

Dr. Julien Pontabry

Image processing and analysis specialist

✉ julien.pontabry@helmholtz-muenchen.de 🌐 <http://perso.numericable.fr/julien.pontabry> 📍 Munich, Germany



Experience

Research scientist

Helmholtz Institute of Epigenetic and Stem cells

📅 since 2016/01 📍 Helmholtz Zentrum München, Munich, Germany

- Was asked to join the newly created institute to develop data analysis good practices within the labs
- Responsible for data analysis and computer science in the institute
- Work on accurate nuclear membrane segmentation, nuclear morphology analysis and large-scale machine learning within images database

Research assistant

European Center for Biology and Medicine (CERBM)

📅 2013/09 – 2015/12 📍 IGBMC, Illkirch, France

- Joined the institute to work within multiple biology research teams on data analysis improvements (mainly images, but also genes expression levels)
- Worked mainly on chromatin quantification in mouse cells, muscle mechanics analysis with time-lapses and filamentous cell structure analysis
- Taught biologists imaging pipeline, image processing and analysis and advanced data analysis with machine learning, and supervised a Ph.D. student

Ph.D. candidate

French National Scientific Research Center (CNRS)

📅 2010/09 – 2013/08 📍 ICube Laboratory, Illkirch, France

- Continued in the ICube Laboratory (former LSIT) to do my Ph.D. thesis
- Worked on normal human fetal brain growth automatic analysis and discovery with MRI images of a healthy population
- Taught first and second years student computer science and programming, and supervised a master student

Master student

French National Scientific Research Center (CNRS)

📅 2010/01 – 2010/06 📍 LSIT, Illkirch, France

- Joined the lab to do my master thesis
- Worked on neural fibers reconstruction from diffusion weighted Magnetic Resonance Imaging data of human fetal brain

Education

Ph.D. in Signal and Image Processing

University of Strasbourg

📅 2010/09 – 2013/08 📍 Strasbourg, France

M.Sc. in Computer Science Applied to Imaging

University of Strasbourg

📅 2008/09 – 2010/06 📍 Strasbourg, France

B.Sc. in Fundamental and Applied Computer Science

University of Strasbourg

📅 2005/09 – 2008/06 📍 Strasbourg, France

Interests



Main achievements

Nuclear morphology analysis

I initiated transverse projects to study nuclear shape importance in development of mammals embryo-genesis.

Human fetal brain growth analysis

I designed several methods to extract growth information embed in in-vivo MRI images of human fetal brain.

Former Digikam developer

I used to be developer of the GNU/Linux advanced photography editor Digikam, where I especially worked on local contrast and seamless smart scaling plugins.

Interdisciplinary working environment

Former computer scientist, I developed strong skills in both my research field (image processing and analysis) and in its application domain (image acquisition and biomedicine).

Languages

French (native) ●●●●●

English (work language) ●●●●○

German (basics) ●●○○○

General skills

Image processing and analysis ●●●●●

Scientific computing ●●●●●

Python prototyping ●●●●●

Unix-based systems ●●●●○