

# Amina Ghrissi

*PhD Engineer in Applied  
Mathematics*

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28 years old

## Work Experience

- DEC-MARS 2017-2021 *University Côte d'Azur | UCA & I3S Laboratory, CNRS*  
PhD in Biomedical Data Analysis | **IADB** project.  
-Developing a decision-aid solution to help cardiologists identify potential ablation sites in atrial fibrillation based on spatiotemporal dispersion of EGMs with the use of machine learning.  
-Exporting, anonymizing and restructuring clinical data (EGM, ECG).  
-**Patent under preparation.**
- MAR-SEP 2017 *Compressed Sensing of Atrial Fibrillation MSc Internship | I3S, CNRS*  
Processing ECG signals to extract atrial activity in atrial fibrillation using compressed sensing.
- NOV-FEV 16-17 *Dynamic Modeling of Drugs Project | Biocore INRIA, ExactCure*  
Simulated and reconciled pharmacokinetic drug models.
- FEB-MAY 2016 *Data Analysis Graduation Project | Integration Objects*  
Designed statistical and machine learning solutions to identify key variables and recognize patterns.
- JUL-AUG 2015 *Data Analysis Internship | Integration Objects*  
Benchmarked and designed a validation test to evaluate a data mining software 'KNet Analytics'.

## Education

- 2016-2017 *University Nice-Sophia Antipolis | UNS*  
MSc in Computational Biology and Biomedicine, First rank, (grade 15/20). | **CBB**
- 2013-2016 *National Engineering School of Tunis | ENIT*  
Engineer in Modeling and Scientific Computing  
Modeling for Industry and Services Department | **MIndS**
- 2011-2013 *Preparatory Institute of Engineering Studies of Tunis | IPEIT*  
National Competition exams in Mathematics and Physics, (rank 237/2000).
- 2008-2011 *Bourguiba Pioneer School of Tunis | LPBT*  
Baccalaureate in Mathematics with Honors, (grade 17/20).

## Computer Skills

Programming languages | Software: Matlab, Python, R, C++, TensorFlow, Keras, Docker, Git

## Languages

ENGLISH: Fluent

FRENCH: Fluent, C2 in TCF, French Institute of Tunis, Mars 2016

ARABIC: Mother tongue

## Publications & Presentations

- **A. Ghrissi**, et al. "Data Augmentation for Automatic Identification of Spatiotemporal Dispersion Electrograms in Atrial Fibrillation Ablation Using Machine Learning," *42<sup>nd</sup> Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Montreal, 2020.
- **A. Ghrissi**, et al. "Identification of Spatiotemporal Dispersion Electrograms in Persistent Atrial Fibrillation Ablation Using Maximal Voltage Absolute Values," *28<sup>th</sup> European Signal Processing Conference*, Amsterdam, 2021.
- **A. Ghrissi**, et al. "Atrial Fibrillation Ablation Guided by Electrogram Spatiotemporal Dispersion using Machine Learning," *Atrial Signals, Physicians meet Engineers, Bordeaux, 2019, poster presentation*.
- **A. Ghrissi**, V. Zarzoso. "Compressed Sensing for the Extraction of Atrial Fibrillation Patterns From Surface Electrocardiogram," *27<sup>th</sup> European Signal Processing Conference, EUSIPCO 2019*, Spain, 2019.
- **A. Ghrissi**, et al., "Training Neural Networks: A Tensor Based Approach," in EURASIP summer school, Tensor-Based Signal Processing, August 27-31, 2018, Leuven, Belgium, poster presentation.

## Scholarships & Grants

2018-2020: Excellence PhD scholarship, IDEX UCA *JEDI*.

2016-2017: LABEX UCN Grant @Sophia.

## Licenses & Certifications

OPENCLASSROOMS 2020: Perfectionnez-vous en Python

COURSERA-2019: Improving Deep Neural Networks

## Competitions & Leadership Experience

- **Student Paper Contest**: Representative of Europe and Finalist in EMBC, Montreal, 2020.
- **PhysioNet/CinC Challenge**, "Detection of Cardiac Arrhythmias from Varied Length Multichannel Electrocardiogram Recordings Using Deep Convolutional Neural Networks," Italy | 2020.
- **Invent @UCA** in partnership with **ORPEA**: Transfert of Intellectual Property Right | 2019.
- Active member in Association of STIC Doctorants (**ADSTIC**): Café @ADSTIC | 2017-2019.
- Co-founder and Vice President of **MIndS** | **TA club** at ENIT | 2014.