

# Mikael Trellet

*phD graduate in Bioinformatics engineering*

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📄 <https://perso.limsi.fr/trellet/>

27 years old – driver licence

## Work experience

- Sept. 2011 – **Research/Educational assistant**, *Computational and Structural Biology group*,  
Sept. 2012 Utrecht university - NETHERLANDS.  
Under Pr. Alexandre Bonvin supervision
- Research project for protein-peptide docking with HADDOCK software [TMB13]
  - European grid-computing administration in the WeNMR project
  - New clustering method for protein-protein complexes assessment [RTS<sup>+</sup>12]
- June 2011 – **Developer**, Google Summer of Code 2011.
- Aug. 2011 Project under Biopython initiative. Interface analysis module leading to new features in the biopython module for protein-protein interfaces analysis.  
[http://biopython.org/wiki/GSoC2011\\_mtrellet](http://biopython.org/wiki/GSoC2011_mtrellet)
- Aug. 2011 – **Developer**, *AROBAS unit, IBISC/CNRS*, Evry university - FRANCE.
- Dec. 2011 Under Pr. Fariza Tahi supervision Development of TFold for the pseudoknot detection in RNA ( 5600 lines ; JAVA) and web-portal creation to port the software.  
<http://tfold.ibisc.univ-evry.fr/TFold/>

## Academic

### Education

- 2012 – 2015 **PhD degree**, *Paris-Saclay University - FRANCE*.  
Informatics
- 2009 – 2011 **Master's degree**, *Evry university - FRANCE*.  
Biology and Informatics engineering
- 2006 – 2009 **Bachelor's degree**, *Evry university - FRANCE*.  
Biology, specializing in bioinformatics
- 2007 – 2010 **Baccalauréat**, *Mennecy Highschool - FRANCE*.  
Science, specializing in Physics/Chemistry

### Research

- Oct. 2012 – **PhD student**, *VENISE group, LIMSI/CNRS*, Paris-Saclay University - FRANCE.
- Dec. 2015 Exploration and Analyses of Molecular Data in Virtual Environments.
- Visualization of molecular structures with stereoimages based on depthmaps/textures smart-phones and tablets
  - Content-based navigation of molecules in virtual environments [TFBB14]
  - Semantic definition of structural biology for the use of Visual Analytics
- Jan. 2011 – **Master student**, *Computational and Structural Biology group*, Utrecht university -  
July 2011 NETHERLANDS.  
Under Pr. Alexandre Bonvin supervision  
Docking of protein-peptide complexes using HADDOCK approach + Development of post-analysis module for HADDOCK web server ( 1500 lines ; Python, Bash and R)

June 2010 – **Master student**, *AROBAS unit, IBISC/CNRS*, Evry university - FRANCE.

Aug. 2010 Under Pr. Fariza Tahi supervision  
Improvement of TFold for the prediction of RNA pseudoknots

June 2009 – **Master student**, *Structural Bioinformatics research group*, Institut Pasteur, Paris - FRANCE.

Aug. 2009 Under Pr. Michael Nilges supervision  
Homology modelling of pilin, structural subunit of *N. Meningitidis* and *N. Gonorrhoeae* pili [CRMM<sup>+</sup>11]

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## Computer skills

Bioinfo tools PyMol, VMD, Biopython, GROMACS  
Game Engine Unity3D, Blender  
Langages C/C++/C#, Python, Bash, Javascript, Java, HTML, PHP, SQL, SPARQL, RDF(S), OWL  
Database MySQL, Oracle, Web Semantic  
OS MacOSX 10.5-10.10, Linux (Ubuntu, Debian)  
Administration Nagios, Virtuoso, UMD (from EGI)  
Network Websocket, Protocole IP/UDP  
Softwares Microsoft office, Open Office, Adobe Suite (Photoshop, Illustrator, Dreamweaver)

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## Languages

Français **Native**  
Anglais **Fluent**  
Allemand **School level**

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## Other

Tutoring Math, Biology, Physics and Chemistry for hischool students (4 years)  
Sport Badminton (FFBA and FFSU for 10 years) – France Championship in 2009 with the Evry university team as captain / Jogging / Tennis / Squash  
Scouts Animator for 5 years and Director for 3 years  
Humanitarian 2-years project to build 3 classrooms in Madagaskira - summer 2007

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## Publications

- [CRMM<sup>+</sup>11] Julia Chamot-Rooke, Guillaïn Mikaty, Christian Malosse, Magali Soyer, Audrey Dumont, Joseph Gault, Anne-Flore Imhaus, Patricia Martin, Mikael Trellet, Guilhem Clary, et al. Posttranslational modification of pili upon cell contact triggers *n. meningitidis* dissemination. *Science*, 331(6018):778, 2011.
- [RTS<sup>+</sup>12] João PGLM Rodrigues, Mikael Trellet, Christophe Schmitz, Panagiotis Kastiris, Ezgi Karaca, Adrien SJ Melquiond, and Alexandre MJJ Bonvin. Clustering biomolecular complexes by residue contacts similarity. *Proteins: Structure, Function, and Bioinformatics*, 80(7):1810–1817, 2012.
- [TFBB14] Mikael Trellet, Nicolas Férey, Marc Baaden, and Patrick Bourdot. Content-guided navigation in multimeric molecular complexes. In *BIOIMAGING*, pages 76–81, 2014.
- [TMB13] Mikael Trellet, Adrien SJ Melquiond, and Alexandre MJJ Bonvin. A unified conformational selection and induced fit approach to protein-peptide docking. *PloS one*, 8(3):e58769, 2013.