

# Curriculum Vitae – Victoria Mazo, PhD

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## EMPLOYMENT

2016 – present **Deep Learning Researcher, Zebra Medical Vision**

Developed and implemented applications for detection of pathologies in lungs CT and brain CT using the Semantic Segmentation approach and Generative Adversarial Networks.

2014 – 2016 **Researcher, Cyberbit** (formerly Intelligence division at Nice)

Developed and implemented applications for osint (open source intelligence) and surveillance, such as Face Liveness Detection, Image Captioning, Sentiment Analysis and Semantic Similarity

2009 - 2014 **Teaching Assistant, Bar Ilan University**

2007 - 2009 **Process Engineer, Intel**

Analyzed with statistical methods and improved quality of gates in transistor manufacturing

## EDUCATION

2009 - 2014 **PhD in Physics**, Bar Ilan University

*Field:* Theoretical Condensed Matter Physics

*Dissertation Title:* “Monolayer and Bilayer Graphene Ribbons in a Strong Magnetic Field”

*Dissertation Adviser:* Prof. E.Shimshoni

2012 - 2014 **M.Sc. in Financial Mathematics**, Bar Ilan University

2003 - 2007 **M.Sc. in Physics**, Tel Aviv University

*Field:* Theoretical High Energy Physics, String Theory

*Thesis Title:* “On AdS/CFT Models”

*Thesis Advisers:* Prof. J.Sonnenschein (Tel Aviv University) and Prof. N.Obers (Niels Bohr Institute, Denmark)

2000 - 2003 **B.Sc. in Physics**, Bar Ilan University

## PROJECTS

### Stochastic model of working memory

Under the supervision of M.Tsodycs, Weizmann Institute.

Worked on best fitting of Tsodycs' model of working memory to the neurobiological data within the framework of neural networks. Solved numerically stochastic differential equations and compared the results with multiple parameters to find the best fit to the biological data and best theoretical implementation of the working memory principles

## LANGUAGES

Fluent in **English, Hebrew** and **Russian**, and proficient in **German**

## PUBLICATIONS

- V. Mazo, I. Tamir, E. Toledano and E. Elnekave “Recurrent Fully Convolutional DenseNet for Bronchiectasis Detection in CT Imaging”, Submitted to ICML (2017)
- V. Mazo, I. Tamir, E. Toledano and E. Elnekave “Ground Glass Opacity Detection Using Fully Convolutional Neural Networks”, Submitted to MICCAI (2017)
- V. Mazo, E. Shimshoni, C.-W. Huang, S. Carr and H.A. Fertig “Helical quantum Hall edge modes in bilayer graphene: a realization of quantum spin-ladders”, *Physica Scripta*, Vol. 2015, T165 (2015)
- V. Mazo, C.-W. Huang, E. Shimshoni, S. Carr and H.A. Fertig “Superfluid-insulator transition of quantum Hall domain walls in bilayer graphene”, *Phys. Rev. B* 89, 121411 (2014)
- V. Mazo, E. Shimshoni and H.A. Fertig “Collective edge modes of a quantum Hall ferromagnet in graphene”, *Phys. Rev. B* 86, 125404 (2012)
- V. Mazo, E. Shimshoni and H.A. Fertig “Edge states of bilayer graphene in the quantum Hall regime”, *Phys. Rev. B* 84, 045405 (2011)
- V. Mazo and J. Sonnenschein “Non critical holographic models of the thermal phases of QCD”, *JHEP*, Vol. 06, 091 (2008)