Master Internship 2014
Modeling spatial information in 2D biomedical images

Supervisors
Thomas Boudier – thomas.boudier@svn.jussieu.fr
Ludovic Roux – ludovic.roux@ipal.cnrs.fr

The Cognitive Microscope (MICO) Project

MICO is a 3.5 years project supported by ANR, TecSan 2010 programme.

The MICO project deals with analysis of histopathological images of breast cancer. A useful information for pathologists is the spatial organization of cells, or intra-nuclear compartments. However this information is difficult to formalize in terms of numerical parameters.

This internship has the objective to propose a model of spatial organization of objects, at a local scale and global scale. The local scale of spatial organization will be based on mereo-topology model (1), and the global scale on α-shapes (2) and spatial statistics (3). The model will then be used to simulate virtual structures presented to the pathologists.

Profile Required for the Applicant

• Master Degree in Computer Science or Engineer Student (last year of studies)
• Knowledge of Java

Duration of the internship: 5 to 6 months, starting on the first semester of 2014. Gratification about 800€ net per month

Bibliography

