
Marília Dias Vieira Braga

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Birthday: 22/October/1975
Nationality: Brazilian
Unmarried, 2 children (born 2014, 2017)

Academic Background / Professional Experience

- 2018- Research/teaching position at Bielefeld University (group of Prof. Dr. Jens Stoye)
- 2017-2018 Parental leave
- 2016-2016 Temporary teaching position at Bielefeld University (group of Prof. Dr. Jens Stoye)
- 2015-2016 Parental leave
- 2011-2015 Leader of Research Group at Inmetro (Brazilian National Institute of Metrology, Quality and Technology, Rio de Janeiro, Brazil), funded by CNPq (Brazilian National Research Foundation)
- 2009-2010 Post-doctoral position at Bielefeld University (group of Prof. Dr. Jens Stoye)
- 2005-2009 PhD in Bioinformatics – Laboratoire de Biométrie et Biologie Évolutive - Université Lyon I (France)
Advisor: Dr. Marie-France Sagot - Research supported by Program Alþan - European Union
- 2004-2005 Software analyst - Ci&T Software - Campinas - SP - Brazil (www.cit.com.br)
- 2003-2004 Bioinformatics researcher - Alellyx Applied Genomics – Campinas – SP – Brazil
- 2002-2003 Enterprise co-founder and Bioinformatics researcher - Scylla Bioinformatics - Campinas - SP – Brazil
(www.scylla.com.br)
- 2000-2002 Research assistant at the Bioinformatics Laboratory – Institute of Computing – University of Campinas
(Brazil)
- 1998-2000 Master's degree in Computer Science – Institute of Computing – University of Campinas (Brazil)
Advisor: Prof. Dr. João Meidanis - Research supported by FAPESP Brazilian agency (www.fapesp.br)
- 1994-1997 Bachelor's degree in Computer Science - Institute of Computing – University of Campinas (Brazil)
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Languages

- Portuguese: fluent (mother tongue)
 - English: fluent
 - French: fluent
 - German: advanced
 - Spanish: advanced
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Organization of International Events

- Since December 2017: member of the Steering Committee of RECOMB Satellite Workshop on Comparative Genomics (RECOMB-CG).
 - Organizing Chair of the tenth annual RECOMB Satellite Workshop on Comparative Genomics (RECOMB-CG), held in Niterói, Brazil, in October 17-19 2012.
 - Program Committee Chair of RECOMB-CG 2012.
 - Member of the Program Committee of the following international conferences:
 - RECOMB-CG 2010, 2011, 2012, 2013, 2015, 2016, 2017, 2018
 - Brazilian Symposium in Bioinformatics (BSB) 2013, 2018 and BSB-X-meeting 2014, 2015
 - Workshop on Algorithms in Bioinformatics (WABI) 2013, 2014
 - Intelligent Systems for Molecular Biology (ISMB) 2016
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Teaching Experience

- 2016 - Summer Semester (Bielefeld University):
 - Algorithms in Bioinformatics (Seminar)
 - 2011 - from March to May (UFRJ - Brazil):
 - Computational Biology (with Prof. Dr. Celina M. H. de Figueiredo)
 - 2010 - Summer Semester (Bielefeld University):
 - Classical Papers in Bioinformatics (Seminar)
 - Combinatorics of Genome Rearrangements (Seminar)
 - 2009/2010 - Winter Semester (Bielefeld University):
 - Bioinformatics Journal Club
 - Algorithmen in der Genomforschung (lecture, with Prof. Dr. Jens Stoye)
 - 2009 - Summer Semester (Bielefeld University):
 - Bioinformatics Journal Club (with Prof. Dr. Jens Stoye)
 - Algorithms in English (Seminar)
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Grants Received

Research project, 2011 to 2015 - CNPq (Brazilian National Research Foundation - grant PROMETRO no. 563087/2010-2)

Participation in Scientific Events, 2013 - CNPq (Brazilian National Research Foundation - grant AVG no. 451784/2013-8)

Promotion of Scientific Events, 2012 - CNPq (Brazilian National Research Foundation - grant ARC no. 452871/2012-3)

Doctoral scholarship, 2005 to 2008 - Program Alþan (European Union - grant no. E05D053131BR)

Master scholarship, 1998 to 2000 - FAPESP (Foundation for Research Support of São Paulo, Brazil - grant 97/11629-2)

Main Interests

Algorithm development and analysis

Computational biology (genome rearrangements, sequence alignment)

Publications

- Diego P. Rubert, Edna A. Hoshiro, Marília D. V. Braga, Jens Stoye and Fábio V. Martinez. Computing the Family-Free DCJ Similarity. *BMC Bioinformatics* 19(Suppl. 6): 152, 2018.
- Diego P. Rubert, Gabriel L. Medeiros, Edna A. Hoshiro, Marília D. V. Braga, Jens Stoye and Fábio V. Martinez. Algorithms for Computing the Family-Free Genomic Similarity under DCJ. In *Proc. of RECOMB-CG, LNBI 10562*, p. 76-100, 2017.
- Diego P. Rubert, Pedro Feijão, Marília D. V. Braga, Jens Stoye and Fábio V. Martinez. Approximating the DCJ distance of balanced genomes in linear time. *Algorithms for Molecular Biology* 12: 3, 2017.
- Diego P. Rubert, Pedro Feijão, Marília D. V. Braga, Jens Stoye and Fábio V. Martinez. A Linear Time Approximation Algorithm for the DCJ Distance for Genomes with Bounded Number of Duplicates. In *Proc. of WABI, LNBI 9838*, p. 293-306, 2016.
- Fábio V. Martinez, Pedro Feijão, Marília D. V. Braga and Jens Stoye. On the family-free DCJ distance and similarity. *Algorithms for Molecular Biology* 10: 13, 2015.
- Marília D. V. Braga and Jens Stoye. Sorting linear genomes with rearrangements and indels. *TCBB*, vol. 12, no. 3, p. 500-506, 2015.
- Fábio V. Martinez, Pedro Feijão, Marília D. V. Braga and Jens Stoye. On the family-free DCJ distance. In *Proc. of WABI, LNBI*, vol. 8701, p. 174-186, 2014.
- Eyla Willing, Simone Zaccaria, Marília D. V. Braga and Jens Stoye. On the inversion-indel distance. *BMC Bioinformatics* 14(Suppl. 15): S3 (Proc. of RECOMB-CG), 2013.
- Marília D. V. Braga and Jens Stoye. Restricted DCJ-Indel Model Revisited. In *Proc. of BSB, LNBI*, vol. 8213, p. 36-46, 2013.
- Marília D. V. Braga, Cedric Chauve, Daniel Doerr, Katharina Jahn, Jens Stoye, Annelise Thévenin and Roland Wittler. The Potential of Family-Free Genome Comparison. In *MAGE*, pages 287-307 (chapter 13), 2013.
- Poly H. Da Silva, Raphael Machado, Simone Dantas and Marília D. V. Braga. DCJ-indel and DCJ-substitution distances with distinct operation costs. *Algorithms for Molecular Biology*, 8:21, 2013.
- Marília D. V. Braga. An overview of genomic distances modeled with indels. In *Proc. of CiE, LNCS*, vol. 7921, p. 22-31, 2013.
- Poly H. Da Silva, Raphael Machado, Simone Dantas and Marília D. V. Braga. Restricted DCJ-indel model: sorting linear genomes with DCJ and indels. *BMC Bioinformatics* 13(Suppl. 19): S14 (Proc. of RECOMB-CG), 2012.
- Marília D. V. Braga. DCJ-substitution distance with distinct costs. Short paper in digital proc. of BSB 2012.
- Poly H. Da Silva, Marília D. V. Braga, Raphael Machado and Simone Dantas. DCJ-indel distance with distinct operation costs. In *Proc. of WABI, LNBI*, vol. 7534, p. 378-390, 2012.
- Marília D. V. Braga, Raphael Machado, Leonardo C. Ribeiro and Jens Stoye. Genomic distance under gene substitutions. *BMC Bioinformatics* 12(Suppl. 9): S8 (Proc. of RECOMB-CG), 2011.
- Marília D. V. Braga, Raphael Machado, Leonardo C. Ribeiro and Jens Stoye. On the weight of indels in genomic distances. *BMC Bioinformatics* 12(Suppl. 9): S13 (Proc. of RECOMB-CG), 2011.
- Marília D. V. Braga, Eyla Willing and Jens Stoye. Double cut and join with insertions and deletions. *Journal of Computational Biology (JCB)*, 18(9), p. 1167-1184, 2011.
- Jakub Kováč, Robert Warren, Marília D. V. Braga and Jens Stoye. Restricted DCJ Model (The Problem of Chromosome Reincorporation). *Journal of Computational Biology (JCB)*, 18(9), p. 1231-1241, 2011.
- Marcelo P. Lopes, Marília D. V. Braga, Celina M. H. de Figueiredo, Rodrigo de A. Hausen and Luis Antonio B. Kowada. Analysis and Implementation of Sorting by Transpositions using Permutation Trees. In *Proc. of BSB, LNBI*, vol. 6832, p. 42-49, 2011.

- Marília D. V. Braga. On sorting genomes with DCJ and indels. In Proc. of RECOMB-CG, LNBI, vol. 6398, p. 62-73, 2010.
- Jakub Kovac, Marília D. V. Braga and Jens Stoye. The problem of chromosome reincorporation in DCJ sorting and halving. In Proc. of RECOMB-CG, LNBI, vol. 6398, p. 13-24, 2010.
- Marília D. V. Braga, Eyla Willing and Jens Stoye. Genomic distance with DCJ and indels. In Proc. of WABI, LNBI, vol. 6293, p. 90-101, 2010.
- Marília D. V. Braga and Jens Stoye. The solution space of sorting by DCJ. *JCB*, 17(9), p. 1145-1165, 2010.
- Marília D. V. Braga, Christian Gautier and Marie-France Sagot. An asymmetric approach to preserve common intervals while sorting by reversals. *Algorithms for Molecular Biology*, 2009.
- Marília D. V. Braga and Jens Stoye. Counting all DCJ sorting scenarios. In Proc. of RECOMB-CG, LNBI, vol. 5817, p. 36-47, 2009.
- Said S. Adi, Marília D. V. Braga, Cristina G. Fernandes, Carlos E. Ferreira, Fábio V. Martinez, Marie-France Sagot, Marco A. Stefanos, Christian Tjandraatmadja and Yoshiko Wakabayashi. Repetition-free longest common subsequence. *Discrete Applied Mathematics*, 2009.
- Marília D. V. Braga. babobabLUNA: the solution space of sorting by reversals. *Bioinformatics*, vol. 25, no. 14, 1833--1835, 2009.
- Marília D. V. Braga. Exploring the solution space of sorting by reversals when analyzing genome rearrangements. PhD thesis, 2009.
- Claire Lemaitre, Marília D. V. Braga, Christian Gautier, Marie-France Sagot, Eric Tannier and Gabriel A. B. Marais. Footprints of inversions at present and past pseudoautosomal boundaries in human sex chromosomes. *Genome Biology and Evolution*, 2009.
- Marília D. V. Braga, Marie-France Sagot, Celine Scornavacca and Eric Tannier. Exploring the solution space of sorting by reversals with experiments and an application to evolution. *TCBB* vol. 5, no. 3, 348--356, 2008.
- Said S. Adi, Marília D. V. Braga, Cristina G. Fernandes, Carlos E. Ferreira, Fábio V. Martinez, Marie-France Sagot, Marco A. Stefanos, Christian Tjandraatmadja, Yoshiko Wakabayashi. Repetition-free longest common subsequence. In Proc. of LAGOS 2007. *Electronic Notes in Discrete Mathematics*, vol. 30, p. 243-248, 2008.
- Marília D. V. Braga, Marie-France Sagot, Celine Scornavacca and Eric Tannier. The solution space of sorting by reversals. In Proc. of ISBRA, LNBI, vol. 4463, p. 293-304, 2007.
- André L. Vettore et al. Analysis and functional annotation of an expressed sequence tag collection for tropical crop Sugarcane. *Genome Research*, 13, p. 2725-2735, 2003.
- João Meidanis, Marília D. V. Braga and Sergio Verjovski-Almeida. Whole-genome analysis of transporters in the plant pathogen *Xylella fastidiosa*. *Microbiology and Molecular Biology Reviews*, vol. 66, no. 2, p. 272-299, 2002.
- Marília D. V. Braga and João Meidanis. An algorithm that builds a set of strings given its overlap graph. In Proc. of LATIN. *LNCS*, vol. 2286, p. 52-63, 2002.
- Guilherme P. Telles, Marília D. V. Braga, Zanoni Dias, Tzy-Li Lin, José A. A. Quitzau, Felipe R. da Silva and João Meidanis. Bioinformatics of the Sugarcane EST Project. *Genetics and Molecular Biology*, vol. 24, no. 1-4, p. 9-15, 2001.
- Marília D. V. Braga. Grafos de sequências de DNA. Master thesis (in Portuguese), 2000.
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