

Curriculum Vitae of Farida MOKCHAHA-HMISSI

Full Name: Farida Chedly MOKCHAHA-HMISSI
Date / Place of Birth: March 15, 1959 / Ras Jebel (Tunisia)
Citizenship: Tunisia
Martial Status: Married, one son.
Function: : Mathematics Professor

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E-mail: Farida.Hmissi@fst.rnu.tn

Field of Specialization: Potential Analysis; Stochastic Analysis.

Languages: Arabic: native; French: very good; English: good; German: good

ACADEMIC QUALIFICATIONS

- 2005** : Habilitation: University of Tunis Elmanar.
Title: Bochner Subordination, Additive Kernels and Ergodicity
Scientific Committee: Juergen Bliedtner, Klaus Janssen (Germany)
Med Salah Khalgui, Hedi Bensaad, Ezeddine Haouala (Tunisia).
- 1993** : These of Speciality: University of Tunis Elmanar (with high honors).
Prepared at the University of Frankfurt .
Title: An analytical and probabilistic study of Fatou-Naim-Doob theorem
Advisor: Juergen Bliedtner (Frankfurt)
- 1985** : Master of Sciences in Mathematics: (with honors)
University of Tunis Elmanar.
Title: Markov processes with identical exit laws
Advisor: Klaus Janssen (Duesseldorf).
- 1983** : Bachelor of Sciences in Mathematics: (with high honors)
University of Tunis Elmanar.

POSITIONS

- 2014-Now** : Professor at Al-Imam University, Riyadh (Saudi Arabia)
2012-2014 : Professor at the University of Tunis Carthage (Tunisia).
2007-2012 : Associate Professor at the University of Tunis Carthage (Tunisia).
1994-2007 : Assistant Professor at the university of Tunis Elmanar (Tunisia).
1992-1994 : Assistant at the university of Tunis Elmanar (Tunisia).
1990-1992 : Assistant (Lecturer) at the university of Frankfurt (Germany).
1985-1989 : Assistant at the university of Tunis Elmanar (Tunisia).

UNIVERSITY TEACHING

Bachelors Degree in Mathematics:

- Abstract algebra; Linear algebra; Calculus; Real Analysis, Measure Theory.
- Differential Equations; Measures Theory; Probability, Mathematical Statistics, Biostatistics.

Master in Mathematics: Stochastic Analysis

- Probability: Conditional Expectation, Stopping Time, Martingale.

- Markov Processes: Transition Function, Brownian Motion, Lévy Process, Markov Chains.
- Potential Theory: Resolvent, Semigroup, Excessive Functions, Potentials, Integral Representation.
- Functional Analysis.

Manuscripts (In French)

- Probability for Bachelors (with Mohamed Hmissi).
- Probability for Master (with Mohamed Hmissi).

INTERNATIONAL CONFERENCES

- European Conference on Iteration Theory (ECIT): Batschuns (Austria) 1989, Gargnano (Italy) 2006, Nant (France) 2010.
- International Conference on Potential Analysis: Utrecht (Holland) 1991 et Kouti (Czech Republic) 1994, Hammamet (Tunisia) 1998 (Local Organizer), Bielefeld (Germany) 2003.
- The conferences of the Tunisian Mathematical Society: I often attended this annual conference since 1998.
- International Conference on Stochastic Analysis and Applications (ICSAA): Hammamet (Tunisia) 2007,2009,2011 and 2013.
- Connected International Meetings Professional Association: CIMPA School and Conference, Lévy Processes and Self-Similarity, Tunis and Hammamet 2013.

AWARDS AND SCHOLARSHIPS

- Invited from the Universities of Duesseldorf and Frankfurt (Germany), 1994, 1998, 2007 and 2013.
- Grand from the CNRS (National Center for Scientific Research), University of Every (France), 1998.
- Grant from the DAAD (German Academic Exchange Service), University of Dusseldorf, 1985 and 1986.
- Tunisian Government Scholarship for graduate studies in France, 1979.
- The first regional award for excellence diploma from high school in the governorate of Bizerte, 1978.

RESEARCH EXPERIENCE

- Supervised Master Theses: 3 (achieved).
- Supervised Ph. D These: 2 (achieved).

RESEARCH INTERESTS

- **Potential Analysis:** Fatou-Naim-Doob Theorem, Harmonic Functions, Riesz Potentials, Energy Formulas, Additive Kernels, Integral Representation, Exit Laws, Entrance Laws, Bochner Subordination, S-Subordination.
- **Stochastic Analysis:** Infinite Dimensional Dynamical Systems, Ergodicity, Random Dynamical Systems (RDS), Gradient-like RDS, Random Densities for Random Maps.

PUBLICATIONS

1. Hmissi F.: Théorèmes aux limites cofines sur les H-cônes de fonctions. Revue Roumaine Math. pures appli. 39, 659-666 (1994)
2. Hmissi F.: Fonctions harmoniques pour les potentiels de Riesz sur la boule unité. Expo. Math. 12, 281-288 (1995)
3. Hmissi F., Hmissi M.: Additive Kernels and Integral Representation of Potentials. Potential Analysis 15, 123-132 (2001)
4. Hmissi F., Hmissi M.: Bochner Subordination and Ergodicity. Grazer Math. Berichte 346 , 211-221 (2004)
5. Hmissi F.: On Energy Formulas for Symmetric Semigroups. Ann. Math. Silesianae 19, 7-18 (2005)
6. Hmissi F., Maaouia W.: On Bochner Subordination for Contraction Semigroups with Sector Condition. Int. J. of Applied Math.18 No. 4, 429-445 (2005)
7. Hmissi F., Hmissi M.: On Dynamical Systems generated by Homogeneous Processes. Grazer Math. Berichte 350, 144-155 (2006)

8. Hmissi F., Hmissi M., Maaouia W.: On Bochner Subordination of Densities. *Grazer Math. Berichte* 351, 52-65 (2007)
9. Hmissi F., Hmissi M.: On subordination of resolvent and application to right processes. *Stochastics: An International Journal of Probability and Stochastic Processes* 351, Taylor and Francis, 52-65 (2009)
10. Hmissi A., Hmissi F., Hmissi M.: On gradient-like random dynamical systems. in: Fournier-Prunaret D. et al.(eds.), *European Conference on Iteration Theory, Nant 2010, ESAIM: Proceedings and Surveys*, Vol. 36, 217-228 (2012)
11. Hmissi M., Mokchaha F., Hmissi A.: On potential kernels associated with random dynamical systems. *Opuscula Math.* 35, No. 4, 499-515 (2015)
12. Hmissi A., Mokchaha F.: On locally gradient-like random dynamical systems. *Faculté des Sciences de Tunis* (2016)
13. Hmissi M., Mokchaha F.: On some random densities for random maps. *Journal of difference equations and applications*, Vol. 24, No. 1, 127-137 (2018)
14. Hmissi M., Mokchaha F.: On random densities for parameter dependent random maps. Submitted (2021)
15. Hmissi M., Mokchaha F.: On correlated random densities for random maps. In preparation (2021)