

Afaf Saaidi

BioInformatician

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Date of birth: 07/20/1988
Citizenship : Moroccan

Employment

- Sep 2019-... **Postdoctoral Fellow**, *School of Mathematics, Georgia Institute of Technology.*
Working with Prof. Heitsch. Fundig: NIH grant
- Jan-May 2019 **Postdoctoral Fellow**, *AgroBiosciences department at University Mohammed VI Polytechnic, Benguerir, Morocco.*
- Oct-Dec 2018 **Postdoctoral Fellow**, *Laboratory of Computer Science at Ecole Polytechnique, Palaiseau, France.*
- Feb-Aug 2015 **Master thesis intern**, *Max Plank Institute of Biochemistry, Gottingen, Germany.*

Education

- 2015–2018 **PhD in Computer Science, Major BioInformatics**, *Laboratory of Computer Science, Ecole Polytechnique, Palaiseau, France.*
Dissertation Topic: “*Multi-dimensional probing for RNA secondary structure(s) prediction*”, supervised by Prof. Mireille Regnier and Dr. Yann Ponty, defended on October the 1st, 2018.
Funding: Medical Research Foundation (FRM), France:
Thesis available on [Link](#)
- 2014–2016 **Master 2 Research in Bioinformatics and Biostatistics**, *Ecole Polytechnique, Palaiseau, France.*
- 2011–2014 **Engineering degree in Modeling and Scientific Computing**, *Ecole Mohammedia des Ingénieurs, Rabat, Morocco.*
“*Graduated with High Honors*”
- 2008–2011 **Bachelor in Mathematics and Computer Science**, *Faculty Polydisciplinaire, Khouribga, Morocco.*
“*Graduated with High Honors*”

Research Interests

- **Structural BioInformatics (Resolving RNA structure through prediction methods).**
- **Algorithmic, Numerical Analysis and Data analysis.**

Publications

- 2020 **Reconciling RNA structural profiling with correlated mutation analysis from DMS-MaP footprinting**, *A.Saaidi, A.Laederach and C.E.Heitsch*.
(In preparation)
- 2020 **IPANEMAP: Integrative Probing Analysis of Nucleic Acids Empowered by Multiple Accessibility Profiles**, *Saaidi et al. .*
Nucleic Acids Research. Available on [Link](#)
- 2019 **RNA secondary structure modelling following the IPANEMAP workflow**, *Allouche, Saaidi et al. .*
Chapter in *RNA Folding - Methods and Protocols* *Springer Nature, Methods in Molecular Biology*. Available on [Link](#)
- 2017 **Two ribosome recruitment sites direct translation events within HIV1 Gag open reading frame**, *Deforges, Saaidi et al. .*
Nucleic Acids Research Oxford Journals, Science & Mathematics. Available on [Link](#)

Conferences, Seminar, Workshops

Selected Talks

- MatBio 2017 **Short reads mapping using SHAPE mutational profile**, *Mathematical Foundation in Bioinformatics*, Kings college London, U.K, [Link](#).
- JC 2017 **An integrative approach for predicting the RNA secondary structure**, *Junior Conference, Computational approaches to nucleic acid and protein structure and function*, University Paris Sud Orsay, France.
- JOBIM 2017 **An integrative approach for predicting the RNA secondary structure for the HIV-1 Gag UTR using probing data**, *Journées Ouvertes en Biologie, Informatique et Mathématiques*, Lille, France, [Link](#).
- JOBIM 2016 **Towards structural models for the Ebola UTR regions using experimental SHAPE probing data**, *Journées Ouvertes en Biologie, Informatique et Mathématiques*, Lyon, France, [Link](#).

Seminar and Thematic School Talks

- Dec 2020 **Virtual conference**, *Machine Learning in Science & Engineering MLSE2020*.
- Oct 2019 **Clustering strings with mutations using an expectation-maximization algorithm**, *MatBio seminar*, Georgia Institute of Technology, US.
- Mar 2019 **An EM algorithm to map NGS outputs in the case of parallel sequencing of RNAs undergoing SHAPE-MaP modification**, *Statistics seminar*, Department of statistics, College of science, Purdue University, US.
- Feb 2018 **Winter seminar TBI**, , Thematic: Computational Biology, Computational Mathematics, Bioinformatics, bled, Slovenia.
- Nov 2017 **AlgoSb2017 Winter School**, Thematic: Algorithms in Structural Bioinformatics, Computational protein design , Cargese, Corsica,.
- Feb 2016 **Winter seminar TBI**, Thematic: Computational Biology, Computational Mathematics, Bioinformatics, bled, Slovenia.

Poster Communication

- Nov 2019 **Workshop in Data Science for a better life@ Bayer, Kerpen, Germany.**
- Oct 2019 **34th Mini-conference on Mathematics and Algorithms, Clemson, US, [Link](#).**
- Nov 2017 **Workshop in IT for Life Science @ Bayer, Leverkusen- Neuss, Germany.**
- Nov 2016 **Doctoral days, University Paris Saclay, Centralsupelec, France, [Link](#).**

Scientific Popularization

- 2017 **L'ARN tire les ficelles**, *Article in the canadian journal CurioCity, let's talk Science.*
- 2017 **Scientific mediator F estival Sciences et Art Curiositas**, *CNRS France.*
- 2016 **Challenge My thesis in 6'** , *[Link Youtube](#).*
- 2015,2018 **Scientific mediator F te de la science**, *INRIA Saclay France.*

Related research activities

- Reviewer for the journal *Bioinformatics* since 2019, [Link](#)
- Member of the organizing committee of the Math-Bio seminar at GT.
- Volunteer RECOMB, Paris 2018: international conference in Computational Molecular Biology.
- **Teaching:** Tutoring for the module INF442, "Massive data processing, MPI with C++", 2016. This class was dedicated to the second year engineer students at Ecole Polytechnique, France.

Developed softwares

Github link <https://github.com/afafbioinfo>.

Invitations, Scientific Stays, Awards and Scholarships

- Feb 2019 **Scientific short stay, Statistics department, Purdue University, US.**
- Oct 2018 **Grant for young Postdoc, Ecole Polytechnique, France.**
- Nov 2016 **Poster award in the category Life Sciences, Journ e de l'Ecole doctorale Interface, Universit  Paris Saclay, France.**
- Jun 2017 **Scholarship for a scientific stay abroad, Ecole doctorale Interface, Universit  Paris Saclay, France.**

References

- Dr. Yann Ponty
Director of Research at CNRS-LIX, France
Yann.Ponty@lix.polytechnique.fr
- Dr. Bruno Sargueil
Senior scientist at Paris Descartes University, France
bruno.sargueil@parisdescartes.fr
- Dr. Mireille R gnier
Full Professor at Ecole Polytechnique, Palaiseau, France
Mireille.Regnier@polytechnique.edu