



Ragaa Ahmed

Curriculum Vitae

PERSONAL DETAILS

<i>Full Name</i>	Ragaa Ahmed Abbas Ahmed
<i>Birth</i>	June 25, 1988
<i>Gender</i>	Female
<i>Nationality</i>	Egyptian
<i>Domicile</i>	Qena, Egypt
<i>Marital Status</i>	Married
<i>Position</i>	Lecturer
<i>Working Address</i>	Department of Mathematics, Faculty of Science, South Valley University- 83523 Qena, Egypt.
<i>Emails</i>	ragaa.ahmed@tecnico.ulisboa.pt ragaa_ahmed@sci.svu.edu.eg ragaaahmedabbas@gmail.com
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SPECIALIZATION

<i>General specialty</i>	Mathematics
<i>Specific specialty</i>	Applied Mathematics, Stochastic Dynamical System, Stochastic Process, Stochastic Differential Equations, Probability Theory

WORK EXPERIENCE

<i>DATES:</i>	September 2020 – present
<i>POSITION HELD:</i>	Lecturer in department of mathematics.
<i>MAIN ACTIVITIES:</i>	Teaching classes of mathematics courses and computer science in addition to researches.
<i>EMPLOYER:</i>	Faculty of Science, South Valley University, Qena, Egypt.
<i>DATES:</i>	2014 – 2020
<i>POSITION HELD:</i>	Assistant lecturer in department of mathematics.
<i>MAIN ACTIVITIES:</i>	Teaching practical classes of mathematics courses in addition to researches.
<i>EMPLOYER:</i>	Faculty of Science, South Valley University, Qena, Egypt.
<i>DATES:</i>	2011 – 2014
<i>POSITION HELD:</i>	Teaching assistant in department of mathematics
<i>MAIN ACTIVITIES:</i>	Teaching practical classes of mathematics courses in addition to Master researches.
<i>EMPLOYER:</i>	Faculty of Science, South Valley University, Qena, Egypt.

TEACHING COURSES:

- Teaching the course of the probability theory for Master students in the period from 26-09-2016 to 04-02-2017 during the first semester, IST, Lisboa, **Portugal** see here.
- Teaching the mathematics courses, Faculty of science, South valley university, **Egypt**.
- Teaching computer science course (450 M) Faculty of Science, South valley university, **Egypt**.
- Giving a talk entitled "The Monte Carlo method and some applications" in the regular seminar of Lisbon Mathematics PhD (LisMath), May 27th, 2016, Instituto Superior Técnico, Lisbon, **Portugal** see here.
- Giving a talk entitled "A Hamiltonian model perturbed by stochastic noises", June 19th, 2018, Instituto Superior Técnico, Lisbon, **Portugal**.
- Giving a series of seminars to the group of my supervisor Prof. Patrícia Gonçalves related to my PhD thesis at Instituto Superior Técnico, University of Lisbon, Lisbon, **Portugal**:
 - Description the model of Hamiltonian systems (18th October 2019)
 - SPDEs and equilibrium fluctuation (29th October 2019)
 - Characterization of limit points for the Y field (12th November 2019)
 - Characterization of limit points for the Z field (18th November 2019)
 - On the anomalous diffusion of Hamiltonian systems perturbed by a conserving noise (28th November 2019).

EDUCATION AND TRAINING:

- **Undergraduate**

<i>DATES:</i>	2005 – 2009
<i>QUALIFICATION TITLE:</i>	Bachelor's Degree of Science in Mathematics.
<i>Venue</i>	Department of Mathematics, Faculty of Science (Qena), South Valley University, Egypt
<i>GRADE:</i>	Very good with honors (Rank: first of the class)
<i>PRINCIPLE SUBJECTS:</i>	
<i>Principle studies include:</i>	Mathematics, Computer Science, Statistics, Chemistry and Physics

- **Postgraduate**

- Postgraduate courses for Master degree (Total grade: Excellent 92.57 %, 2010)
- List of the selected Master courses:
 - * Quantum mechanics * Statistical mechanics
 - * Differential equations * Optional course
 - * Statistics * Special course (Tensors)
 - * Practical Course (MATHEMATICA)

- M. Sc. of mathematics (2014)
Mathematics department, Faculty of Science, South Valley University, Egypt.
- Thesis title:

”The Quantum Thermodynamic Functions of Plasma in terms of Green’s Functions”
- **A PhD student at Instituto Superior Técnico since 9/2015 with a fellowship, from Foundation of Science and Technology (FCT) (1/9/2015 -31/1/2020).**
 - List of the selected courses in the first year of the fellowship 2015/2016: (the courses should cover two different areas namely; (1) Mathematical Physics (2) Mathematical Analysis)
 - * Calculus of Variations and Partial Differential Equations by Prof. Margarida Baía.
 - * Functional Integration and Applications to Quantum Mechanics by Prof. Ana Bela Cruzeiro.
 - * Ordinary Differential Equations by Prof. Pedro Alves Martins Rodrigues.
 - * Geometric Mechanics by Prof. José António Maciel Natário.
 - * Probability in quantum mechanics by Prof. Jean-Claude Zambrini.
 - * Mathematical Methods in Physics by Prof. Nicolas Van Goethem.
 - * Research Seminar in Mathematics I, LISMATH Directive Board.
 - * Research Seminar in Mathematics II, LISMATH Directive Board.
- **A PhD degree in Mathematics**, January 2020, thesis title **”On the anomalous diffusion of Hamiltonian systems perturbed by a conserving noise”**, from Instituto Superior Técnico, University of Lisbon, Portugal.

PERSONAL SKILLS AND COMPETENCE:

MOTHER TOUNGUE: Arabic
OTHER LANGAUGES: English
Portuguese (Basics A1 and A2)
SELF ASSESSMENT: English

- Listening: Very Good • Speaking: Good • Reading: Very good
- Writing: Very Good • TEST SCORES: Obtained a TOEFL local

COMPUTER SKILLS:

- ICDL (International Computer Driving Licence).
 - Basic concepts of Information Technology (IT).
 - Using the computer and managing files (Windows and Linux(Ubuntu))
 - Office (Spreadsheets, Word processing, Presentation and Databases)
 - Information and Communication (Internet)
- ICTP (Information and Communication Technology Program).
- L^AT_EX(Scientific WorkPlace 5.5, latex studio).
- MATHEMATICA.
- MATLAB

AWARDS, MERITS AND PROJECTS

- Top of the class merit (three consecutive years).
- One of the South Valley University Publication award 2013, March 2014, **Egypt**.
- One of the South Valley University Publication award 2021, March 2022, **Egypt**.
- A PhD fellowship from FCT for receiving the PhD degree from Instituto Superior Técnico (IST), Universidade de Lisboa, **Portugal** (September 2015).
- A member of project from the Academy of Scientific Research and Technology (ASRT), **Egypt** (Grant No.6407) 2022.
- A member of a project submitted to STDF entitled "Mathematical Modelling and Numerical Simulation with Machine Learning for Producing Biogas from an Anaerobic Digester (MMNSML-PBAD)" **Egypt**. This project has a budget of 1506500 (No.48310) 2023.

SUPERVISION

<i>Degree:</i>	Master in Computer Science
<i>Candidate:</i>	Abdelrahman Abdelnazier
<i>entitled:</i>	Applications of deep learning in medical image analysis
<i>Year:</i>	2022

ACTIVITIES (ATTENDED COURSES)

1. Course on Stochastic calculus by Prof. Ana Bela Cruzeiro in the first semester of the academic year 2017/2018, Instituto Superior Técnico, Lisbon, **Portugal** see here.
2. Mini-course on Microlocal Analysis (II) (Partial Differential Equations Seminar) by Prof. Jorge Drumond Silva, February, 15th, 2017, Instituto Superior Técnico, Lisbon, **Portugal** see here.
3. Mini-Course on "Entropy methods in particle systems" by Prof. Milton Jara (IMPA, Rio de Janeiro, Brasil), November 13-16, 2017, Instituto Superior Técnico, Lisbon, **Portugal**.
4. Mini-Course on entropy methods in interacting particle systems in the first semester of 2018 by Otávio Menezes, post doctorate at Center of Mathematical Analysis, Geometry, and Dynamical Systems (CAMGSD), Instituto Superior Técnico, Lisbon, **Portugal**.
5. Course on Martingale problem and lumpability for Markov processes by Prof. Johel Beltrán, Pontificia Universidad Católica del Perú, February 18th- March 14th, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.
6. Mini-course on Hydrodynamic limit of particle systems on resistance spaces by Prof. Joe Chen, Department of Mathematics, Colgate University, January 25th-February 6th, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.
7. Mini-course on Generalisations to Multispecies by Martin Evans, Edinburgh University, July 4-5, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.
8. Mini-course on large deviations by Prof. Tertuliano Franco, Universidade Federal da Bahia, October 21th,23th,25th, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.

CONFERENCES, SEMINARS AND SCHOOLS

1. Attended the 1st International Conference on New Horizons in Basic and Applied Science (NHBAS), September 21-23, 2013, Hurghada, **Egypt** see here.
2. Attended the UT Austin — Portugal CoLab Program Autumn School in Nonlinear Science October 5-9, 2015, Instituto Superior Técnico, Lisbon, **Portugal** see here.
3. Attended the research school of Stochastic Dynamics Out of Equilibrium, April 3-7, 2017, Centre International de Rencontres Mathématiques, Marseille, **France** see here.
4. Attended the seminar of Adriana Neumann. Universidade Federal do Rio Grande do Sul. "Asymptotic behavior of the exclusion process with slow boundary", October 17th, 2017, Instituto Superior Técnico, Lisbon, **Portugal**.
5. Attend the seminar of Leonardo de Carlo entitled "Geometric and combinatoric structures in stationary Markov chains", November 21th, 2017, CAMGSD, Instituto Superior Técnico, Lisbon, **Portugal**.
6. Attended the seminar of Mariana Tavares entitled "Scaling limits for d-dimensional symmetric exclusion process with a slow membrane", December 13th, 2017, CAMGSD, Instituto Superior Técnico, Lisbon, **Portugal**.
7. Attended the seminar of Otávio Menezes entitled "Invariance principle for a slowed random walk driven by symmetric exclusion", December 15th, 2017, CAMGSD, Instituto Superior Técnico, Lisbon, **Portugal**.
8. Attended the seminar of probability and statistics, February 2nd, 2018, Instituto Superior Técnico, Lisbon, **Portugal**.
9. Attended the ENSPM 2018 - ENCONTRO NACIONAL DA SPM 2018 The Portuguese Mathematical Society (SPM) meeting, July 9-11, 2018, Instituto Politécnico de Bragança, Bragança, **Portugal** see here.
10. Attended the 1st colloquium on Interacting Particle Systems @Técnico (CIPST), March 15th, 2019, Mathematics Department, Instituto Superior Técnico, Lisbon, **Portugal** see here.
11. Attended the seminar of Cédric Bernardin, University of Nice Sophia-Antipolis entitled "Microscopic models for multicomponents SPDE's with a KPZ flavor", May 21th, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.
12. Attended the seminar of Joe Chen, Colgate University entitled "Random walks, electric networks, moving particle lemma, and hydrodynamic limits", June 28th, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.
13. Attended the seminar of Martin Evans, Edinburgh University entitled "Open Boundary ASEP", July 1st, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.
14. Attended the seminar of Martin Evans, Edinburgh University entitled "Matrix Product Solution", July 2nd, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.
15. Attended the seminar of Martin Evans, Edinburgh University entitled "Phase Diagram", July 3th, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.
16. Participated with a talk entitled "Hamiltonian system with exponential potential" in the 2nd colloquium on Interacting Particle Systems @Técnico (CIPST), July 5th, 2019, Mathematics Department, Instituto Superior Técnico, Lisbon, **Portugal** see here.

17. Attended the seminar of Gunter Schutz, Jülich University entitled "The Fibonacci family of dynamical universality classes", Octobre 1st, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.
18. Attended the seminar of Alessandra Occelli entitled "A short KPZ story", October 29th, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.
19. Attended the seminar of Alessandra Occelli entitled "KPZ universality for last passage percolation models", November 5th, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.
20. Attended the seminar of Stefano Scotta entitled "Equilibrium fluctuations for symmetric exclusion with long jumps and infinitely extended reservoirs", November 14th, 2019, Instituto Superior Técnico, Lisbon, **Portugal**.
21. Participated with a poster entitled "Towards equilibrium fluctuations for a Hamiltonian system with two conserved quantities" in the conference of Particle Systems and PDE's VIII (PSPDE VIII) December 2-6, 2019, Instituto Superior Técnico, University of Lisbon, Lisbon, **Portugal** see here.

PUBLICATIONS

4. Akel, Mohamed, Hillal M. Elshehabey, and **Ragaa Ahmed**, Generalized Laplace-Type Transform Method for Solving Multilayer Diffusion Problems, Journal of Function Spaces, 2021. <https://doi.org/10.1155/2022/2304219>
3. **Ragaa Ahmed**, Cédric Bernardin, Patrícia Gonçalves, and Marielle Simon, A Microscopic Derivation Of Coupled Spde's With a KPZ Flavor, Annales de l'Institut Henri Poincaré-Probabilités et Statistiques 2021, Vol. 58, No. 2, 890–915. <https://doi.org/10.1214/21-AIHP1196>
2. N. A. Hussein, D. A. Eisa, A.-N. A. Osman, **R. A. Abbas**, Quantum Binary and Triplet Distribution Functions of Plasma by using Green's Function, Contributions to Plasma Physics, 54, 2014, 815-826. <https://doi.org/10.1002/ctpp.201400016>
1. Nagat A. Hussein, Abdel Nasser A. Osman, Dalia A. Eisa, **Ragaa A. Abbas**, The quantum thermodynamic functions of plasma in terms of the Green's function, Natural Science, 6, 2014, 71-80 <https://doi.org/10.4236/ns.2014.62011>

REFERENCES

- Patrícia Gonçalves Home page, Google Scholar
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