Biological model representation and analysis

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List of Publications

L. Cao, K. Yan, L. Winkel, M. de Graauw, F.J. Verbeek. Pattern Recognition in High-Content Cytomics Screens for Target Discovery: Case Studies in Endocytosis. Proceedings of Pattern Recognition in Bioinformatics 2011, Delft, LNCS Springer, pages 330-342, 2011

L. Cao, K. Yan, L. Winkel, M. de Graauw, F.J. Verbeek. Hierarchical classification strategy for Phenotype extraction from epidermal growth factor receptor endocytosis screen. Journal of BMC bioinformatics, 2013 (Submitted)

M. de Graauw, L. Cao, L Winkel, M.H. van Miltenburg, S.E. Le Dévédec, M. Klop, K. Yan, C. Pont, V.M. Rogkoti, A. Tijsma, A. Chaudhuri, R. Lalai, L. Price, F.J. Verbeek, B. van de Water. Annexin A2 depletion delays EGFR endocytic trafficking via cofilin activation and enhances EGFR signaling and metastasis formation. Oncogene. doi:10.1038/onc.2013.219. 2013

L. Cao, F.J. Verbeek. Evaluation of algorithms for point cloud surface reconstruction through the analysis of shape parameters. 3D Image Processing (3DIP) and Applications 2012, Proceedings SPIE Vol. 8290,Bellingham, 82900G, 2012

L. Cao, F.J. Verbeek. Analytical evaluation of algorithms for point cloud surface reconstruction using shape features. Journal of Electronic Imaging, 22(4), 043008, doi:10.1117/1.JEI.22.4.043008, 2013

L. Cao, F.J. Verbeek. Nature inspired phenotype analysis with 3D model

representation optimization. Proceedings of the 4th International Conference on Innovations in Bio-Inspired Computing and Applications,IBICA 2013, Ostrava, 2013

E. Larios, Y. Zhang, L. Cao, and F. J. Verbeek. CytomicsDB: A Metadata-based storage and retrieval approach for High-Throughput Screening Experiments, The 9th IAPR conference on Pattern Recognition in Bioinformatics, 2014.

Curriculum Vitae

Lu Cao was born on December 19th, 1983 in Ningbo, Zhejiang Province, China. She received her bachelor degree of Computer Science and Technology at Beijing Forestry University in 2006. In the same year, she got the test waiver admission of Graduate school at the same university and received her master degree of Computer Application Technology in 2009. She gained the scholarship from China Scholarship Council and was accepted as a PhD student supervised by Fons J. Verbeek in Imaging and Bioinformatics section, Leiden institute of Advanced Computer Science, Leiden University. Her research focuses on image analysis, pattern recognition, 3D model representation and analysis. Now, she is working in Robert Passier's group in the faculty of anatomy and embryology, LUMC as a postdoc.