

CURRICULUM VITÆ

Marie-France Sagot

Director of Research (DR1) INRIA

Head of ERABLE-BAOBAB team

INRIA Grenoble Rhône-Alpes

& Laboratoire de Biométrie et Biologie Évolutive

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Team web page: <http://team.inria.fr/erable/>

Basic information

Education

- 1988-1991** “Bacharelado em Ciência da Computação” (BSc in Computer Science), “Instituto de Matemática e Estatística” (IME), University of São Paulo, Brazil (Price of the Best Student of the Class of 91 of the Institute)
- 1992-1993** “Diplôme d’Études Approfondies” (DEA) in Computer Science, University of Paris VII, France (Graded 1st of the Class)
- 1993-1996** PhD in Theoretical Computer Science, University of Marne-la-Vallée, France (*Summa cum laude*)
(committee: D. Arquès, R. Baeza-Yates, M. Crochemore, A. Danchin, G. Myers, D. Perrin, D. Sankoff, A. Viari)
- 2000** “Habilitation à Diriger les Recherches” (HDR) in Theoretical Computer Science, University of Marne-la-Vallée, France
(committee: J. Berstel, M. Crochemore, P. Darlu, C. Gautier, D. Gusfield, R. Karp, G. Myers, D. Sankoff, A. Viari)

Past positions

- 1995-1997** Assistant Professor, University of Marne-la-Vallée, France
- 1997-1998** Research and Development, Institut Pasteur, Paris, France
- 1998-2001** Research Assistant (“Chargée de Recherche”), Institut Pasteur, Paris, France
- 2000-2001** Head of the Team LAC, Institut Pasteur, Paris France
- 1998-2001** Associated Research Fellow, Institut Gaspard Monge, University of Marne-la-Vallée
- 2001-2003** Research Assistant (“Chargée de recherche (CR1)”), Inria, France
(Projet Helix Inria Rhône-Alpes, Grenoble and University Claude Bernard, Lyon)
- 2003-2009** Director of Research (“Directeur de Recherche (DR2)”), Inria, France
(Projet Helix Inria Rhône-Alpes, Grenoble and University Claude Bernard, Lyon)
- 2004-2007** Founder and Director of the PhD Program on Computational Biology, Instituto Gulbenkian de Ciência, Lisbon, Portugal

Current positions

- 2002- ...** Visiting Research Fellow, King’s College, London, United Kingdom
- 2004-...** Head of the UCBL-CNRS Team BAOBAB, France
- 2004- ...** Visiting Researcher, INESC-ID, Instituto Superior Técnico, Lisbon, Portugal
- 2010-...** Research Director (“Directeur de Recherche (DR1)”), INRIA, France
- 2010-...** Head of the INRIA “EPI” (Team) ERABLE, previously BAMBOO, France
- 2012-...** Co-head with Ana Tereza Vasconcelos of the “Laboratoire International Associé” LBBE-CNRS and LNCC-Brazil LIRIO

Teaching activities

Regular teaching

- 1998-2005** DEA “Informatique Fondamentale et Applications” at the Univ. of Marne-la-Vallée, France
- 1998-2005** “Cours d’Informatique en Biologie” of the Institut Pasteur, Paris, France
- 2000-2001** DESS of “Ingénierie Génomique Fonctionnelle” at the Universities of Paris VII and Évry, France
- 2000-2001** DEA “Applications des Mathématiques et de l’Informatique à la Biologie”, Universities of Évry and Versailles, and Inria Rocquencourt, France
- 2001** Computer Science Department of the École Normale Supérieure, Lyon, France
- 2001-2010** Institut National des Sciences Appliquées, Lyon, France
- 2002** DEA “Informatique” of the LIRMM, University of Montpellier, France
- 2002** Institut des Sciences de l’Ingénieur of the University Blaise Pascal, Clermont Ferrand, France
- 2002-2003** Institut National d’Agriculture de Paris-Grimont (INA-PG), France
- 2004-2010** Master “Approches Mathématiques et Informatiques du Vivant”, Univ. Lyon I, France

Participation to international schools (invited professor)

- 1999** Eleventh International School for Computer Science Researchers, Computational Biology, Lipari Island, June 20 - July 3, 1999 (<http://alpha.dipmat.unict.it/~lipari/lipari.html>)
- 2000** École Jeunes Chercheurs du GDR ALP en Algorithmique et Calcul Formel, Caen, March 27-31, 2000
- 2000** Cours de Doctorat, University of Pisa, June 5-16, 2000
- 2001** Atelier de Formation Inserm en Bioinformatique, Lyon, France, January 11-12, 2001, co-organisation with François Rechenmann (Inria Rhône-Alpes, Grenoble) and Christian Gautier (Université Claude Bernard, Lyon) and professor
- 2001** School on Algorithms and Combinatorics, Ceará, Brazil, March 12-24, 2001
- 2001** School on Computational Biology, Poznan, Poland, June 3-10, 2001
- 2001** Atelier de Formation Inserm en Bioinformatique, Santiago, Chile, October 12-16, 2001
- 2003** Fifteenth International School for Computer Science Researchers, Algorithmics for Data Mining and Pattern Discovery, Lipari Island, July 13 - July 26, 2003 (<http://alpha.dipmat.unict.it/~lipari/lipari.html>)

Supervision of Master and PhD students / Postdocs / Participation to PhD and HDR committees

Master students

DEA “Informatique Fondamentale et Applications” of the University of Marne-la-Vallée

Stéphane Bizard, March to September 1998

Laurent Marsan, March to September 1998

Philippe Blayo, February to September 1999

Sylvain Lhullier, February to September 1999

Julien Allali, February to September 2001

Sophie Créno, February to September 2002

Benoît Olivieri, February to September 2003

Pierre Peterlongo, February to September 2003

Gérald Balayssac, February to September 2003

Laurent Canet, February to September 2005

DEA “Algorithmique” of the Universities of Paris VI, Paris VII and Paris XI, the École Polytechnique, ENS Cachan, ENS Ulm

Frédéric Chataigner, February to September 2001

co-supervision with Christian Choffrut, Liafa, Paris VII

DEA “Biomathématiques” of the Universities of Paris VI and VII

Marina Zelwer, January to September 2000

DEA “Évolution - Écosystèmes - Microbiologie - Modélisation (E2M2)” of the University of Lyon I

Vincent Lacroix, September 2003 to August 2004

Master M1 “Approches Mathématiques et Informatique du Vivant (aMIV)” of the University of Lyon I

Virginie Desvignes, September 2004 to August 2005

Master M1 AgroParisTech, Paris

Maria Puig Lombardi, April to July 2014

Master M2 “Approches Mathématiques et Informatique du Vivant (aMIV)” of the University of Lyon I

Claire Lemaitre, September 2004 to August 2005

Florence Cavalli, September 2005 to August 2006

Co-supervision with Cristina Vieira, University of Lyon 1

Master M2 “Biologie-Informatique” (M2BI) of the University Diderot, Paris 7

Laura Urbini, January 2014 to July 2014

PhD students

PhD in Computer Science of the University of Marne-la-Vallée

Laurent Marsan, 1998-2002 (defended in April 2002)

Philippe Blayo, 1999-2003 (defended in January 2003)

Julien Allali, 2001-2004 (defended in December 2004)

Pierre Peterlongo, 2003-2006 (defended in September 2006)

All in co-supervision with Maxime Crochemore, University of Marne-la-Vallée

PhD in Computational Biology of the University Lyon I
 Vincent Lacroix, 2004-2007 (defended in 2007)
 Marilia Dias Vieira Braga, 2005-2009 (defended in 2009)
 Co-supervision with Eric Tannier, INRIA Helix
 Ludovic Cottret, 2005-2009 (defended in 2009)
 Co-supervision with Hubert Charles, INSA Lyon
 Claire Lemaitre, 2005-2008 (defended in 2008)
 Co-supervision with Christian Gautier, University Lyon I
 Vicente Acuña, 2006-2010 (defended in 2010)
 Co-supervision with with Christian Gautier, University Lyon I
 Marc Deloger, 2006-2009 (defended in 2009)
 Co-supervision with Cristina Vieira, University Lyon I
 Nuno Mendes, 2006-2011 (defended in 2011)
 Co-supervision with Ana Teresa Freitas, Instituto Superior Técnico, Lisbon
 Patricia Simões, 2007-2012 (defended in 2012) Co-supervision with Sylvain Charlat, University Lyon I
 Paulo Milreu, 2009-2012 (defended in 2012)
 Co-supervision with Vincent Lacroix, University Lyon I
 Cecilia Klein, 2010-2013 (defended in 2013)
 Co-supervision with Ana Tereza Vasconcelos, LNCC, Brazil
 Pierre-Antoine Farnier, 2010-2014 (defended in 2014)
 Co-supervision with Laurence Mouton and Fabrice Vavre, University Lyon I
 Gustavo Sacomoto, 2011-2014 (defended in 2014)
 Co-supervision with Pierluigi Crescenzi, Univ. Florence, Italy and Vincent Lacroix, University Lyon I
 Susan Higashi, 2011-2014 (defended in 2014)
 Co-supervision with Christian Gautier, University Lyon I and Stefano Colella, INRA
 Beatrice Donati, 2011-2014 (defended in 2014)
 Co-supervision with Pierluigi Crescenzi, Univ. Florence, Italy
 Mariana Galvão Ferrarini, 2012-...
 Co-supervision with Arnaldo Zaha, federal University of Rio Grande do Sul, Brazil
 Martin Wannagat, 2013-...
 Co-supervision with Leen Stougie, Free Univ. Amsterdam and CWI, and Alberto Marchetti-Spaccamela, Univ. Rome La Sapienza, Italy
 Alice Julien-Laferrière, 2013-...
 Co-supervision with Susana Vinga, IDMEC/IST-UL, Lisbon, Portugal and Vincent Lacroix, University Lyon I
 Laura Urbini, 2014-...
 Co-supervision with Catherine Matias, Laboratoire de Probabilités et Modèles Aléatoires UMR CNRS 7599, Université Pierre et Marie Curie, Paris

PhD in Computer Science of the University of Pisa
 Nadia Pisanti, 1998-2001 (defended in December 2001)
 Co-supervision with Fabrizio Luccio, University of Pisa

PhD in Computer Science of the Instituto Superior Técnico of Lisbon
 Alexandra Carvalho, 2004-2011 (defended in 2011)
 Co-supervision with Arlindo Oliveira, Instituto Superior Técnico of Lisbon

PhD in Computer Science of the University of São Paulo, Brazil
Estela Maris Rodrigues, 1999-2003 (defended in February 2003)
Co-supervision with Yoshiko Wakabayashi, University of São Paulo
Said Sadique Adi, September 2003-2005 (defended in May 2005)
Co-supervision with Carlos Eduardo Ferreira, University of São Paulo

PhD in Computer Science of the Federal University of Pernambuco, Brazil
Jeane Cecilia Bezerra de Melo, 2003-2005 (defended in August 2005)
Co-supervision with Katia Guimarães, University of Pernambuco
Paulo Gustavo Fonseca, 2005-2008 (defended in February 2008)
Co-supervision with Katia Guimarães, University of Pernambuco

Postdocs

Sébastien Provencher, grant from the Gouvernement of Québec, 2001-2003
Nadia Pisanti, grant from Ercim, September 2001 to May 2002
Raquel Tavares, grant from Portuguese Government, 2001-2003
Eric Tannier, grant from the Inria, 2003-2004
Patricia Thébault, grant from the Inria, 2005-2007
Cinzia Pizzi, grant from the Inria, 2006-2007
Paulo Fonseca, grant from the Inria, 2008-2009
Amélie Véron, grant from the Inria, 2008-2009
Augusto Velozzo, grant from the ANR, 2008-2009
Vincent Lacroix, grant from the ANR, 2008-2009
Igor Nor, grant from the ANR, 2009-2011
Vicente Acuña grant from the ANR, 2010-2011
Matteo Brillì, grant from the ERC, 2010-2012
Janice Kielbassa, grant from the ERC, 2010-2012
Christian Baudet, grant from the ANR, 2011-...
Blerina Sinimeri, grant from the ERC, 2012-...
Lilia Brinza, grant from the ERC, 2012-2013
Cecilia Klein, grant from the ERC, 2013-2014
Gustavo Sacomoto, grant from the ERC, 2014-2015
Ricardo Andrade, grant from Ciência Sem Fronteiras, Brazil, 2013-...
Laurent Bulteau, grant from European FP7 KBBE project BacHBerry, 2014-...
Delphine Parrot, grant from European FP7 KBBE project BacHBerry, 2014-...

Participation to PhD Committees (except from (co-)supervised PhDs)

Sabria Benhamida, referee, IGM, University of Marne-la-Vallée, 1999
Ingrid Lafontaine, IBPC, University of Paris VII, 2000
Bruno Spataro, LBBM, University of Lyon II, 2001
Stéphane Vialette, LIAFA, University of Paris VII, 2001
Antoine Marin, Inra Jouy-en-Josas, University of Paris VII, 2002
Francisco Soares de Araujo, IME, University of São Paulo, Brazil, 2002
Guillaume Achaz, IJM, University of Paris VI, 2002
Simone Bentolila, referee, IGM, University of Marne-la-Vallée, 2002
Sébastien Jaeger, referee, CPT, University of Marseille, 2002
Olivier Elemento, referee, LIRMM, University of Montpellier, 2002

Magali Lescot, referee, LGPD, University of Marseille, 2002
Giulio Pavesi, referee, University of Milano, Italie, 2002
Sabria Benhamida, IGM, University of Marne-la-Vallée, 1999
France Denoeud, referee, Orsay University, France, 2003
Séverine Bérard, referee, LIRMM, University of Montpellier, France, 2003
Olivier Perriquet, University of Lille, France, 2003
Yvan Saeys, referee, University of Ghent, Belgium, 2004
Jérôme Waldispühl, referee, École Polytechnique, France, 2004
Martin Figeac, referee, University of Lille, France, 2004
Susana Vinga, referee, ITQB, Universidade Nova de Lisboa, Portugal, 2005
Ketil Malde, referee, University of Bergen, Norway, 2005
Behshad Behzadi, École Polytechnique, France, 2005
Guillaume Blin, referee, University of Nantes, France, 2005
Nahla el Zant el Kadhi, referee, University of Paris XIII, France, 2005
Gabriel Frey, referee, University of Strasbourg, France, 2005
Mathilde Carpentier, referee, University of Paris VI, France, 2005
Sarah Djebali, referee, ENS Paris, France, 2006
Sébastien Tempel, referee, IRISA, France, 2007
Sébastien Leclercq, referee, LIRMM, France, 2007
Matthias Zytnicki, referee, INRA Toulouse, France, 2007
Anthony Labarre, referee, Free University of Brussels, Belgium, 2008
Romain Bourqui, University of Montpellier, France, 2008
Sara A. C. Madeira, referee, IST Lisbon, Portugal, 2008
Séverine Jancek, referee, University of Paris 6, France, 2008
Sylvain Guillemot, referee, LIRMM, University of Montpellier, 2008
Annelyse Thévenin, referee, University of Nantes, France, 2009
Carito Guziolowski, referee, IRISA, University of Rennes, France, 2009
Celine Scornavacca, referee, LIRMM, University of Montpellier, France, 2009
Krister M. Swenson, referee, University of Lausanne, 2009
Matthias Bernt, referee, University of Leipzig, Germany, 2010
Raluca Uricaru, referee, LIRMM, University of Montpellier, 2010
Sara Vieira Silva, University Paris 6, France, 2010
Anne-Laure Gaillard, referee, University Paris 6, France, 2011
Gilles Vieira, referee, University of Évry, France, 2011
Luís F. D. P. de Figueiredo, referee, University of Jena, Germany, 2011
Adam Alexander Thil Smith, referee, University of Évry, France, 2012
Kalle Karhu, referee, University of Helsinki, Finland, 2013
Kimon Froussios, referee, King's College, London, UK, 2014
Caroline Baroukh, referee, University of Perpignan, Narbonne, France, 2014

Participation to Habilitation (HDR) Committees

Guillaume Fertin, referee, LINA, University of Nantes, 2004
Hélène Touzet, referee, University of Lille, France, 2004
Eric Rivals, University of Montpellier, France, 2005
Jean-Stéphane Varré, University of Lille 1, 2008
Pierre Brézellec, University of Évry, 2011
Guillaume Blin, University of Marne-la-Vallée, 2012

Andrei Zinoviev, ENS Paris, 2013

Institutional responsibilities

Selection and scientific committees

- 1998** Selection committee for an IR position in computational biology at the INRA
- 2000** Selection committee for a CR2 position in computational biology at the INRIA
- 2000-2003** Scientific committee ACI Cryptology, French Ministry of Research
- 2000-2003** Committee IMPG (“Informatique, Mathématique et Physique pour la Génomique”), inter EPST (CNRS-INRA-INRIA-INSERM) and French Ministry of Research
- 2000** Evaluation committee of the INA-PG team of the “Département Biométrie et Intelligence Artificielle” of the INRA
- 2001** Scientific committee of the “Cours Informatique en Biologie” of the Institut Pasteur
- 2002** Scientific committee of the “Computational Biology Course” of the University of Chile in Santiago, Chile
- 2002-2009** Various participations to selection committees for CR2 positions at the INRIA
- 2002-2005** Nominated Substitute Member of the Evaluation Committee of the INRIA Rhône-Alpes
- 2003** Selection committee for CR1 positions at the INRIA
- 2005-2008** Member of the permanent researchers Selection and Promotion Committee for the CNRS Interdisciplinary Commission 44 (“Modelling of biological systems and bioinformatics”)
- 2005** Member of the Selection Committee for the Horizon programme of the Netherlands Genomics Initiative (NGI), the Netherlands
- 2008-2010** Member of the permanent researchers Selection and Promotion Committee for the CNRS Interdisciplinary Commission 43 (“Modelling of biological systems and bioinformatics”)
- 2008-2010** Member of the permanent researchers Selection and Promotion Committee for the CNRS Section 01 (“Mathematics”)
- 2011-...** Member of the “COncil Scientifique (COS)” for the INRIA Grenoble Rhône-Alpes
- 2014-...** Member of the Scientific Advisory Committee for the CWI, Amsterdam, The Netherlands

Expertises

- 2000-2002** Expertise of projects for the Bioinformatics Program inter EPST (CNRS-INRA-INRIA-INSERM) of the French Ministry of Research
- 2001** Expertise of projects for the National Science and Engineering Research Council of Canada
- Since 2001** Expertise of faculty researchers candidate to a position or to a promotion at Universities in Belgium, Canada, Germany, Israel, the Netherlands, the UK, the USA
- 2003** Expertise of research projects for the BBVA Foundation, Spain
- 2004** Expertise of research projects for the FCI, Canada
- 2004** Expertise of a research project in bioinformatics for the EPSRC, UK

- 2005** Expertise of research projects for the “Fonds québécois de la recherche sur la nature et les technologies”, Canada
- 2005** Expertise of research projects for the “Fund for Scientific Research” (FWO), Flanders, Belgium
- 2005** Expertise of research projects for the BBSRC, UK
- 2006-2011** Expertise of projects for the Agence Nationale de la Recherche (ANR), programmes “Blanc” and “Jeunes chercheurs”
- 2006** Expertise of research projects for the Horizon programme of the Netherlands Genomics Initiative (NGI), the Netherlands
- 2007** Expertise of PhD programs on Computational Biology for the Wellcome Trust, UK
- 2008** Expertise of candidates for two positions in Bioinformatics and Medical Bioinformatics at Uppsala University, Sweden
- 2011** Member of the evaluation committee for the CWI, Amsterdam, The Netherlands
- 2013** Member of the evaluation committee for the Bioinformatics group, Institut Curie, Paris, France
- 2013** President of the evaluation committee for the MIA, INRA, France

Organisation of scientific events and editorial work activities

Conference chairing and organisation

Co-chairing and co-organisation with Olivier Gascuel (Program Committee co-Chairman) and Gilles Caraux (Organisation Committee Chairman) of the conference JOBIM 2000 (“Journées Ouvertes : Biologie, Informatique et Mathématiques”), Montpellier, May 3-5, 2000

Co-chairing and co-organisation with Hans-Peter Lenhof (Program Committee co-Chairman), Catherine Christophe and Bernard Prum (Organization Committee co-Chairpersons) of the European Conference on Computational Biology 2003, realised jointly with JOBIM’03, Paris, September 27 - 31, 2003.

Co-chairing and co-organisation with Katia Guimarães (Program Committee co-Chairman and Organization Committee co-Chairperson) of the CompBioNets (Algorithms and Computational Methods for Biochemical and Evolutionary Networks) 2004, Recife, Brazil, Dec. 15-18, 2004.

Co-chairing and co-organisation with Katia Guimarães (Program Committee co-Chairman and Organization Committee co-Chairperson) of the CompBioNets (Algorithms and Computational Methods for Biochemical and Evolutionary Networks) 2005, Lyon, France.

Co-chairing and co-organisation with Maria Emilia Walter (Program Committee co-Chairman) of the BSB (Brazilian Symposium on Bioinformatics) 2007, Angra dos Reis, Brazil.

Co-chairing with Gene Myers of ISMB-ECCB 2009, Stockholm, Sweden.

Co-chairing with Tereza Przytycka of WABI 2011, Saarbrücken, Germany.

Co-chairing with Marília Braga and Mathieu Blanchette of RECOMB-CG 2012, Niteroi, Brazil.

Colloquium, seminar and school organisation

Organisation of the colloquium, “Combinatoire et Génome”, University of Marne-la-Vallée, December 2-3, 1996

Organisation from 1997 to 2007 of the seminar “Algorithmique et Biologie”, Inria Rhône-Alpes, Laboratoire de Biométrie et Biologie Évolutive and Institut Gaspard Monge. Each series of seminars is composed of around fifteen talks, in english since 1998, of which approximately half are given by french researchers and half by non french.

Series 1: RNA Structures, December 18-19, 1997

Series 2: Phylogeny, April 8-9, 1998

Series 3: Protein Structures, September 14-16, 1998

Series 4: Genome Structural and Functional Analysis, December 8-10, 1998

Series 5: Knowledge Databases – Data and Methods Formalisation in Genome and Post-Genome Projects, March 22-24, 1999

Series 6: RNA Structures – The Return, June 15-16, 1999

Series 7: Evolution and Phylogeny, September 27-29, 1999

Series 8: Annotation - Concepts and Methods, December 14-16, 1999

Series 9: Regulation Expression, March 13-15, 2000
Series 10: Macromolecular Structures and Interactions, September 13-15, 2000
Series 11: Regulation, Metabolism and Genome Organisation, September 20-21, 2001
Series 12: Genome Dynamics and Evolution, April 3-5, 2002
Series 13: Statistics and Probabilities in Genomics, October 1-3, 2003
Series 14: Algorithmics and Combinatorics in Biology, April 2-4, 2003
Series 15: Genomic Rearrangements, February 2-4, 2004
Series 16: Genomes, Chromosomes, Cells and Developmental Evolution, November 2-4, 2004
Series 17: Evolutionary Genomics, October 26-28, 2005
Series 18: Spring in Lyon, May 14-17, 2007

Co-organisation of the School ENUMEX, “Enumeration Algorithms & Exact Methods For Exponential Problems in Computational Biology”, September 23-28, 2012, University Residential Center, Bertinoro (Forlì-Cesena), Italy, <http://team.inria.fr/erable/en/events/school-enumex/>

Co-organisation of the School ADDICTION, “Addressing Difficult problems in a Computationally Tractable fashion”, November 16-21, 2014, Olissipo Marquês de Sá Hotel, Lisbon, Portugal, <http://team.inria.fr/erable/en/events/school-addiction/>

Co-organisation of the Colloquium EMOTIONS, “Ecological and Molecular modelling of infections”, December 10-11, 2014, Lyon, France, <http://emotions2014.sciencesconf.org/>

Editorial work

Steering Committee Member of the French National Conference in Bioinformatics (JOBIM) from the start (2000) to 2005, of the European Conference on Computational Biology (ECCB since the start (2002)), of the International Symposium on Bioinformatics Research and Applications (ISBRA) since 2008, and of the Latin American Theoretical Informatics Symposium (LATIN) since 2010 (chair since 2014).

Editor-in-Chief of *IEEE/ACM Transactions in Computational Biology and Bioinformatics*, published by the IEEE Computer Society, the Association for Computing Machinery, the IEEE Neural Networks Society, and the IEEE Engineering in Medicine and Biology Society from 2009 to 2012.

Member of the Editorial Board of *IEEE/ACM Transactions in Computational Biology and Bioinformatics*, published by the IEEE Computer Society, the Association for Computing Machinery, the IEEE Neural Networks Society, and the IEEE Engineering in Medicine and Biology Society until 2008.

Member of the Editorial Board of the *Journal of Discrete Algorithms*, Elsevier.

Member of the Editorial Board of *Lecture Notes in Bioinformatics (LNBI)*, topical subseries of *Lecture Notes in Computer Science (LNCS)*, Springer-Verlag.

Member of the Editorial Board of *Research in Microbiology*, published by Elsevier, until 2005.

Member of the Editorial Board of *BMC Bioinformatics*, published by BioMed Central.

Member of the Editorial Board of *BMC Algorithms in Molecular Biology*, published by BioMed Central.

Program Committee Member of around 70 International Conferences since 1999 including WABI, CPM, SPIRE, ESA, RECOMB, ISMB, ECCB

Reviewer for the journals: *AAI, Algorithmica, BioEssays; Bioinformatics; BMC Bioinformatics, Computers and Chemistry; Journal of Automata, Languages and Combinatorics; Journal of Computational Biology; Microbiology; The Computer Journal; Theoretical Computer Science; Nucleic Acids Research; Research in Microbiology; SIAM J. on Computing*

Research activities

Research areas

See <http://team.inria.fr/erable/>

Project coordination

Project of Cooperation CGRI-FNRS-CNRS, “Combinatoire et automates – Application au codage, à l’analyse des structures génomiques et à la compression des données”

University of Mons-Hainaut and University of Marne-la-Vallée; Belgium coordinator: Olivier Delgrange; French coordinators: Olivier Carton and Marie-France Sagot; Duration: 1998-2000

Project CAPES-COFECUB “Algorithmes pour l’Analyse Génomique”, France-Brésil

University of São Paulo (Brazil), University of Campinas (Brazil), University of Marne-la-Vallée, University of Rouen and Institut Pasteur; Brazilian coordinators: Yoshiko Wakabayashi and José Augusto Ramos Soares; French coordinators: Maxime Crochemore and Marie-France Sagot; Duration: 1999-2001

Project BioInformatique CNRS-INRA-INRIA-INSERM “Régulation, Synténie et Pathogénicité – Algorithmes et Expérimentations”

Institut Pasteur, Institut de Biologie Physico-Chimique of Paris, Institut Gaspard Monge of the University of Marne-la-Vallée; Coordinators: Anne Vanet and Marie-France Sagot; Duration: 2000-2002

Project of The Royal Society “Pattern inference in computational molecular biology”

King’s College of London, Institut Pasteur and Institut Gaspard Monge of the University of Marne-la-Vallée; Coordinators: Costas Iliopoulos and Marie-France Sagot; Duration: 2000-...

Project of the Wellcome Trust Foundation

King’s College of London, Institut Pasteur and Institut Gaspard Monge of the University of Marne-la-Vallée; Coordinators: Costas Iliopoulos and Marie-France Sagot; Duration: 2001-2003

Project BioInformatique CNRS-INRA-INRIA-INSERM “Algorithms for Modelling, Search and Inference Problems in Molecular Biology”

Project Helix of the Inria Rhône-Alpes and Laboratoire de Biométrie et Biologie Évolutive plus fifteen other labs, of which six in Europe outside France (Belgium, Finland, two in Italy, Sweden, United Kingdom); Coordinator: Marie-France Sagot; Duration: 2002-2004. Funding for a postdoc for one year was granted together with the project.

Project CAPES-COFECUB “Algorithmes et Combinatoire pour la Biologie Moléculaire”, France-Brésil

Federal University of Pernanbuco (Brazil), University of Campinas (Brazil), University of Marne-la-Vallée, University of Lyon I, Inria; Brazilian coordinator: Katia Guimarães; French coordinator: Marie-France Sagot; Duration: 2003-2005

Project ACI “Nouvelles Interfaces des Mathématiques “Mathematical and algorithmical aspects of biochemical and evolutionary networks”

8 French and 16 International teams, Coordinator: Marie-France Sagot; Duration: 2003-2006. Funding for a postdoc for one year was granted by the INRIA in association with this project.

Project “Associated Team” INRIA-USP (University of São-Paulo)

HELIX project, INRIA and Department of Computer Science, University of São Paulo, Brazil; Brazilian coordinator : Yoshiko Wakabayashi; French coordinator: Marie-France Sagot; Duration: 2005-...

Project ARC, INRIA, “Integrated Biological Networks” (IBN)

BAOBAB-HELIX project, MISTIS and Symbiose projects, SSB group and Institut Pasteur, Coordinator: Marie-France Sagot; Duration: 2005-2007. Funding for a postdoc for one year was granted together with the project.

Project ANR, French Ministry of Research, “From the molecule to the cell: Development, confrontation and integration of formal models and methods of analysis” (REGLIS)

BAOBAB-HELIX project, Coordinator: Marie-France Sagot; Duration: 2006-2008. Funding for a postdoc for two years, and for engineering positions for 52 months full time and 24 months part-time was granted together with this project.

Project ARC, INRIA, “Computational Analysis of Inter-Chromosomal Interaction Networks” (ChromoNet)

BAOBAB-HELIX project, MISTIS project, SSB group and MRC Imperial College London, Coordinator: Marie-France Sagot; Duration: 2007-2008. Funding for a postdoc for one year was granted together with the project.

Project SticAmSud, “Models and Algorithms for Integrative Biology” (Patagonia)

BAOBAB-HELIX project, Univ. São Paulo and Campo Grande in Brazil, Adolfo Ibañez in Chili, French coordinator: Marie-France Sagot; Duration: 2008-2009

Project ANR, French Ministry of Research, “Mathematical Investigation of ‘Relations Intimes’” (MIRI)

BAOBAB-BAMBOO project, Coordinator: Marie-France Sagot; Duration: 2009-2012. Funding for two postdocs for two years each, one PhD for three years, and engineering positions for 12 months full time.

See <http://pbil.univ-lyon1.fr/members/sagot/htdocs/team/projects/miri/miri.html>.

Project ERC Advanced Grant, “Species Identity and SYmbiosis F(PH)ormally and Experimentally explored” (SISYPHE)

BAMBOO/ERABLE project, Coordinator: Marie-France Sagot; Duration: 2010-2015. Funding for the equivalent of 30 years of PhDs, postdocs, and engineers.

See <http://pbil.univ-lyon1.fr/members/sagot/htdocs/team/projects/sisyphe/sisyphe.html>

Laboratoire International Associé LBBE-CNRS and LNCC (Brazil), “Laboratoire International de Recherche en bIONformatique” (LIRIO)

BAMBOO/ERABLE project, French coordinator: Marie-France Sagot, Brazilian coordinator: Ana Tereza Vasconcelos; Duration: 2012-....

Inria-Faperj project, “Bioinformatics for the Reconstruction and Analysis of the Metabolism of PARasites” (RAMPA)

BAMBOO project, LNCC (Brazil), French coordinator: Marie-France Sagot, Brazilian coordinator: Ana Tereza Vasconcelos; Duration: 2012-2013.

CAPES-COFECUB project, “Multidisciplinary Approach to the Study of the Biodiversity, Interactions and Metabolism of the Microbial Ecosystem of Swines”

BAMBOO/ERABLE project, LNCC (Brazil), French coordinator: Marie-France Sagot, Brazilian coordinator: Ana Tereza Vasconcelos; Duration: 2013-2016.

Project participation

Project Action de Recherche Coopérative (INRIA), “Recherche et Extraction de Motifs pour l’Analyse Génomique” (REMAG)

INRIA (Nancy, Rennes and Rocquencourt), University of Marne-la-Vallée and Institut Pasteur; Duration: 1999-2001

Project INRA-Génoplatte, “Outils informatiques pour la prédiction de gènes et l’annotation de génomes. Application au génome d’*Arabidopsis thaliana*”

Biométrie team INRA Toulouse (resp. Christine Gaspin), INRA Associated Laboratory at the University of Ghent (resp. Pierre Rouzé), INRIA Rhône-Alpes (resp. François Rechenmann and Alain Viari), Institut Pasteur (resp. Marie-France Sagot); Coordinator: Christine Gaspin; Duration: 2000-2002

Project BioInformatique CNRS-INRA-INRIA-INSERM “Détection des exons/introns dans le génome humain”

CGM of Gif-sur-Yvette, Atelier de BioInformatique of the University of Paris VI, Institut Pasteur, Laboratoire Génome et Informatique of the University of Versailles Saint-Quentin-en-Yvelines and Institut de Mathématiques de Luminy at Marseille; Coordinator: Claude Thermes; Duration: 2000-2002

Project BioInformatique CNRS-INRA-INRIA-INSERM “Modélisation et simulation de réseaux de régulation génique: La transduction de signaux par les nucléotides cycliques chez la cyanobactérie *Synechocystis* PCC6803”

Inria Rhône-Alpes, University Joseph Fourier of Grenoble, ENS Ulm; Coordinators: Hidde de Jong and Hans Geiselman; Duration: 2001-2002

Project Vinci “Algorithmes et structures de données pour l’extraction de motifs dans les séquences biologiques”

University of Pisa, Project Helix of the Inria Rhône-Alpes and the Laboratoire de Biométrie et Biologie Évolutive and Institut Gaspard Monge of the University of Marne-la-Vallée; Coordinators: Roberto Grossi and Maxime Crochemore; Duration: 2001

Project BioInformatique CNRS-INRA-INRIA-INSERM “Validation de modèles de réseaux de régulation génique. régulation globale de la transcription chez *Escherichia coli* et *Synechocystis* PCC 6803”

Inria Rhône-Alpes, University Joseph Fourier of Grenoble, ENS Ulm; Coordinators: Hidde de Jong and Hans Geiselman; Duration: 2002-2004

Project BioInformatique CNRS-INRA-INRIA-INSERM “Découverte de motifs dans les séquences biologiques”

Inria Rennes and Rhône-Alpes, Laboratoire Irin of the University of Nantes and SIB Genève; Coordinator: Jacques Nicolas; Duration: 2002-2003

Project BioInformatique CNRS-INRA-INRIA-INSERM “Cartographie comparée des génomes de vertébrés”

Project Helix of the Laboratoire de Biométrie et Biologie Évolutive and the Inria Rhône-Alpes, Inra of Toulouse; Coordinators: Dominique Mouchiroud and Thomas Faraut; Duration: 2002-2004

Project AgroBi, INRA, “Caractérisation et modélisation de la fonction symbiotique de *Buchnera aphidicola* chez le puceron du pois *Acyrtosiphon pisum*”

BAOBAB-HELIX project, INSA-Lyon and Maths Dept. University Lyon I, Coordinator: Hubert Charles; Duration: 2006-2008

Project ANR, French Ministry of Research and BBSRC-UK, “Systems level analysis of animal metabolism by multicompartement graph- and constraint-based modelling” (MET-NET4SyBio)

BAOBAB-HELIX project, Universities of Orsay, Lille and Bordeaux, Coordinator: Alain Denise; Duration: 2007-2009

Project ANR, French Ministry of Research and BBSRC-UK, “Systems level analysis of animal metabolism by multicompartement graph- and constraint-based modelling” (MET-NET4SyBio)

BAOBAB-HELIX project, BF2I Team Insa-Lyon, York University, French coordinator: Hubert Charles; Duration: 2008-2010. Funding for a postdoc for two years and an engineering position for one year was granted together with this project.

ANR Blanc, “Methods for efficient detection and visualization of biological information from non assembled NGS data” (Colib’Read)

BAMBOO/ERABLE project, Inria EPI GenScale, MAP Lirmm, BAMBOO/ERABLE coordinator: Vincent Lacroix; Duration: 2013-2016. Funding for one postdocs for 18 months.

Project Inserm, “Functional annotation of the transcriptome at the exon level” (Exomic)

BAMBOO/ERABLE project, Centre National de Cancérologie of Lyon, ERABLE coordinator: Vincent Lacroix; Duration: 2013-2016. Funding for two postdocs for two years each.

Project FP7 KBBE, “BACterial Hosts for production of Bioactive phenolics from bERRY fruits” (BachBerry)

BAMBOO/ERABLE project, with 12 academic partners and 4 private, French coordinator: Marie-France Sagot; Duration: 2013-2016. Funding for two postdocs for two years each and a PhD for three years.

Project H2020-MSCA-ETN-2014 “Microbial Metagenomics and the Modern Wine Industry” (MicroWine)

ERABLE project, with 15 academic beneficiaries and 8 academic and private partners, French coordinator: Marie-France Sagot, also member of the Steering Committee of the project; Duration: 2015-2018. Funding for a PhD for three years.

Publications

Refereed Journals

- [1] M.-F. Sagot, A. Viari, J. Pothier and H. Soldano. Finding flexible patterns in a text – An application to 3D molecular matching. *Comput. Appl. Biosci.*, 11:59-70, 1995.
- [2] M.-F. Sagot, A. Viari and H. Soldano. Multiple comparison: a peptide matching approach. *Theor. Comput. Sci.*, 180(1-2):115-137, 1997.
- [3] M.-F. Sagot and G. Myers. Identifying satellites and periodic repetitions in biological sequences. *Journal of Computational Biology*, 5(3):539-554, 1998.
- [4] A. Vanet, L. Marsan and M.-F. Sagot. Promoter sequences and algorithmical methods for identifying them. *Research in Microbiology*, 150:779-799, 1999.
- [5] A. Vanet, L. Marsan, A. Labigne and M.-F. Sagot. Inferring regulatory elements from a complete genome. An application to the analysis of *Helicobacter pylori* σ^{80} family of promoter signals. *Journal of Molecular Biology*, 297:335-353, 2000.
- [6] L. Marsan and M.-F. Sagot. Algorithms for extracting structured motifs using a suffix tree with an application to promoter and regulatory site consensus identification. *Journal of Computational Biology*, 7:345-362, 2000.
- [7] N. Pisanti and M.-F. Sagot. Further thoughts on the syntenic distance between genomes. *Algorithmica*, 34:157-180, 2002.
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- [9] P. Blayo, P. Rouzé and M.-F. Sagot. Orphan gene finding – An exon assembly approach. *Theoretical Computer Science*, 290:1407-1431, 2003.
- [10] S. Robin, J.-J. Daudin, H. Richard, M.-F. Sagot and S. Schbath. Occurrence probability of structured motifs in random sequences. *J. Computational Biology*, 9:761-773, 2003.
- [11] C. S. Iliopoulos, J. McHugh, P. Peterlongo, N. Pisanti, W. Rytter and M.-F. Sagot. A first approach to finding common motifs with gaps. *International Journal of Foundations of Computer Science*, 2005, in press.

- [12] J. Allali and M.-F. Sagot. A new distance for high level RNA secondary structure comparison. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2(1): 3-14, 2005.
- [13] N. Pisanti, M. Crochemore, R. Grossi and M.-F. Sagot. Bases of motifs for generating repeated patterns with don't cares. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2(1): 40-50, 2005.
- [14] A. Carvalho, A. T. Freitas, A. L. Oliveira and M.-F. Sagot. An Efficient Algorithm for the Identification of Structured Motifs in DNA Promoter Sequences. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 3:126-140, 2005.
- [15] M. Crochemore, C. S. Iliopoulos, M. Mohamed, and M. F. Sagot. Longest Repeats with a Block of k Don't Cares. *Theoretical Computer Science*, 362:248-254, 2006.
- [16] V. Lacroix, C. G. Fernandes and M.-F. Sagot. Motif Search in Graphs: Application to Metabolic Networks. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 3:360-368, 2006.
- [17] E. Cambouropoulos, M. Crochemore, C. S. Iliopoulos, M. Mohamed, M.-F. Sagot. All maximal-pairs in step-leap representation of melodic sequence. *Inf. Sci.*, 177(9):1954-1962, 2007.
- [18] E. M. Rodrigues, M.-F. Sagot, and Y. Wakabayashi. The Maximum Agreement Forest Problem: approximation algorithms and computational experiments. *Theoretical Computer Science*, 374:91-110, 2007.
- [19] Y. Diekmann, E. Tannier, M.-F. Sagot. Evolution under reversals: parsimony and conservation of common intervals. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 4(2):301-309, 2007. in press.
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- [22] J. Allali and M.-F. Sagot. A multiple layer model to compare RNA secondary structures. *Software Practice and Experience*, 38(8):775-792, 2008.

- [23] P. Peterlongo, J. Allali, and M.-F. Sagot. Indexing Gapped-Factors using a Tree, accepted at *International Journal of Foundations of Computer Science*, 19:71-87, 2008.
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- [26] M. D. V. Braga, M.-F. Sagot, C. Scornavacca and E. Tannier. Exploring the solution space of sorting by reversals, with experiments and an application to evolution. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 5:348-356, 2008.
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- [33] N. Mendes, A.T. Freitas, M.-F. Sagot. Current tools for the identification of miRNA genes and their targets. *Nucleic Acids Research*, 37:2419-2433, 2009.
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- [35] C. Lemaitre, L. Zaghloul, M.-F. Sagot, C. Gautier, A. Arnéodo, E. Tannier, B. Audit. Analysis of fine-scale mammalian evolutionary breakpoints provides new insight into their relation to genome organisation, *BMC Genomics*, 10:335, 2009.

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- [51] C. Baudet, Z. Dias, M.-F. Sagot. Sampling Solution Traces for the Problem of Sorting Permutations by Signed Reversals. *Alg. for Mol. Biol.*, 7(1):18, 2012.
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Book Chapters (invited papers)

- [63] C. Mathé, T. Schiex, P. Rouzé, P. Blayo and M.-F. Sagot. Gene finding in eukaryotes. in Q. Lu and M. Weiner, editors, *Gene cloning and expression technologies*, Eaton Publishing, pages 27-43, 2002.
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Refereed Conference Proceedings (equivalent to Journals for the Computer Science Community)

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Dissertations

- [105] M.-F. Sagot. *Analyse des structures primaire et tertiaire des protéines : localisation des mots répétés et recherche rapide sur banque*. “Mémoire de DEA d’Informatique Fondamentale”, University of Paris VII, 1993.
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Invited talks at international scientific events

“Kolloquium” of the Departement of Computer Science of the University Ludwig Maximilians in Munich

Title: On the use of models for combinatorially identifying approximate factors in strings
Institute of Computer Science, University Ludwig Maximilians, Munich, Mai 25, 1999

Special Session on Combinatorics at the 23rd Brazilian Colloquium on Mathematics

Title: On the syntenic distance between genomes (A few results and conjectures)
IMPA, Rio de Janeiro, Brazil, July 23, 2001

Dagstuhl Seminar on Computational Biology

Titre: Motif inference
Dagstuhl Schloss, Dagstuhl, Germany, November 17, 2002

Third Haifa Workshop on Interdisciplinary Applications of Graph Theory, Combinatorics and Computing, Haifa, Israel

Title: Tiny steps towards addressing one part of the DNA rearrangement puzzle
CRI, University of Haifa, Haifa, Israel, May 29, 2003

First Workshop on Post-Genome Algorithms, Bertinoro, Italy

Title: Tiny steps towards addressing a small part of the DNA rearrangement puzzle
University of Bologna Residential Center Bertinoro (Forly), Italy, June, 2003

Eleventh general meeting of the European Women in Mathematics

Title: Tiny steps for one part of the DNA rearrangement puzzle
CIRM, Luminy, Marseille, France, November 4, 2003

Fourth Workshop on Algorithms in Bioinformatics (WABI/ALGOS) 2004

Title: Some questions around genome rearrangements
Bergen, Norway, September 16, 2004

Second RECOMB Comparative Genomics Satellite Workshop

Title: Some questions around genome rearrangements
University of Bologna Residential Center Bertinoro (Forly), Italy, October, 2004

Federation of the European Societies in PLant Biology (FESPB) 2006

Title: Computational biology: Negative thoughts and (maybe) some positive actions
Palais des Congrès, Lyon, July 19, 2006

Workshop on Metabolic Pathways Analysis

Title: TBA: Towards Better understanding metabolic Associations
Lorentz Center, Leiden, The Netherlands, November 26-30, 2009

Eighth Annual Meeting of the Bioinformatics Italian Society (BITS)

Title: Towards an algorithmic and mathematical exploration of symbiosis
Pisa, Italy, June 20-22, 2011

Twelve “Journées Ouvertes en Biologie, Informatique et Mathématiques” (JOBIM)

Title: Towards an algorithmic and mathematical exploration of symbiosis
Paris, France, June 28 - July 1, 2011

First RECOMB Satellite Conference on Open Problems in Algorithmic Biology

Title: Lasting relations
Saint Petersburg, Russia, August 27-29, 2011

Distinguished Speaker Series of Center for Bioinformatics, Max-Planck Institute Saarbrücken

Title: Towards An Algorithmic And Mathematical Exploration Of Symbiosis
Saarbrücken, Germany, May 16, 2012

Eleventh International Meeting on Computational Intelligence Methods for Bioinformatics and Biostatistics, Cambridge, Angleterre

Title: Species interactions from a mathematical modelling and algorithmic perspective
Cambridge, UK, May 28, 2014