Pattern Recognition in High-Throughput Zebrafish Imaging

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Curriculum Vitae

Alexander E. Nezhinsky was born om May 7 1982 in Leningrad, the USSR. He graduated from the Stedelijk Gymnasium in Leiden in 2001. He studied Computer Science at Leiden University and gained his Master of Computer Science degree in 2007. Additionally he followed courses at the Academy of Arts (KAVBK) in The Hague.

In august 2008 he started as PhD candidate in the section Imaging and Bioinformatics under the supervision of Dr. Ir. F. J.Verbeek. In his PhD research he investigated different image analysis and pattern recognition techniques applied to the zebrafish model.

List of publications

- A. Nezhinsky, E.J. Stoop, A.M. van der Sar & F.J. Verbeek: Numerical Analysis of Image Based High-Througput Zebrafish Infection Screens: /Matching Meaning with Data/. In: BIOINFORMATICS 2012, Proceedings of the Int. Conf. on Bioinformatics Models, Methods and Algorithms: 257-262 (2012)

- A. Nezhinsky, E.J. Stoop, A.A. Vasylevska, A.M. van der Sar & F.J. Verbeek: Spatial Analysis of Bacterial Infection Patterns in Zebrafish. In: Proceedings 21th Annual Belgian-Dutch Conference on Machine Learning: 27-31 (2012)

- A. Nezhinsky & F.J. Verbeek: Efficient and Robust Shape Retrieval from Deformable Templates. In: T. Margaria & B. Steffen (Eds.), Leveraging Applications of Formal Methods, Verification and Validation. Applications and Case Studies (ISoLA 2012), Lecture Notes in Computer Science 7610: 42-55, Springer (2012)

- A. Nezhinsky, I. Martorelli & F.J. Verbeek: Detection of Developmental Stage in Zebrafish Embryos in a high throughput processing environment. In: Proceedings 20th Annual Belgian-Dutch Conference on Machine Learning: 97-98 (2011)

- E.J. Stoop, T. Schipper, Huber S.K. Rosendahl, A. Nezhinsky, F.J. Verbeek, S.S. Gurcha, G.S. Besra, C.M. Vandenbroucke-Grauls, W. Bitter & A.M. van der Sar: Zebrafish embryo screen for mycobacterial genes involved in the initiation of granuloma formation reveals a newly identified ESX-1 component, Disease Model Mechanisms : 526-536 (2011)

- A. Nezhinsky, J.W. Kruisselbrink & F.J. Verbeek: Convex Shape Retrieval from Edge Maps by the use of an Evolutionary Algorithm. In: J. Filipe H. Gamboa A. Fred (Ed.), Proceedings 1st International Conference on Bioinformatics: 221-225 (2010)

- A. Nezhinsky & F.J. Verbeek: Pattern recognition for high throughput zebrafish imaging using genetic algorithm optimization. In: 5th IAPR Conference on Pattern Recognition in BioInformatics (PRIB 2010), Lecture Notes in Bioinformatics 6282: 302-312, Springer (2010)

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