

Richard Rast

PERSONAL INFORMATION	Email: richard.rast@gmail.com (850) 830-0284 Website: http://rody-mirov.github.io
EDUCATION	Ph.D. , Mathematics, University of Maryland, May 2016 M.A. , Mathematics, University of Maryland, May 2012 B.S. , Computer Science, Dickinson College, May 2009 B.S. , Mathematics, Dickinson College, May 2009
INDUSTRY EXPERIENCE	Bluefin, LLC (previously Roof Express) <input type="checkbox"/> <i>Data Scientist</i> , March 2016 - current <ul style="list-style-type: none">• Built data-driven prediction systems to determine when a roof would fail.• Used linear models and tree-based methods, including random forests.• Mathematically determined what types of data are worth collecting.• Designed products and services to support and be supported by the data analysis. <input type="checkbox"/> <i>Developer</i> , Summer 2010 and Summer 2012 <ul style="list-style-type: none">• 2010: Built the RoofBOSS system. This rearranges capital expenses to smooth out spending between years.• 2012: Improved RoofBOSS to reduce total spending and improve smoothing, using a deeper search. Improved the numerical stability of certain computations.
PROGRAMMING LANGUAGES	In decreasing order of familiarity: C#, Python, LaTeX, Java, Matlab, HTML, CSS, JavaScript, R.
OPEN SOURCE PROJECTS	I have several open source projects: see https://github.com/rody-mirov <input type="checkbox"/> Two projects are engines for games (Voxelist, Infinite Tile Engine 2D) in C# with XNA. They focused on procedural generation of worlds with splines, value noise, and etc. and support an infinite persistent world with minimal resource usage. <input type="checkbox"/> I designed and developed a small game (Frog Defense) in C# with XNA. It was built to satisfy a challenge: in seven days, deliver an interesting, fun product which was polished and complete.
RESEARCH EXPERIENCE	In addition to my thesis, I have three papers with several coauthors, one of which is published in the <i>Journal of Symbolic Logic</i> . See arXiv.org for preprints. Invited to speak on my research at Berkeley, Rutgers, Notre Dame, and others.
HONORS AND AWARDS	James C. Alexander Prize (2016) Research prize for recent graduates. Highest award given by the department. Spotlight on Graduate Research (2015) (winner) Competition to explain one's research to non-specialists. Aziz/Osborn Gold Medal in Teaching Excellence (2010 and 2015) Student-nominated. This cannot be awarded more than once every five years. Mark E. Lachtman Fellowship (2010) Faculty-nominated award for mathematical research toward dissertation.