CURRICULUM VITAE

EMANUELE LUCREZIA

PhD in Modeling and Data Science

CONTACTS:

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ADDRESS:
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DIGITALS SKILLS:

- Python
- Matlab
- R
- Maple
- Excel (VBA)
- SAP

LANGUAGES:

- Italian: Native
- English: working proficiency
- German: Basic
- Portuguese: Basic

WORK EXPERIENCE

Eltek Group – **Electronic Data Processing**
Jun 2023 – Now
Plastic industry. System Controllability and Data Acquisation (SCADA), Manufacturing Executing System (MES), Data Analysis related to Mainteinance.

Università di Torino – **PhD in Modeling and Data Science**
Nov 2019 – Now
Affiliation: Department of Mathematics, Giuseppe Peano; Turin.
Topics: stochastic processes. failure detection, random walks.
Thesis: "Lindley Process with Laplace Jumps and its Applications",
Advisor: Prof. Cirstina Zucca
Activities: Research, calculation, coding, divulgation and study.
*the applied activities consisted in development-implementation of statistical algorithms in the contest of predictive maintance
*the theoretical activities consisted in the elaboration and study of the probabilistic models underlying the analysis of data.

Istituto Aldo Moro, Rivarolo C.se – Substitute Teacher
Jan 2019 – Jun 2019
Teaching informatics, first class students (14/15 yrs).
* In laboratory: Microsoft Office
* In class: programming fundamentals.

Forschungzentrum, Juelich – Research Assistant
May 2017 – Nov 2018

Affiliation: Institute of Neuroscience and Medicine (INM-6), Institute for Advanced Simulation (IAS-6) and JARA BRAIN Institute I.
Collaboration: Institut de Neurosciences de la Timone, Marseille,France.
* Applied probability and statistics to experimental neuronal data
* Development and implementation of statistical algorithms (python)
* Tutoring at:
- "*Advanced Neural Data Analysis Course" (ANDA 2018), Juelich-Barmen*
- RWTH Aachen University, (Germany) "*Introduction to Computational Neuroscience*"

Forschungzentrum, Juelich – Research Study Assistant
Jun 2016 – Apr 2017

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This work was performed in the framework of a research agreement between the Department of Mathematics of the University of Turin and the research center of Juelich, Forschungszentrum.
* Master Thesis: "Rate Latency Ordering in Multi-Dimensional Point Processes, an Application to Neuroscience"
* Course: *Advanced Neural Data Analysis Course (ANDA 2017), Juelich-Barme*

EDUCATION

Università di Torino – Master Degree: Mathematics
Oct 2014 – Apr 2017

- Thesis title: "Rate Latency Ordering in Multi-Dimensional Point Processes, an Application to Neuroscience".
- Grade: 110/110 cum Laude

Università di Torino – Bachelor Degree: Mathematics
Oct 2010 – Apr 2014

- Thesis title: "Resolvability of Polynomial Equations and Galoìs Theory".
- Grade: 96/110

Liceo Scientifico A. Gramsci, Ivrea – Secondary High School
Set 2005 – Jun 2010

- Grade: 78/100

Other Courses

- German Course: *Sprachenateiler Berlin*, Berlin 24/09/2018–05/10/2018,
- English Course: *MalvernHouseDublin*, Dublin 06/2014–07/2014, Ireland

Online courses:

* SQL for Data Science by University of California, Davis on Coursera. Certificate earned on February 2023 *Cryptography I by Stanford University on Coursera. Certificate earned on October 2019 * Introduction to TCP/IP by Yonsei University on Coursera. Certificate on May 9, 2019 * Advanced Data Science with IBM, a 4-course specialization by IBM on Coursera. Specialization Certificate earned on May 23, 2019 * Machine Learning by *Stanford University* on Coursera. On February 16, 2019

Pubblications:

[Ito, J., Lucrezia, E., Palm, G., & Grün, S. (2019).
Detection and evaluation of bursts in terms of novelty and surprise.
Math. Biosci. Eng, 16, 6990-7008.] doi: 10.3934/mbe.2019351

Posters:

[Rate Latency Patterns Across Neuronal Populations Specific to Behavior]
https://juser.fz-juelich.de/record/849801

[Behavior specific rate latency ordering of simultaneously recorded neurons]
https://juser.fz-juelich.de/record/849800/files/lucrezia_INM_ICS_retreat2018.pdf

[Statistical Definition of Bursting in Neural Spike Trains by Means of Novelty and Surprise Measure]
https://juser.fz-juelich.de/record/852487/files/poster%20neural%20coding%202018,%20Lucrezia%20Palm%20Ito%20Gruen.pdf

Website:

https://manulz3.github.io/