

Aleksander Jankowski



PERSONAL INFORMATION

Name and surname: Aleksander Jankowski
Date of birth: December 31, 1985
Citizenship: Polish
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EDUCATION

University of Warsaw, Faculty of Mathematics, Informatics and Mechanics
Ph.D. in computer science (expected 2015)
proposed thesis: *Modeling transcription factor complex binding to eukaryotic genomes*
Master's degree in mathematics, summa cum laude (2009)
Bachelor's degrees in computer science (2008) and mathematics (2007)

RESEARCH EXPERIENCE

European Molecular Biology Laboratory, Heidelberg, Germany
postdoctoral fellow, Eileen Furlong's group (since 2014)
Studying the role and mechanisms of enhancer-promoter interactions in *Drosophila*
by analyzing chromosome conformation data from Hi-C and Capture-C experiments.

University of Warsaw, Faculty of Mathematics, Informatics and Mechanics
Ph.D. student, Jerzy Tiuryn's group (2009-2014)
and **Genome Institute of Singapore, Computational and Systems Biology**
Ph.D. student, Shyam Prabhakar's group (2010/2011 and 2012/2013)
Studied gene regulation through cooperative binding of transcription factors to DNA.
Developed an algorithm (TACO) for predicting cell-type-specific transcription factor
dimers from genome-wide data, such as DNase-seq or ChIP-seq. Analyzed structural
properties of transcription factor complexes and their chromatin openness profiles.

**University of Warsaw, Interdisciplinary Centre for Mathematical and Computational
Modelling**
summer intern, Witold Rudnicki's group (2008) – work on Boruta, a random-forest-based
algorithm for feature selection in information systems
summer intern, Witold Rudnicki's group (2007) – implementation of Smith-Waterman
algorithm for local sequence alignment on Cell Broadband Engine Architecture

TEACHING EXPERIENCE

University of Warsaw, Faculty of Mathematics, Informatics and Mechanics
WWW Applications (laboratory classes, Spring 2009, Spring 2010 and Spring 2012)
Operating Systems (classroom and laboratory classes, Autumn 2011)
Introduction to Computational Biology (laboratory classes, Spring 2010)

INDUSTRY EXPERIENCE

Prokom Software SA
research and development project (2007) – application of NVIDIA graphics cards
using CUDA parallel computing platform

SELECTED ACHIEVEMENTS

Individual pre-doctoral grant *Comprehensive prediction of cooperative regulatory elements
in eukaryotic genomes* awarded by the National Science Centre, Poland (2 years, 2012-2014)

Scholarship of the Marshal of the Masovian Province for Ph.D. candidates (2012/2013)

Scholarship of the Ministry of Science and Higher Education (Poland) for exceptional
achievements in science (2007/2008, 2008/2009 and 2010/2011)

PUBLICATIONS	<p>Jankowski, A., Prabhakar, S. and Tiuryn, J. TACO: a general-purpose tool for predicting cell-type-specific transcription factor dimers. <i>BMC Genomics</i> 15, 208, 12 pages (2014)</p> <p>Jankowski, A., Szczurek, E., Jauch, R., Tiuryn, J. and Prabhakar, S. Comprehensive prediction in 78 human cell lines reveals rigidity and compactness of transcription factor dimers. <i>Genome Research</i> 23, 1307-1318 (2013)</p> <p>Kursa, M.B., Jankowski, A. and Rudnicki, W.R. Boruta – a system for feature selection. <i>Fundamenta Informaticae</i> 101, 271-285 (2010)</p> <p>Rudnicki, W.R., Jankowski, A., Modzelewski, A., Piotrowski, A. and Zadrozny, A. The new SIMD implementation of the Smith-Waterman algorithm on Cell microprocessor. <i>Fundamenta Informaticae</i> 96, 181-194 (2009)</p>
TALKS	<p>Jankowski, A., Szczurek, E., Tiuryn, J. and Prabhakar, S. Comprehensive prediction of cooperative regulatory elements in multiple human cell types. <i>Symposium of the Polish Bioinformatics Society</i>, May 26, 2012, Gdańsk, Poland</p> <p>Jankowski, A., Tiuryn, J. and Prabhakar, S. Predicting cell type-specific transcription factor cooperative binding. <i>RECOMB Regulatory Genomics</i>, October 19, 2011, Barcelona, Spain</p> <p>Jankowski, A., Tiuryn, J. and Prabhakar, S. Predicting cell type-specific transcription factor cooperative binding. <i>Symposium of the Polish Bioinformatics Society</i>, October 1, 2011, Kraków, Poland</p> <p>Jankowski, A., Tiuryn, J. and Prabhakar, S. Predicting cell type-specific transcription factor cooperative binding. <i>Berlin-Warsaw Workshop on Computational Biology</i>, March 18, 2011, Będlewo, Poland</p> <p>Jankowski, A., Sun, W., Prabhakar, S. and Tiuryn, J. Predicting transcription factor binding sites in the presence of nucleosomes. <i>Berlin-Warsaw Workshop on Computational Biology</i>, June 25, 2010, Sopot, Poland</p> <p>Jankowski, A., Prabhakar, S. and Tiuryn, J. Predicting nucleosome binding sites in yeast genome. <i>Symposium of the Polish Bioinformatics Society</i>, October 3, 2009, Będlewo, Poland</p>
OTHER ACTIVITIES	<p>Member of: Polish Bioinformatics Society, OpenStreetMap Poland Association</p> <p>Treasurer of Stowarzyszenie Społeczność MIMUW</p> <p>Member of RECOMB 2015 conference organizing committee (April 12-15, Warsaw, Poland)</p>
SKILLS	<p>Languages: Polish – native, English – fluent, German and Russian – intermediate</p> <p>Programming languages and computer technologies: C, C++, R, Java, Python, Ocaml, assembly, SQL, HTML, CSS, JavaScript, T_EX/L^AT_EX, Unix/Linux, Windows.</p>
INTERESTS AND HOBBIES	<p>computational biology, regulatory genomics, machine learning, cognitive science</p> <p>travelling, mountain hiking, cartography, photography, railways, typography</p>

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