Alexandru Amărioarei　　　　　*Curriculum vitae*

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DOMAINES DE RECHERCHE

Statistique de scan, distribution de motifs et patterns, méthodes de Monte Carlo

ÉTUDES ET DIPLÔMES

Université de Sciences et Technologies de Lille, Lille, France　　　2010–2014

Thèse de doctorat, *Date de soutenance:* 15 Septembre 2014

- Titre: *Approximations for Multidimensional Discrete Scan Statistics*
- Directeur de Thèse: Cristian Preda, Ph.D
- Rapporteurs: Joseph Glaz, Claude Lefevre
- Examinateurs: Stéphane Robin (Président), Azzouz Dermoune, George Haiman, Manuela Sidoroff

Université de Bucarest, Bucarest, Roumanie

Master 2 (Mathématiques Appliquées),　　　2008–2010

- Titre: *Chaîne de Markov avec applications en biologie* (en roumain)
- Directeur: Ioan Cuculescu

Licence de Mathématiques,　　　2004–2008

- Titre: *Concepts semi-riemanniennes* (en roumain)
- Directeur: Ianus Stere

EXPÉRIENCE PROFESSIONNELLE

Chercheur　　　2015–présent
Département de Bioinformatique,
National Institute of R&D for Biological Sciences,
Bucarest, Roumanie

Poste similaire avec Maître de conférences　　　2016–2017
Faculté de Mathèmatique et de l'Informatique,
Université de Bucarest

ATER　　　2013–2015
Génie Informatique et Statistique (GIS),
Polytech'Lille

Assistant Chercheur　　　2011–2014
MΘdels for Data Analysis and Learning Team,
INRIA Nord Europe, Lille

Doctorant　　　2010–2014
Laboratoire de Mathématiques Paul Painlevé,
UMR CNRS 8524, Université de Sciences et Technologies de Lille

Assistant Chercheur　　　2009–2010
Département de Bioinformatique,
National Institute of R&D for Biological Sciences,
Bucarest, Roumanie

ACTIVITIÉS D'ENSEIGNEMENT

Poste similaire avec Maître de conférences à l'Université de Bucarest　　　2016–2017

- Probabilités et Statistique, TD + TP (R)
- Statistique Inférentielle, TD + TP (R)

ATER à Polytech'Lille, France   2013–2015

- Mise à niveau math, Cours + TD
- Structures Mathematiques, TD
- Probabilités, TD + TP (R)
- Statistique Inférentielle, TD + TP (SAS et R)
- Chaîne de Markov, TD + TP (R - projets)
- Analyse numerique, TP (Matlab)

Vacataire à la Faculté de Mathématiques, Université de Bucarest   2009–2010

- Langages Formels, TD

Vacataire au Lycèe Gheorghe Sincai, Bucarest, Roumanie   2008–2009

- Cours de mathématiques, niveau lycèe (prèparation Baccalaurèat)

PUBLICATIONS DANS DES REVUES

1. M. Sodoroff, M. Paraschiv, **A. Amărioarei**, M. Paun (2016), Measuring Funded Research Performance for Multidisciplinary Research in the Danube Basin, *Journal of Environmental Protection and Ecology, Volume 17, Issue 2, pag. 638-647*

2. **A. Amărioarei**, C. Preda (2015), Approximation for the distribution of three-dimensional discrete scan statistics, *Methodology and Computing in Applied Probability, Vol. 17, Issue 3, pag. 565-578*, DOI: 10.1007/s11009-013-9382-3.

3. **A. Amărioarei**, C. Preda (2014), Approximation for two-dimensional discrete scan statistics in some block-factor type dependent models, *Journal of Statistical Planning and Inference, Vol. 151-152, pag. 107-120*, DOI:10.1016/j.jspi.2014.05.002.

AUTRES PUBLICATIONS

1. **A. Amărioarei**, M. Sidoroff (2009), A first step in scan statistics, *Romanian Biological Science Vol.VII, Nr.1-4*

2. J. Jack, M. Sidoroff, I. Stanciu, **A. Amărioarei**, V. Boscaiu, S. Popescu, M. Ciucu, A. Paun (2009), Modeling of Biochemical Signaling with the Memory NWT algorithm, *Romanian Biological Science Vol. VII, Nr. 1-4*

PRÉ-PUBLICATIONS

1. **A. Amărioarei**, M. Păun (2016), Two decades of research impact: publications, citations, collaboration trends in Scopus (submitted)

2. **A. Amărioarei** (2012), Approximation for the distribution of extremes of one dependent stationary sequences of random variables.

CONFÉRENCES AVEC COMITÉ DE LECTURE

1. **A. Amărioarei**, C. Preda (2013) Approximation for two-dimensional discrete scan statistics in some dependent models, In *Proceedings of 15th Conference of the Applied Stochastic Models and Data Analysis (ASMDA) International Society*, Barcelona, Spain, June 2013.

ARTICLES EN COURS DE RÉDACTION

1. **A. Amărioarei**, Approximations for the distribution of the longest increasing run based on a scan statistic approach.

2. **A. Amărioarei**, A general scan statistic and the influence of the shape of the scanning window.

3. **A. Amărioarei**, C. Preda, Approximations for multidimensional continuous scan statistics over Poisson processes.

COMMUNICATIONS
À DES
CONFÉRENCES,
SYMPOSIUMS ET
AUTRES
COLLOQUES

1. **A. Amărioarei**(2016) Discrete scan statistics with windows of arbitrary shape, 8th *International Workshop on Applied Probability (IWAP2016)*, Toronto, Canada, Juin 2016.

2. **A. Amărioarei** (2016), Statistical techniques for local cluster detection, 2nd *BIS Workshop: bioinformatic and statistical tools for data analysis* Bucarest, Juin 2016.

3. **A. Amărioarei** (2016), Approximations for the distribution of the discrete scan statistics when the scanning window has arbitrary shape, *The 19th Conference of Romanian Society of Statistics and Probability* Bucarest, Mai 2016.

4. **A. Amărioarei**, C. Preda (2015), Scan statistics for some dependent models. Applications, *The 16th Conference of the Applied Stochastic Models and Data Analysis (ASMDA) International Society*, Athens, Greece, July 2015.

5. **A. Amărioarei** (2015), Approximations for the length of the longest monotone run in a sequence of i.i.d. r.v.'s, *The 18th Conference of Romanian Society of Statistics and Probability* Bucarest, Mai 2015.

6. **A. Amărioarei**, C. Preda (2014) Survey on approximation methods for scan statistics: a software illustration, 7th *International Workshop on Applied Probability (IWAP2014)*, Antalya, Turkey, Juin 2014.

7. C. Preda, **A. Amărioarei**, M. Genin (2014) Two dimensional discrete scan statistics with arbitrary scanning window, 7th *International Workshop on Applied Probability (IWAP2014)*, Antalya, Turkey, Juin 2014.

8. C. Preda, **A. Amărioarei** (2014) Approximation for the scan statistics distribution of a three dimensional Poisson process, 7th *International Workshop on Applied Probability (IWAP2014)*, Antalya, Turkey, Juin 2014.

9. **A. Amărioarei** (2014) Efficient simulation methods for scan statistics: a comparison study, *The 17th Conference of Romanian Society of Statistics and Probability* Bucarest, Avril 2014.

10. **A. Amărioarei**, C. Preda (2013) Approximation for two-dimensional discrete scan statistics in some block-factor dependent models, *IMS-China International Conference on Statistics and Probability*, Chengdu, China, Juin 2013.

11. **A. Amărioarei**, C. Preda (2013) Approximation for two-dimensional discrete scan statistics in some dependent models, *The 16th Conference of Romanian Society of Statistics and Probability* Bucarest, Avril 2013.

12. **A. Amărioarei**, C. Preda (2012) Approximations for the three-dimensional discrete scan statistics, *International Workshop on Applied Probability*, Jerusalem, Israel, Juin 2012.

13. **A. Amărioarei**, C. Preda (2012) Approximations for the three-dimensional discrete scan statistics, *The 15th Conference of Romanian Society of Statistics and Probability* Bucarest, Avril 2012.

14. **A. Amărioarei**, C. Preda (2011) Approximations for the three-dimensional discrete scan statistics, *International Conference on Advances in Probability and Statistics - Theory and Applications,* Hong Kong, SAR China, Decembre 2011. (in the honor of N. Balakhrishnan).

15. **A. Amărioarei** (2011) The Markov Chain Imbedding Technique-Applications to Scan Statistics, *The 14th Conference of Romanian Society of Statistics and Probability*, Bucarest, Avril 2011.

SÉMINAIRES	1. **A. Amărioarei** (2015) Approximations for the distribution of scan statistics and applications, *Séminaire de Statistique, IRMA*, Strasbourg, Février 2015.
	2. **A. Amărioarei** (2014) Scan Statistics: Theory and Applications, *Séminaire de Probabilité et Statistique du Laboratoire de Mathématiques Paul Painlevé*, Lille, Mars 2014.
	3. **A. Amărioarei** (2014) Approximations for One and Two Dimensional Scan Statistics with Applications, *Statistics for System Biology Seminar*, Paris, Novembre 2014.
	4. **A. Amărioarei** (2012) Approximations for the Distribution of the Three Dimensional Scan Statistics, *Séminaire de l'Équipe MODAL*, Albiez, Janvier 2012.
POSTERS	1. E. Târnoveanu, A. Ursu, P. Ichim, **A. Amărioarei** (2015), Ethological study of the rook (*Corvus frugilegus L.*) in Iași metropolitan area and its ecological requirements assessment, *International Zoological Congress of "Grigore Antipa" Museum*, Bucharest, November 2015.
	2. **A. Amărioarei**, M. Genin, C. Gower, C. Preda, M. Sidoroff (2014) Detecting Crohn's disease clusters using spatial scan statistics, *Symposium on Modern Biotechnological Advances for Human Health*, Bucarest, Mai 2014.
SOFTWARE	1. **Scan Statistics Simulator**: interface graphique fonctionnant sous Matlab, permettant de trouver la répartition de la statistique de scan discrete dans les cas uni, bi- et tri-dimmensionnels sous différents modèles de distributions.
COMPÉTENCES ORGANISATIONNELLES	1. Co-président du IUBMB Symposium on Modern Biotechnologies in Sustainable Development of the Danube Delta, Mai 31 - Juin 2, 2016, Murighiol, Roumanie
	2. Membre du Comité d'organisation du 12ème Symposium National avec Participation Internationale Medicinal Plants - Present and Perspectives, le 6 –9 Septembre, 2016, Piatra Neamt, Roumanie
PARTICIPATION À DES PROJETS DE RECHERCHE	1. 2016, Projet de consultation pour l'*Administration nationale "Eaux Roumaines"*
	2. 2016, Projet PN 3 DANUBIUS-RI
	3. 2015-2016, Projet Noyau BIODIVERS (PN 19.05)
	4. 2015-2016, Projet Sectoriel *BIOÉCONOMIE* (12 S Bioeconomie)
	5. 2010, Participation à la création et au depôt du Projet MedPlaNet (projet financé ≈ 1.5 million €)
	6. 2010, Projet BIOSIS 62-056/2008-*Bioinformatics system for protein conformation analysis*
	7. 2009-2010, Projet Noyau *BIODIV*
	8. 2009-2010, National Research Plan II, Contract no. 11-066/2007-*Simulation of cells using Membrane Systems*
MOBILITÉ INTERNATIONALE	1. ICGEB: Bioinformatics Course, Trieste, Italie (Juin 2010)

RÉFÉRENCES

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Claude Lefèvre
Department of Mathematics, Université Libre de Bruxelles
email: clefevre@ulb.ac.be

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