Manolis Chatzigeorgiou

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# EDUCATION

*2018-2022* **National Center of Scientific Research “Demokritos”  
 National Technological University of Athens**

*PhD in Chemical Engineering: Development of a novel characterization method for new types of clinker combining Scanning Electron Microscopy and X-ray Powder Diffraction techniques  
(Funding: Stavros Niarchos Foundation Industrial fellowship program, Titan Cement Group, NCSR Demokritos)*

*2015-2017* **National Technological University of Athens**

*Master of Science (MSc) in Mathematical modeling Technologies and Finance engineering*

*2007-2014* **National and Kapodistrian University of Athens**

*Bachelor of Science (BSc) in Physics*

# PUBLICATIONS

1. V.Constantoudis, M.Kalimeri, F.K.Diakonos, K. Karamanos, C. Papadimitriou, **M. Chatzigeorgiou**, H. Papageorgiou, “Long-range correlations and bustiness in written texts: Universal and language-specific aspects”, International Journal of Modern Physics B, vol 30, 2016, DOI: 10.1142/S0217979215410052
2. **M.Chatzigeorgiou**, V.Constantoudis, F.K. Diakonos, K.Karamanos, C. Papadimitriou, M. Kalimeri, H. Papageorgiou, “Multifractal correlations in natural language written texts: Effects of language family and long word statistics”, Physica A: Statistical Mechanics and Applications, vol 469, 2017, DOI.: [10.1016/j.physa.2016.11.028](https://doi.org/10.1016/j.physa.2016.11.028)
3. V.Constantoudis, K.Poulios, **M.Chatzigeorgiou**, G.Papavieros, “Computational nanometrology of nanostructures: the challenge of spatial complexity”, Conference: 18th International Congress of Metrology, DOI: 10.1051/metrology/201713001
4. A. Malakopoulos, **M. Chatzigeorgiou**, N. Boukos, A. Salifoglou,”Durability performance of Portland limestone cement mortar containing butyl and zinc stearate admixtures”, Materials and Structures/Materiaux et Constructions, 54 (2), April 2021, DOI 10.1617/s11527-021-01638-5
5. E. Sakellis, A. Markopoylos, C. Tzouvelekis, **M. Chatzigeorgiou**, A. Travlos, N. Boukos,”Low-cost electrodeposition of size-tunable single-crystal zno nanorods”, Fibers, vol 9 , issue 6, June 2021 , DOI: 10.3390/fib9060038
6. **M**. **Chatzigeorgiou**, V.Constantoudis, D.Papargyriou, M.Katsiotis, M.Beazi-Katsioti, N.Boukos, “Towards optimization of Scanning Electron Microscopy Back-scattered electron image acquisition for multiphase materials”, European Nanoanalysis Symposium EMRS 2021 fall meeting, Dresden Germany (oral)
7. **M**. **Chatzigeorgiou**, Constantoudis V., Papargyriou D., Katsiotis M., Beazi-Katsioti M., Boukos N., “Investigation of contrast and brightness parameters in back-scattered electron scanning electron microscopy images”, European Nanoanalysis Symposium EMRS 2021 fall meeting, Dresden Germany (poster)

# CERTIFICATIONS

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| --- | --- |
| *2021* | [**Deeplearning.AI**](https://www.linkedin.com/school/12831/?legacySchoolId=12831) **(coursera)**  *Structuring Machine Learning Projects* |
| *2020* | **Deeplearning.AI (coursera)**  *Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization* |
| *2020* | [**Deeplearning.AI**](https://www.linkedin.com/school/12831/?legacySchoolId=12831) **(coursera)**  *Neural Networks and Deep Learning* |

*2019* **Topas (Bruker)** *Rieveld/Topas Training for XRD diffractometers*

# WORK EXPERIENCE

2021 ***TITAN Cement Factory Greece (Kamari-Athens):***

*X-ray Powder Diffraction training*

2019 ***TITAN Cement Factory Bulgaria (Zlatna-Panaga):***

*X-ray Powder Diffractometer Installation and XRD analysis Training*

1. ***Athens science festival: Dancing with the molecules***

*Teaching equation of state with music motor techniques for students of primary education*

2017-2018 ***Teaching assistant*** *Master Course: Mathematical and computational modeling of biological systems*

2017 ***Nanometrisis p.c.*** *Fractal and Multi-fractal analysis of scanning electron microscopy and atomic force microscopy depicting*

*nanostructured surfaces*

2016  ***Data Base Administration assistance*** *Assistance on the Migration process of a2btranfer databases*

2012-now ***Private Tutoring*** *Physics, Mathematics, Chemistry*

**LANGUAGES**

* Greek: Native
* English: Proficient English User

# TECH SKILLS

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Coding Languages

* Python
* Matlab

Libraries/Techniques:

* Image analysis/processing: OpenCv, Pillow
* Machine learning: Keras, Tensorflow, scikit-learn
* Scientific computing: scipy, numpy
* Data manipulation and analysis: pandas
* Visualization: matplotlib, seaborn

Scientific Packages:

X-ray diffraction Rietveld analysis: FullProf, Profex, Topas

# COMMUNICATION/ORGANIZATIONAL SKILLS

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| * Quick learner * Teamwork * Responsibility * Flexibility/Adaptability | * Time management * Multitasking * Attention to detail * Interpersonal skills |

**INTERESTS**

Traveling, Cooking, Rock climbing, Hiking