



TO MAGNIFICA RETTRICE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE ____7068____

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Dipartimento di _____ Statistics _____**

Scientist- in - charge: _____ **Prof. Rossini**_____

[Amenah AL-Najafi]

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	AL-Najafi
Name	Amenah

PRESENT OCCUPATION

Appointment	Structure
1. University Professor in Statistics 2. Scientific Researcher	Islamic University (teaching Statistics) Photrek Online Company (conducting scientific research).

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree			
Specialization			
PhD	Stochastics	Szeged	2021
Master	Mathematics	Kufa	2014
Degree of medical specialization			
Degree of European specialization			
Other			

REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date	of	Association	City
------	----	-------------	------



registration		

FOREIGN LANGUAGES

Languages	level of knowledge
English	B2

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2016	SCHOLARSHIPS: Stipendium hungaricum (PhD)
2020	SCHOLARSHIPS: Stipendium hungaricum(thesis)
2023	AWARDS : New England Statistics Symposium (NESS) conference

TRAINING OR RESEARCH ACTIVITY

description of activity

PROJECT ACTIVITY

Year	Project
2024	Building a Coupled Variational Autoencoder (VAE): Developed and implemented a sophisticated VAE model using the New England Research Cloud to enhance deep learning capabilities
2024	Analysis of Environmental, Health, Spatial, and Economic Data: Conducted research exploring illegal waste disposal using SEM and Bayesian hierarchical models
2023-2024	Integration of Uncertain Knowledge Graphs for Medical Decision Support: Designed UKGs with Bayesian methods and integrated them with LLMs and PPLs to support medical decisions.
2024	Collaborative Research on Statistical Estimation Techniques: Investigated IA methodologies for estimating heavy-tailed distribution parameters with applications to seismic data.
2022-2023	Methylation Data Analysis: Analyzed methylation datasets using advanced tools to uncover biological insights and patterns.
2021-2024	Independent Scientific Investigation with Photrek: Developed estimation methods for coupled distributions and applied findings to real-world problems.
2021	Estimation of Tail Indices of Heavy-Tailed Distributions with Applications: Developed new estimators, applied extreme value theory to COVID-19 spread in Iraq and Egypt.
2020	7th Winter School of PhD Students in Informatics and Mathematics, January
2018	Winter School on Applied Algebra and Coding Theory, Würzburg, Germany



2018	International Spring School on Computer-Aided Modelling of Dynamical Systems, Bolyai Institute, University of Szeged, Hungary
2019	International Spring School on Computer-Aided Modelling of Dynamical Systems, Bolyai Institute, University of Szeged, Hungary
2023	Conference: The 36th New England Statistics Symposium (NESS), Boston University, USA
2018	Conference: 32nd European Meeting of Statisticians (EMS), Palermo, Italy
2020	Conference: Stochastic Modeling Techniques and Data Analysis International Conference, Barcelona, Spain
2018	Conference: YSM 2018 – Young Statisticians Meeting, Balatonfüred, Hungary
2018	Conference: CSM – The 5th Conference of PhD Students in Mathematics, Bolyai Institute, University of Szeged, Hungary

PATENTS

Patent

CONGRESSES AND SEMINARS

Date	Title	Place
18-11-2024	Estimating heavy-tailed distributions using Independent Approximates	New-Haven University

PUBLICATIONS

Books
1. A. AL-Najafi and L. Viharos. Weighted least squares estimators for the Parzen tail index. {Periodica Mathematica Hungarica, 2021.}
2. A. AL-Najafi ,L. Stacho and L. Viharos. Regression estimators for the tail index. {Acta Scientiarum Mathematicarum 87(34):649-678, 2021.}
3. M.A. Ibrahim and A. Al-Najafi. Modeling, control, and prediction of the spread of covid-19 using compartmental, logistic, and gauss models: A case study in Iraq and Egypt. {Processes, 8(11):1400, 2020.}
4. M.A. Ibrahim, A. Al-Najafi, and A. D'enes. Predicting the covid-19 spread using compartmental model and extreme value theory with application to Egypt and Iraq. In press, {Trends in Biomathematics: Chaos and Control in Epidemics, Ecosystems, and Cells., 2020.}
5. A. Al-Najafi. Comparative Performance of Three Methods to Classify Smokers Data. {Austrian Journal of Statistics, 50(3), 2021.}
6. L. Oluoch, A. Al-Najafi. Lower bound for the number of 4-Element generating sets of direct



products of two neighbouring partition lattices. {Discussiones Mathematicae - General Algebra and Applications., 2021.}

7. N. Dakhil and Amenah Abdullateef Hameed. Latent Profile Model: A Case Study on Water Quality. *International journal of scientific research*. 2014. DOI: 10.36106/ijsr.

8. N. Dakhil and Amenah Abdullateef Hameed. Classification of water Quality in Najaf Using K-mean. *Journal of Karbala University*. 2014.

Articles in reviews

Amenah AL-Najafi, Ugur Tirnakli, Kenric P. Nelson. Independent Approximates provide a maximum likelihood estimate for heavy-tailed distributions (<https://arxiv.org/abs/2407.06522>)

Congress proceedings

OTHER INFORMATION

Course: Machine Learning with Python - From Linear Models to Deep Learning (MITx, Course ID: 6.86x), from: May 27, 2024 to September 10, 2024.

Completed a comprehensive course covering fundamental concepts in machine learning, including linear models, neural networks, deep learning, and clustering, with hands-on projects and assessments.

Teaching Experience

Lecturer (Oct.2021- Oct. 2022) Open College for Teachers, Ministry of Education's, Iraq.
Taught mature students Differential Equations.

PhD Student (2016-2021), Department of stochastic, University of Szeged, Hungary.

Guest Lecturer assistant (2014-2016) University of Kufa, Ministry of Higher Education and Scientific Research in Iraq.
Taught Mathematical Statistics to undergraduate students 'level 2 and 3 at Faculty of Education.
Taught Computer Science to undergraduate students 'level 3 at Faculty of Art.

Mathematic Teacher (2013-2014) Asia Bint Daimis Secondary School for Girls, Ministry of Education, Iraq. Taught students mathematics at various levels.

Mathematics Teacher (2005-2013) Higher Teachers Training Institute, Mathematics Department, Ministry of Education in Iraq
Taught Mathematics and assessed diploma students in Higher Teachers Training Institute.

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and



sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

Please DO NOT SIGN this form.

Place and date: ____Iraq____, ____18/01/2025_____