

Ivaylo Ilinkin

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Research Interests

Computational Geometry, Computer Graphics
Computer Science Education, Human-Computer Interaction

Education

Ph.D. in Computer Science August 2003
University of Minnesota, Minneapolis, MN
Thesis Advisor: Dr. Ravi Janardan
Thesis Title: “Geometric Algorithms With Application to Layered Manufacturing”

B.A. in Mathematics and Computer Science May 1997
Manchester College, North Manchester, IN

Professional Experience

Associate Professor – Gettysburg College 2011–Present

Visiting Scholar – Ewha University, Korea Spring 2022
Visiting Professor – Sahmyook University, Korea Fall 2013

Assistant Professor – Gettysburg College 2007–2010

- Senior Seminar
- Bioinformatics
- Computer Graphics
- Mobile Computing Systems Programming
- Programming Languages
- The Theory of Computation
- The Mathematics of Computation
- Data Structures
- Computer Science II: Object-Oriented Programming (in Java)
- Computer Science I: Programming Fundamentals (in Java)
- Introduction to Computing (non-major)

Assistant Professor – Rhodes College 2003–2007

- Senior Seminar
- Computer Graphics

- Theory of Computation
- Advanced Algorithms
- Internet Programming
- Programming Languages
- Discrete Structures for Computer Science
- Computer Science II: Object-Oriented Programming (in C++)
- Computer Science I: Programming Fundamentals (in Python, C/C++)

Instructor – University of Minnesota

Summer 2002

- Structure of Computer Programming I (in Scheme)

Teaching Assistant – University of Minnesota

1997–2003

- Advanced Algorithms (graduate level)
- Discrete Mathematics
- Data Structures and Algorithms II
- Data Structures and Algorithms I
- Structure of Computer Programming I (in Scheme)

Publications

- (2022) Ivaylo Ilinkin
"Marching Cubes for Teaching GLSL Programming".
Eurographics'21 (Education): 42nd Conference of the European Association for Computer Graphics.
- (2021) Ivaylo Ilinkin
"Mesh Smoothing for Teaching GLSL Programming".
Eurographics'22 (Education): 43rd Conference of the European Association for Computer Graphics.
- (2020) Ivaylo Ilinkin, Sunghee Kim
"Enhancing CS1 with Mobile Apps".
ACE'20 (Workshop): Proc. 24th Australasian Computing Education Conference, 211-212.
- (2020) Ivaylo Ilinkin
"Designing a Course on Non-Photorealistic Rendering".
Eurographics'20 (Education): 41st Conference of the European Association for Computer Graphics.
- (2017) Ivaylo Ilinkin, Sunghee Kim
"Evaluation of Korean Text Entry Methods for Smartwatches".
CHI'17: 35th Conference on Human Factors in Computing Systems, 722–726.
- (2016) Ivaylo Ilinkin
"Android Library for CS1".
CCSC-E'16 (Workshop): 32nd Conference of Consortium for Computing Sciences in Colleges.
- (2014) Ivaylo Ilinkin
"Opportunities for Android Projects in CS1".
SIGCSE'14: 45th Symposium on Computer Science Education.

- (2014) Ivaylo Ilinkin
"Visualization of Floater and Gotsman's Morphing Algorithm".
SoCG'14 (Multimedia): 30th Symposium on Computational Geometry.
- (2014) Ivaylo Ilinkin
"Experimental Evaluation of Parametric Search Algorithms".
EuroCG'14: 30th European Workshop on Computational Geometry.
- (2013) Ivaylo Ilinkin
"Parametric Search Visualization".
SoCG'13 (Multimedia): 29th Symposium on Computational Geometry.
- (2010) Ivaylo Ilinkin, Sunghee Kim
"Evaluation of Text Entry Methods for Korean Mobile Phones, a User Study".
CHI'10: 28th Conference on Human Factors in Computing Systems, 2023–2026.
- (2010) Ivaylo Ilinkin, Jieping Ye, Ravi Janardan
"Multiple Structure Alignment and Consensus Identification for Proteins".
BMC Bioinformatics, 11:71.
- (2008) Ivaylo Ilinkin, Sunghee Kim
"Design and Evaluation of Korean Text Entry Methods for Mobile Phones".
CHI'08: Extended Abstracts on Human Factors in Computing Systems, 2853–2858.
- (2006) Jieping Ye, Ivaylo Ilinkin, Ravi Janardan, Adam Isom
"Multiple Structure Alignment and Consensus Identification for Proteins"
WABI'06: 6th International Workshop on Algorithms in Bioinformatics
Lecture Notes in Bioinformatics (LNBI), 4175, pp. 115–125.
- (2006) Ivaylo Ilinkin, Ravi Janardan, Michiel Smid, Paul Castillo, Eric Johnson, Jörg Schwerdt
"Heuristics for Estimating Contact-Area of Supports in Layered Manufacturing"
JEA: Journal of Experimental Algorithmics, 11.
- (2004) Ivaylo Ilinkin, Ravi Janardan, Michiel Smid, Paul Castillo, Eric Johnson, Jörg Schwerdt
"Approximating Contact-Area of Supports in Layered Manufacturing"
CCCG'04: 16th Canadian Conference on Computational Geometry, pp. 91–94.
- (2002) Ivaylo Ilinkin, Ravi Janardan, Jayanth Majhi, Jörg Schwerdt, Michiel Smid, Ram Sriram
"A Decomposition-based Approach to Layered Manufacturing"
CGTA: Computational Geometry Theory and Applications, 23(2), pp. 117–151.
- (2002) Ivaylo Ilinkin, Ravi Janardan, Michiel Smid
"Terrain Polygon Decomposition with Application to Layered Manufacturing"
COCOON'02: 8th Annual International Conference on Computing and Combinatorics
Lecture Notes in Computer Science (LNCS), 2387, pp. 381–390.
- (2001) Ivaylo Ilinkin, Ravi Janardan, Jayanth Majhi, Jörg Schwerdt, Michiel Smid, Ram Sriram
"A Decomposition-based Approach to Layered Manufacturing"

WADS'01: 7th International Workshop on Algorithms and Data Structures
Lecture Notes in Computer Science (LNCS), 2125, pp. 389–400.

Grants and Awards

- "Design and Usability Assessment of Keypad Layouts for Korean Mobile Phones", Gettysburg College Research and Professional Development Grant (2008)
- "Structure-based Protein Classification", Rhodes College Faculty Development Grant (2006)

Professional Development

- (DIMACS) The Mathematics of Medical Imaging, Spelman College Jun 2005
- ACS Summer Teaching Workshop, Rollins College Jun 2005
- LEGO Mindstorms in Computing Curriculum, University of Mississippi Nov 2004
- (DIMACS) Folding and Unfolding in Computational Geometry, St. Mary's College Jul 2004
- Hands-on Teaching of Bioinformatics, Hope College May 2004
- Preparing Future Faculty (PFF), University of Minnesota 2000-2001