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## Education

November 2009: Habilitation Degree, Monastir University, Tunisia.

Jul 2000: qualified for the position of assistant-professor in 2000 by the National Council of the French Universities. <http://admi.net/jo/20000722/MENP0001377K.html>

Jan 2000: PHD in Mathematics (Probability and Statistics), University of Paris 6.

- Laboratory: LPMA (Laboratoire de Probabilités et Modèles Aléatoires), Paris 6.
- Advisor: Pierre PRIOURET
- Title: *Stochastic Algorithms: asymptotic study of the error.*
- Print: <http://www.genealogy.math.ndsu.nodak.edu/id.php?id=13735>

Jun 1995: Master's degree of mathematics (Probability and applications), University of Paris 6.

Jun 1994: Bachelor degree in Fundamental Mathematics, Faculty of Sciences of Bizerte.

## Positions

Sep. 2012-Today: Associate Professor, Faculty of Sciences of Monastir.

Jan 2011-Jun 2012: Associate Professor, Faculty of Sciences of Sousse.

Nov 2002-Jan 2011: Assistant-Professor, Faculty of Sciences of Monastir.

Sep 2001-Oct 2002: Assistant-Professor, Preparatory institute of Tunis.

Sep 1999-Sep 2001: Assistant-Professor (nontenure track), University of Paris Sud: Orsay.

Sep 1995-Jul 1999: Adjunct-Professor, University of Paris 6, Cergy Pontoise (Paris), Orsay (Paris Sud).

## Working Groups

Sep 2002-Today: *Harmonic Analysis* group of the Fac. of Sc. of Monastir, directed by M. KAMMOUN.

Sep 1995 - Nov 2000: *Statistics of processes* group, LPMA of Paris 6, directed by J. JACOD.

Mars 2009 - Jul 2013: *DGRS/CNRS 09/R 15-07*. Tunisian-French Project, LPMA of Paris 6, directed by MY SELF and CYRIL BANDERIER of the University Paris 13.

## Visiting Professorships

Institute Elie Carton, Nancy (France): invited by Pr. Philippe Chassaing, University of Henry Poincaré, July 2012.

Laboratory of Informatics of Paris Nord, Villetaneuse (France): invited by Pr. Cyril Banderier, University of Paris 13, November 2011.

Institute Elie Carton, Nancy (France): invited by Pr. Philippe Chassaing, University of Henry Poincaré, March 2010.

Laboratory of Informatics of Paris Nord, Villetaneuse (France): invited by Pr. Cyril Banderier, University of Paris 13, December 2009.

Institute Elie Carton, Nancy (France): invited by Pr. Pierre Vallois, University of Henry Poincaré, November 2008.

Laboratory of Probability and statistics, Versailles (France): invited by Pr. Brigitte Chauvin, University of Versailles saint Quentin, Feb. 2008.

Institute of Advanced Studies scientific (France): IHES, Jan-Feb-March 2005.

## Scientific Projects and Organizations Memberships

October 2012: President of the comity of organisation, of the *School of Probability and combinatorics*, Mahdia. <http://lipn.univ-paris13.fr/aguech/ecole/>

October 2010: President of the comity of organisation, of the *School of Probability and combinatorics*, Mahdia. <http://lipn.univ-paris13.fr/aguech/colloque/>

Mai 2010: co-organizer, with Khalifa El Mabrouk, of the *the Fifth day of Probability*, Sousse. <http://www.uc.rnu.tn/pdf/probapplication.pdf>

Mai 2009: co-organizer, with Khalifa El Mabrouk, of the *the Fourth day of Probability*, Monastir. <http://www.annonces.rnu.tn/news/annee2009/mai09/JPob09.pdf>

Mai 2008: co-organizer, with Khalifa El Mabrouk, of the *the Third day of Probability*, Monastir. <http://www.annonces.rnu.tn/news/annee2008/mai08/journeeproba.pdf>

March 2007: Member of the comity of organisation of the *International Colloquium On Stochastic and Potential Analysis* Hammamet.

Mai 2007: co-organizer, with Khalifa El Mabrouk, of the *the Second day of Probability*, Monastir.

Jun 2006: co-organizer, with Mounir Zili, of the *the Fisrt day of Probability*, Monastir.

Mar 2008-Today: member of the GDR-IM team (Research group in Informatics and Mathematics - French). <http://www.gdr-im.fr/>

## Research

### Published papers

- R. AGUECH, C. BANDERIER: *The Moran Model, height of random walks and analysis of a cache algorithm*, 2009. AOFA09. Frjus, June 14 - 19, 2009.
- R. AGUECH: *Limit Theorems for random triangular urn schemes*. J. Appl. Probab., pp. 827-843, vol. 46, (3), 2009.
- R. AGUECH: *The size of random fragmentation intervals*, DMTCS proc AI, pp. 523- 534, 2008.
- R. AGUECH, N. LASMAR, H. MAHMOUD : *Extremal Weighted Path Lengths in Random Binary Search Trees*. Probability in the Engineering and Informational Sciences, pp. 133141, vol. 21, 2006.
- R. AGUECH, N. LASMAR, H. MAHMOUD : *Limit Distribution of Distances in Biased Random Tries*, Journal of Applied Probability pp. 114, vol. 43, 2006.
- R. AGUECH, N., LASMAR, H. MAHMOUD : *Distances in Random Digital Search Trees*, Acta Informatica, pp. 243264, vol. 43, 2006.
- R. AGUECH, S. LOUHICHI, S. LOUHICHI : *On the asymptotic independent representation for sums of some weakly dependent random variables*, Studia Scientiarum Mathematicarum Hungarica, pp. 371383, vol. 42 (4), 2005.
- R. AGUECH, E. MOULINES, P. PRIOURET : *On a perturbation approach for the analysis of the stochastic tracking algorithms*, SIAM journal of control and optimisation, pp. 872899, vol. 39 (3), 2001.
- R. AGUECH, E. MOULINES, P. PRIOURET : *Performance analysis of the LMS algorithm*, SIAM journal of control and optimisation, ICASSP 1998.

### Papers under preparation

- R. AGUECH, C. BANDERIER: *The hight of the Moran Model*. To appear in 2014.
- R. AGUECH, A. BRIQUET: *On the the maximum length of the random fragmentation interval*.
- R. AGUECH, P. CHASSAING: *The hight of the skip graph*.
- R. AGUECH, N. LASMAR: *A generalized Polya Urn*.
- R. AGUECH, A. ANIS: *Weight Paths Lengths in Random Binary Search Trees*.

## Conferences

- Talk at the French-meeting *ALEA days*. Marseille, March 2011.
- Talk at the French-meeting *ALEA days*. Marseille, March 2010.
- Talk at the French-meeting *ALEA days*. Marseille, March 2009.
- Talk at the international conference on *Analysis of Algorithms*. Frejus (French), Jun 2009.
- Talk at the seminar of the laboratory Probability and statistics, University of Nancy 1, November 2008.
- Talk at the seminar of the laboratory Probability and statistics, University of Versailles Saint Quentin, March 2008.
- Talk at the international conference on *Analysis of Algorithms*. Nice (French), Jun 2007.
- Talk at the French-meeting *ALEA days*. Marseille, March 2007.
- Talk at the Fourth colloquium on *mathematics and computer science*. Nancy, September 2006.
- Talk at the *Probability and App. Day*, CIRM. International Center of research in Math. May 2000.
- Talk at the International conference ICASSP. Suettle, USA , May 1998.
- Talk at the Probability Days. Nice, September 1998.
- Talk at the Probability Days. Toulouse, September 1997.
- Talk at the French-Tunisian meeting. Bizerte, Tunisia 1996.

## Teaching

### France

1995-1996: Tutorials, collaboration with J. LACROIX (analysis and numerical analysis, 2<sup>nd</sup> level).

1996-1997: Tutorials (analysis, 1<sup>st</sup> level)

1997-1999: Tutorials, collaboration with M. LAUTON (Financial Mathematics, 1<sup>st</sup> level).

1999-2001: Lectures (Probability and statistics, 2<sup>nd</sup> level),

### Preparatory Institute for Engineering Studies, Tunisia

2001-2002: Lectures in analysis (1<sup>st</sup> section physics level),

### Faculty of Sciences of Monastir, Tunisia

2002-2003: Tutorials (analysis and algebra, 1<sup>st</sup> level).

2002-2003: Tutorials (probability, 3<sup>rd</sup> level).

2003-2004: Tutorials (probability, 3<sup>rd</sup> level).

2004-2010: Lectures in probability: Modeling and Probability (4<sup>th</sup> level).

### Super School of science and technologie of Hammam Sousse (ESSTH), Tunisia

2010-2012: Lectures in Probability Master (1<sup>st</sup> and 2<sup>nd</sup> levels): Martingales, Poisson Process, branching Process, Polya Urns, Random trees.

2011-2012: Lectures in Probability and statistics (1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> levels).

### Faculty of Sciences of Monastir, Tunisia

2013-2014: Lecture Master 2 on *Branching Process, Poisson Process, Markov chains*.

2012-2013: Lecture Master 2 on *Branching Process*.

2012-2013: Tutorials Master 2 (Differential calculus, 3<sup>rd</sup> level).

2012-2013: Lecture on *Probability and statistics*( 3<sup>rd</sup> level).