**Xavier LOIZEAU** 

7 rue des rosiers 44880 Sautron FRANCE +33 (0)6 58 66 51 81 xavierloizeau@free.fr Date of birth: 13/01/92 Nationality: French

## **EDUCATION**

2012 - present Master of Science (MSc) in Statistics equivalent (Diplôme d'ingénieur)

ENSAI - National School for Statistics and Information Analysis, Rennes, France

(Specialisation: Advanced Statistical Engineering)

- Expected graduation: 2015

MSc in Mathematical Statistics, University of Rennes 1, department of mathematics

- Expected graduation: 2015

**Dual degrees in junction with ENSAI studies:** 

- BSc in Mathematics equivalent, University of Rennes 1, France (graduated)

2010-2012 Post secondary classes préparatoires, Specialisation in Mathematic and Physics, Lycée

Clemenceau, Nantes, France

Undergraduate-level courses required in preparation for competitive entrance exams into top

graduate and engineering schools (France's grandes écoles)

2010 A-levels equivalent (baccalauréat S) -

- Major: Scientific, with honours; specialisation: Mathematics

## SUBJECTS IN STUDY PROGRAM

Mathematic Stochastic

Complex analysis Inferential statistics
Differential equations Computational statistics

Topology Test theory
Functional analysis Linear regression

Measure theoryGeneralised Linear ModelsNumerical analysisGeneralised Additive ModelsGroup theoryNon Linear RegressionArithmeticNon Parametric Regression

Linear algebra

Time series
Survival analysis
Survey methodology

Makov chains Martingale Levy Processes

## PROFESSIONAL EXPERIENCE

Internship at ONERA (National Agency of Study and Research in Aerospace, Palaiseau)
Modelling Infra-Red emission by space-rocket engines.

Based on design of experiment and Kriging.

2014 Internship at CREST (Research Centre for Economics and Statistics)

Studied, implemented and compared two methods for illumination bias on electronic microscope images.

Implemented an R package for these methods.

2013 Internship at Beck Prosper (Kingswindford, West Midland, United Kingdom)

Discovered work environment abroad. Accomplished administrative tasks.

## **ACADEMIC PROJECTS**

2015 **Statistics project** (in group), create a boat tracking algorithm given AIS system data. Used to classify trajectories and detect potential illegal doings.

*Implemented in C++, involves Kalman and particular filter.* 

2015 **Statistics project**, comparing prior choices in terms of their posterior concentration

Compared theoretical and practical properties of two prior choices for the white noise model.

2014 **Statistics project** (in group), cluster evolution analysing, application to cytometric analysis

Analysed the evolution of an ecosystem in state of remediation. Involves managing a large
amount of data, different clustering algorithm and research of comparison criterions for
partitions on different data bases.

2013 **Statistics project** (in group), setting patient profiles based on IGS II and Glasgow scores after a liver transplant

Analysing the power of prediction of these scores about death, fitting a logistic regression model to our population.

Mathematic/informatics project, coding an automatic music composer using Rubik's Cube modelling Developed in PASCAL, involves group theory to create a Rubik's Cube solving algorithm.

## **ICT**

Operating systems: Mac OS, Ubuntu, Windows 8/7/Vista/XP

Programming languages: R, Matlab, Scilab, C++, Java, Pascal, SAS, SPAD, Winbugs

# **FOREIGN LANGUAGES**

French (mother tongue)

English (2013 : TOEIC test, Advanced level, 880/990)

Spanish (basic)

### **INTERESTS**

Sport: judo (13 years, brown belt), jujitsu, handball, volleyball

Music: Guitar (in band), singing

Traveling: Norway (Oslo), Sweden (Stockholm), USA (Seattle, Washington DC), Spain (A Coruña, Galicia),

Switzerland (Geneva), Italy

Reading: fictions, mathematics reviews, guitar reviews