International Symposium on Visual Computing)* 5358.1 (2008), pp. 1157–1166.

#### PARTICIPATIONS AND PRESENTATIONS

Conferences	04/2016	GTC 2016, San Jose
	08/2015	42nd SIGGRAPH 2015, Los Angeles Paper and Talk: <i>Smoothed Quadratic Energies on Meshes</i>
	06/2014	16th EuroVis 2014, Swansea
	06/2013	15th EuroVis 2013, Leipzig
	05/2013	34th Eurographics 2013, Girona Paper and Talk: <i>Global Selection of Stream Surfaces</i>
	03/2013	Sixth PacificVis 2013, Sydney Paper and Talk: <i>Poisson-based Tools for Flow Visualization</i>
	11/2012	17th VMV 2012, Magdeburg Poster: <i>Continuous Shape Deformation by Generalized Metric Energies</i>
	06/2012	Eights Curves and Surfaces 2012, Oslo Paper and Talk: <i>Generalized Metric Energies for Continuous Shape Deformation</i>
	10/2011	16th VMV 2011, Berlin Paper and Talk: <i>Pose Correction by Space-Time Integration</i>
	11/2010	15th VMV 2010, Siegen Paper and Talk: <i>Continuous Deformations of Implicit Surfaces</i>
	06/2010	Seventh Curves and Surfaces 2010, Avignon Paper and Talk: <i>Isometry-Preserving Shape Integration</i>
	11/2009	14th VMV 2009, Braunschweig
	07/2009	Seventh SGP 2009, Berlin
	12/2008	Fourth ISVC 2008, Las Vegas Paper and Talk: <i>Multiple Aligned Characteristic Curves for Surface Fairing</i>
	09/2008	Fifth GI VR/AR Workshop, Magdeburg
	06/2008	Sixth SGP 2008, Copenhagen Poster: <i>Aligned Characteristic Curves on Surfaces</i>
02/2008	19th SimVis 2008, Magdeburg	
Workshops	05/2014	GI Best German Ph.D. Thesis 2013 Colloquium, Dagstuhl Talk: <i>Geometrische Formen in Vektorfeldern</i>
	09/2011	German National Academic Foundation Summer School AG "Planning in Multi-Agent Systems", Guidel Talk: <i>Planning Graph Techniques</i>
	02/2011	FIN Day of Doctorate Candidates, Magdeburg Talk: <i>Continuous Shape and Volume Deformations</i>

08/2010 German National Academic Foundation Summer School  
 AG "The Book of Proofs", Salem  
 Talk: *Touching Simplices*

06/2008 Geometric Modeling Based on Polygonal Meshes  
 SGP 2008 Course, Prof. Dr. L. Kobbelt & Prof. Dr. M. Botsch, Copenhagen

09/2007 German National Academic Foundation Summer School  
 AG Approximation–Algorithms, Görlitz  
 Talk: *Scheduling and Linear Programming*

08/2006 German National Academic Foundation Summer School  
 AG Cryptography, Neubeuern  
 Talk: *Cryptography in Theory and Practice: The Case of Encryption in IPsec*

#### TEACHING AND SUPERVISION

		<i>Saarland University</i>
<i>Teaching Assistant</i>	<i>Spring 2014</i>	Geometric Modeling (Dr. K. Hildebrandt and Prof. Dr. T. Weinkauff)
<i>Instructor</i>	<i>Fall 2013</i>	Visualization and Data Analysis (with Prof. Dr. T. Weinkauff)
		<i>Otto-von-Guericke University Magdeburg</i>
<i>Teaching Assistant</i>	<i>Spring 2013</i>	Computer Graphics (Prof. Dr. H. Theisel)
	<i>Fall 2012</i>	Computer Aided Geometric Design (Prof. Dr. H. Theisel)
	<i>Spring 2012</i>	Computer Graphics (Jun.-Prof. Dr. T. Grosch)
	<i>Fall 2011</i>	Introduction to Computer Science (Prof. Dr. H. Theisel)
	<i>Spring 2011</i>	Algorithms and Datastructures (Prof. Dr. H. Theisel)
	<i>Fall 2009</i>	Computer Aided Geometric Design (Prof. Dr. H. Theisel)
	<i>Spring 2009</i>	Computer Graphics (Prof. Dr. H. Theisel)
	<i>Fall 2008</i>	Computer Aided Geometric Design (Prof. Dr. H. Theisel)
	<i>Fall 2008</i>	Algorithms and Datastructures (Prof. Dr. D. Rösner)
	<i>Spring 2008</i>	Computer Graphics (Prof. Dr. H. Theisel)
<i>Seminars</i>	<i>Fall 2012</i>	Hot Topic in Computer Graphics (with Prof. Dr. H. Theisel)
	<i>Fall 2009</i>	Hot Topic in Computer Graphics (with Prof. Dr. H. Theisel)
<i>Thesis Advisor</i>	<i>2013</i>	Y. Kozlov (Master Thesis)
	<i>2012</i>	H. Krist (Bachelor Thesis)
	<i>2010</i>	K. Rohmer (Bachelor Thesis)

## TECHNICAL SKILLS

<i>Languages</i>	C++14, Matlab, L <sup>A</sup> T <sub>E</sub> X, Python, CMake, Maple, GLSL, Bash, Java, Haskell
<i>Libraries</i>	OpenGL, Eigen, ceres, Boost, CUDA, Suitesparse, Qt, CGAL, TBB, OpenMP, BLAS/LAPACK
<i>Applications</i>	git, Blender, sublime-text, docker, Inkscape, Maya, Gimp, Meshlab
<i>Operating Systems</i>	Linux, Windows

## FURTHER INFORMATION

<i>Languages</i>	GERMAN · Mother tongue ENGLISH · Advanced (fluent in written and spoken form) SPANISH · Second mother tongue (conversationally fluent) LATIN · Basic (simple words and phrases only)
<i>References</i>	Prof. Dr. H. Theisel · Full Professor · <a href="mailto:theisel@ovgu.de">theisel@ovgu.de</a> Head of the Visual Computing Group - Otto-von-Guericke University  Prof. Dr. T. Weinkauff · Full Professor · <a href="mailto:weinkauff@kth.se">weinkauff@kth.se</a> Head of the Visualization Group - KTH Royal Institute of Technology  G. Takacs, Ph.D · Senior Research Scientist · <a href="mailto:gabriel.takacs@microsoft.com">gabriel.takacs@microsoft.com</a> Analog.Science Group - Microsoft Corp.  Dr. C. Rössl · Senior Research Scientist · <a href="mailto:roessler@isg.cs.ovgu.de">roessler@isg.cs.ovgu.de</a> Visual Computing Group - Otto-von-Guericke University

August 28, 2017