

VALERIA SECCHINI

PROFILE



Nationality:
Italian

Date of birth:
06/10/1994

CONTACTS

- Prague
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LANGUAGES

- English **C1**
([C1 2021 IELTS Certificate](#))
- Spanish **A2**

CODING AND

SIMULATION SOFTWARES

- Python very good command
- NetLogo good command
- Mathematica good command
- C++ good command
- MATLAB fair command

DIGITAL SKILLS

- Unix/Linux: independent user
- LaTeX: very good command
- GitHub: good command
- Office Suite: very good command

RESEARCH ACTIVITY

JUNIOR RESEARCHER in CORPTAX team

Charles University, Prague (07/2021 - now)

- Topic: Multinational Corporations' (MNCs') taxation and shifting of their profits into tax havens
- Task: Understanding how much countries lose in taxes due to MNCs profits shifting and how this flow of profits is organized

EDUCATION

PhD STUDENT in Economics and Finance

Charles University, Prague (10/2021 - now)

Principal subjects covered:

- Taxation
- Computational Economics
- Economics Complexity

MASTER'S DEGREE in PHYSICS OF COMPLEX SYSTEMS

(Final evaluation: 110/110 cum laude)

University of Turin, Italy (12/2018 – 12/2020)

Principal subjects covered:

- Data Mining and Neural Networks
- Dynamical Systems
- Stochastic Processes
- Agent-Based Modelling
- Statistical Mechanics (in and out of equilibrium)
- Network Analysis
- Micro-Economics
- Advanced Statistics

Skills acquired:

- Ability to model and understand complex systems through an interdisciplinary approach
- Knowledge of advanced mathematical, physical, statistical and simulation tools to study complexity.
- Advanced programming: data mining, machine learning and agent-based simulation (Python, Mathematica, NetLogo).
- Familiarity with economic systems developed through the study in economic courses and projects.

BACHELOR'S DEGREE in PHYSICS

University of Padua, Italy (10/2013 – 07/2018)

Principal subjects covered:

- Mathematical Calculus and Complex Analysis
- Mathematical Physics
- Statistics
- General and Special Relativity

- Quantum and Statistical Mechanics
- Computational Physics and Coding

TEACHING EXPERIENCE

- **Teaching Assistantship** in the academic course of Principles of Economics I, "Charles University", Prague (10/2021 - now)
- **Tutor in Mathematics** in Middle School "Peyron-Re Umberto I", Turin (Italy) (02/2019 - 06/2019)

PUBLICATIONS

- Knopoff, D.; Secchini, V.; Terna, P. "Cherry Picking: Consumer Choices in Swarm Dynamics, Considering Price and Quality of Goods". *Symmetry* 2020, 12, 1912. Text of paper: <https://www.mdpi.com/2073-8994/12/11/1912> .
Repository for code: <https://github.com/Valer7a/Cherry-Picking-in-a-Decentralized-Hayekian-Market-with-Quality-described-through-Swam-Theory>

PROJECTS

- **Master's Thesis Project**,
"Cherry Picking: Consumers' Choices in a Swarm Dynamics Considering Price and Quality of Goods", text as "Project_Full_Text" in: <https://github.com/Valer7a/Cherry-Pickingin-a-Decentralized-Hayekian-Market-with-Quality-described-through-Swam-Theory>
- **Econophysics project**,
"Market Efficiency Under Different Dynamics in the Mall" : <https://terna.to.it/tesineEconofisica/marketEfficiency.htm>
- **Deep Learning projects**,
- "Text classification, through fine tuned Word2Vec and Doc2Vec": <https://www.kaggle.com/valeriasecchini/text-classif-fine-tuned-word2vec-and-doc2vec> ,
- "Classification of the gender of authors' tweets" <https://www.kaggle.com/valeriasecchini/notebook-valeria-secchini-data-mining-project>
- "Classification of names in patent litigation" <https://www.kaggle.com/valeriasecchini/task5-valeriasecchini>
- **Network analysis**:
"Analysis of Political Books Network" : <https://github.com/Valer7a/Analysis-of-Political-Books-Network/settings>
- **Bachelor's Thesis Project**,
"Order-Book's dynamics: Stigler model" : <http://tesi.cab.unipd.it/61240/>