Xavier LOIZEAU 371 Im Neuenheimer Feld 69120 Heidelberg GERMANY 29th of October 2015 +49 (0)1575 9361755 xavierloizeau@free.fr Date of birth: 13/01/92 Nationality: French

EDUCATION

2015 - present Philosophiæ doctor (PhD) student in Mathematic

University of Heidelberg, Institute of applied mathematics, Germany

2012 - 2015 Master of Science (MSc) in Statistics equivalent (*Diplôme d'ingénieur*)

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

(Specialisation: Advanced Statistical Engineering)

- Graduated

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

- Graduated

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 analysisSurrogate modelsDifferential equationsInferential statisticsTopologyComputational statistics

Functional analysis

Measure theory

Numerical analysis

Group theory

Test theory

Linear regression

Generalised Linear Models

Generalised Additive Models

Arithmetic Non Linear Regression
Linear algebra Non Parametric Regression

Time series
Survival analysis
Survey methodology
Makov chains
Martingale
Levy Processes

Levy Processes Minimax theory

PROFESSIONAL EXPERIENCE

2015 Internship at ONERA (National Agency of Study and Research in Aerospace, Palaiseau)

Building a multi-fidelity surrogate model for Infra-Red emission by space-rocket engines.

Based on design of experiment, Bayesian Co-Kriging, sensitivity analysis and propagation of uncertainty.

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

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

Implemented an R package using C++ for these methods, based on parametric and non parametric Kernel regression.

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 R, 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.
- 2014 **IT project** (in group), developed an assistant to house furnitures and budget management *Developed in JAVA and SQL*
- 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.*
- 2012 **Mathematic/IT 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, composition

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

(Geneva), Italy

Reading: fictions, mathematics reviews, guitar reviews