

Curriculum Vitae

December 5, 2017

Personal Information

Full name: Eduardo Gade Gusmão
Date of birth: December 2, 1987
Pace of birth: Recife, Brazil
Citizenship: Brazilian

Contact

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Research Interests

Regulatory Genomics	<ul style="list-style-type: none">• NGS-based technologies (among others, RNA-seq, DNase-seq, ChIP-seq & ATAC-seq).• Functional/Epigenetic analyses of regulatory landscapes and their DNA sequence motifs.• 3D chromatin structure (among others, Hi-C, ChIA-PET, PLAC-seq & HiChIP).
Machine Learning	<ul style="list-style-type: none">• Computational modeling & treatment of NGS-based genomic signals.• Statistical learning (among others, Markov models, Bayesian methods & mixture models).• Methods for experimental artifact removal and “omics” data integration.

Education and Positions

01/02/2018 –Current	Postdoctoral Researcher Center for Molecular Medicine, University of Cologne – Cologne, Germany. <i>Principal Investigator:</i> Prof. Dr. Argyris Papantonis. <i>Keywords:</i> Regulatory genomics, chromatin conformation, machine learning.
01/01/2017 –31/08/2017	Postdoctoral Researcher Dana-Farber Cancer Institute, Harvard School of Public Health – Boston, MA, USA. <i>Principal Investigator:</i> Prof. Dr. Xiaole Shirley Liu. <i>Keywords:</i> Single-cell regulatory genomics, machine learning.
01/09/2016 –31/12/2016	Visiting Research Fellow Dana-Farber Cancer Institute, Harvard School of Public Health – Boston, MA, USA. <i>Principal Investigator:</i> Prof. Dr. Xiaole Shirley Liu. <i>Keywords:</i> Single-cell regulatory genomics, machine learning.
02/11/2012 –31/07/2016	Ph.D. in Computer Science RWTH Aachen University – Aachen, Germany. <i>Title:</i> Analysis of computational footprinting methods for next-generation sequencing experiments. <i>Advisors:</i> Prof. Dr. Thomas Berlage & Prof. Dr. Ivan G. Costa. <i>Grade:</i> 1.0 (Magna Cum Laude). <i>Keywords:</i> DNase-seq, ChIP-seq, hidden Markov models, transcription factor binding sites.
01/03/2011 –28/08/2012	M.Sc. in Computer Science Federal University of Pernambuco, Center of Informatics – Recife, Pernambuco, Brazil. <i>Title:</i> Prediction of transcription factor binding sites by integrating different epigenetic features. <i>Advisors:</i> Prof. Dr. Ivan G. Costa & Prof. Dr. Marcilio C. P. de Souto. <i>Grade:</i> A (Excellent) – GPA: 4.0/4.0. <i>Keywords:</i> Hidden Markov models, chromatin accessibility, histone modifications.
01/08/2006 –21/02/2011	B.Sc. in Computer Science Federal University of Pernambuco, Center of Informatics – Recife, Pernambuco, Brazil. <i>Title:</i> Study of methods to identify single nucleotide polymorphism interactions. <i>Advisor:</i> Prof. Dr. Katia S. Guimarães. <i>Grade:</i> 89.9% – GPA: 3.67/4.0. <i>Keywords:</i> Single nucleotide polymorphism, epistasis, information entropy, linkage disequilibrium.

Publications

First Author

22/02/2016	Gusmao, E.G. , Allhoff, M., Zenke, M. & Costa, I.G. Analysis of computational footprinting methods for DNase sequencing experiments. <i>Nature Methods</i> , 13(4):303–309, 2016.
01/08/2014	Gusmao, E.G. , Dieterich, C., Zenke, M. & Costa, I.G. Detection of active transcription factor binding sites with the combination of DNase hypersensitivity and histone modifications. <i>Bioinformatics</i> , 30(22):3143–3151, 2014.

- 11/06/2014 **Gusmao, E.G.** & de Souto, M.C.P. Issues on sampling negative examples for predicting prokaryotic promoters. In *Proceedings of the 2014 International Joint Conference on Neural Networks (IJCNN 2014)*, pages 494–501, 2014.
- 17/08/2012 **Gusmao, E.G.**, Dieterich, C. & Costa, I.G. Prediction of transcription factor binding sites by integrating DNase digestion and histone modification. *Lecture Notes in Computer Science*, 7409:109–119, 2012.

Collaborations

- XX/XX/2017 **ENCODE-DREAM *in vivo* transcription factor binding site prediction challenge consortium.** Analysis of *in silico* methods to identify protein-DNA binding. *Submitted to: Developmental Cell*, In review, 2017.
- XX/XX/2017 Almeida, D.C., Joussen, S., Franzen, J., Fernandez-Rebollo, E., **Gusmao, E.G.**, Ploenzke, M., Heilmann S., Hoffmann, A., Zenke, M., Costa, I.G. & Wagner, W. The impact of IFN-gamma licensing on mesenchymal stem cells molecular signature. *Submitted to: Scientific Reports*, In review, 2017.
- XX/XX/2017 Zirkel, A., Nikolicć, M., Sofiadis, K., Mallm, J.-P., Brant, L., Becker, C., Altmueller, J., Franzen, J., Koker, M., **Gusmao, E.G.**, Costa, I.G., Ullrich, R.T., Wagner, W., Nuernberg, P., Rippe, K. & Papantonis, A. Topological demarcation by HMGB2 is disrupted early upon senescence entry across cell types and induces CTCF clustering. *Submitted to: Developmental Cell*, In review. Preprint: <http://biorxiv.org/content/early/2017/04/14/127522>, 2017.
- 06/06/2017 Axelsson, A.S., Mahdi, T., Nenonen, H.A., Singh, T., Hänzelmann S., Wendt, A., Bagge, A., Reinbothe, T.M., Millstein, J., Yang, X., Zhang, B., **Gusmao, E.G.**, Shu, L., Szabat, M., Tang, Y., Wang, J., Salö, S., Eliasson, L., Artner, I., Fex, M., Johnson, J.D., Wollheim, C.B., Derry, J.M.J., Mecham, B., Spégel, P., Mulder, H., Costa, I.G., Zhang, E. & Rosengren, A.H. Sox5 regulates beta-cell phenotype and is reduced in type 2 diabetes. *Nature Communications*, 8:15652, 2017.
- 15/09/2016 Kolovos, P., Georgomanolis, T., Koeflerle, A., Larkin, J.D., Brant, L., Nikolicć, M., **Gusmao, E.G.**, Zirkel, A., Knoch, T.A., Costa, I.G., van Ijcken, W.F., Cook, P.R., Grosveld, F.G. & Papantonis, A. Binding of nuclear factor kappa B to non-canonical consensus sites reveals its multimodal role during the early inflammatory response. *Genome Research*, 26(11):1478–1489, 2016.
- 01/12/2015 Schemionek, M., Herrmann, O., Reher, M.M., Chatain, N., Schubert, C., Costa, I.G., Hänzelmann, S., **Gusmao, E.G.**, Kintsler, S., Braunschweig, T., Hamilton, A., Helgason, G.V., Copland, M., Schwab, A., Müller-Tidow, C., Li, S., Holyoake, T.L., Brümmendorf, T.H. & Koschmieder, S. Mts1 is a critical epigenetically regulated tumor suppressor in CML. *Leukemia*, 30(4):823–832, 2015.
- 17/10/2015 Lin, Q., Chauvistré, H., Costa, I.G., **Gusmao, E.G.**, Mitzka, S., Hänzelmann, S., Baying, B., Klisch, T., Moriggl, R., Hennuy, B., Smeets, H., Hoffmann, K., Benes, V., Seré, K. & Zenke, M. Epigenetic program and transcription factor circuitry of dendritic cell development. *Nucleic Acids Research*, 43(20):9680–9693, 2015.
- 04/03/2015 Hänzelmann, S., Beier, F., **Gusmao, E.G.**, Koch, C.M., Hummel, S., Charapitsa, I., Joussen, S., Benes, V., Brümmendorf, T.H., Reid, G., Costa, I.G. & Wagner, W. Replicative senescence is associated with nuclear reorganization and with DNA methylation at specific transcription factor binding sites. *Clinical Epigenetics*, 7(1):19–33, 2015.
- 29/04/2014 Ullius, A., Lüscher-Firzlaf, J., Costa, I.G., Walsemann, G., Forst, A.H., **Gusmao, E.G.**, Kapelle, K., Kleine, H., Kremmer, E., Vervoorts, J. & Lüscher, B. The interaction of MYC with the trithorax protein ASH2L promotes gene transcription by regulating H3K27 modification. *Nucleic Acids Research*, 42(11):6901–6920, 2014.
- 11/11/2011 Araújo, F.R.B., **Gusmao, E.G.** & Guimarães, K.S. A case-control study of non-parametric approaches for detecting SNP-SNP interactions. In *Proceedings of the 30th International Conference of the Chilean Computer Science Society (SCCC 2011)*, pages 19–27, Curicó, Chile, 2011.

Conference Abstracts

- 09/11/2016 **Gusmao, E.G.**, Li, Z. & Costa, I.G. Prediction of transcription factor binding sites using computational footprinting data. In *Proceedings of the 2016 RECOMB/ISCB Conference on Regulatory and Systems Genomics with DREAM Challenges*, Phoenix, AZ, USA, 2016.
- 09/09/2015 **Gusmao, E.G.** & Costa, I.G. Computational approaches to correct biases generated by next-generation sequencing techniques. In *Otto Warburg International Summer School and Research Symposium*, Berlin, Germany, 2015.
- 11/07/2015 **Gusmao, E.G.** & Costa, I.G. HINT-BC – HMM-based identification of transcription factor footprints on bias-corrected DNase-seq data. In *Proceedings of the 23rd Annual International Conference on Intelligent Systems for Molecular Biology and 14th European Conference on Computational Biology (ISMB/ECCB 2015) & Regulatory Genomics Special Interest Group (RegGenSIG 2015)*, Dublin, Ireland, 2015.
- 13/11/2014 **Gusmao, E.G.** & Costa, I.G. Are computationally predicted footprints result of DNase I cleavage bias? In *Proceedings of the 2014 RECOMB/ISCB Conference on Regulatory and Systems Genomics*, San Diego, CA, USA, 2014.
- 04/11/2013 **Gusmao, E.G.** & Costa, I.G. Search of cell-specific transcription factor binding sites with DNase hypersensitivity and histone modifications. In *Proceedings of the International Conference of the AB3C and Brazilian Symposium on Bioinformatics (X-meeting/BSB 2013)*, Recife, Pernambuco, Brazil, 2013.

22/04/2013	Gusmao, E.G. & Costa, I.G. Improving TFBS prediction by integrating epigenetic features. In <i>Proceedings of the 5th Bioinformatics and Stem Cells Satellite Workshop</i> , Cologne, Germany, 2013.
12/09/2012	Costa, I.G. & Gusmao, E.G. Prediction of transcription factor binding sites by integrating DNase digestion and histone modification. In <i>Proceedings of the 11th European Conference on Computational Biology (ECCB 2012)</i> , Basel, Switzerland, 2012.
22/10/2009	Rego, T.G., Araújo Filho, C.R., Gusmao, E.G. , de Souto, M.C.P. & Costa, I.G. Classification complexity in gene marker selection for cancer diagnosis. In <i>Proceedings of the 5th International Conference of the Brazilian Association for Bioinformatics and Computational Biology (AB3C 2009)</i> , Angra dos Reis, Rio de Janeiro, Brazil, 2009.

Prizes & Awards

09/12/2016	Best Publication at the Day of Medical Research of RWTH Aachen University Medical School. Publication: Gusmao, E.G., et al. <i>Nature Methods</i> , 13(4):303–309, 2016. Award: €2000.
09/11/2016	Publication Elected for Top-10 2015/2016 Reading List at the RECOMB/ISCB Conference on Regulatory and Systems Genomics. Publication: Gusmao, E.G., et al. <i>Nature Methods</i> , 13(4):303–309, 2016.
09/11/2016	Top-3 Methods at the ENCODE-DREAM <i>in vivo</i> Transcription Factor Binding Site Prediction Challenge.
17/10/2016	Travel Award to RECOMB/ISCB Conference on Regulatory and Systems Genomics. Award: \$1500.
03/01/2014	Best Research Group at the Day of Medical Research of RWTH Aachen University Medical School
06/11/2013	Best Oral Presentation at International Conference of the AB3C and Brazilian Symposium on Bioinformatics (X-meeting/BSB). Title: “Search of Cell-Specific Transcription Factor Binding Sites with DNase Hypersensitivity and Histone Modifications”.

Editorial & Journal Positions

22/11/2017	Reviewer at International Conference on Biological Information and Biomedical Engineering (BIBE).
10/03/2017	Reviewer at International Conference on Fuzzy Systems and Data Mining (FSDM).
21/02/2017	Reviewer at <i>Nucleic Acids Research</i> .
06/02/2017	Reviewer at International Conference on Biomedical Engineering and Biotechnology (ICBEB).
13/03/2015	Reviewer at International Joint Conference on Neural Networks (IJCNN).
16/01/2015	Reviewer at <i>Bioinformatics</i> (Oxford).

Teaching Experience

23/01/2017 –05/05/2017	Guest Lecturer in Harvard University Academic discipline: Introduction to Computational Biology and Bioinformatics (STAT115/215).
23/01/2017 –28/04/2017	Guest Lecturer in Harvard University Academic discipline: Big Data Statistics in Genomic and Genetic Research (STAT316).
18/04/2016 –04/07/2016	Lecturer in RWTH Aachen University Academic discipline: Practical Course in Bioinformatics 2016 (SOSE2016).
13/04/2015 –29/06/2015	Lecturer in RWTH Aachen University Academic discipline: Practical Course in Bioinformatics 2015 (SOSE2015).
13/05/2013 –17/05/2013	Course Instructor in RWTH Aachen University Short Course: Computational Biomedicine Practical Seminar (SOSE2013).
01/08/2011 –31/12/2011	Teaching Assistant in Federal University of Pernambuco Academic discipline: Biological Sequence Processing (IN1101).
30/07/2007 –31/12/2007	Teaching Assistant in Federal University of Pernambuco Academic discipline: Logic for Computer Science (IF673).
01/01/2007 –31/12/2007	Teaching Assistant in Federal University of Pernambuco Academic discipline: Vectorial and Linear Algebra for Computer Science (MA531).

Mentoring Experience

02/01/2017 –Current	Matthew Ploenzke <i>Type:</i> Ph.D. student rotation. <i>Title:</i> <i>De novo</i> transcription factor enrichment analysis with deep learning.
02/03/2015 –31/08/2015	Ahmad Badar <i>Type:</i> Scientific initiation. <i>Title:</i> Electronic filters for the computational detection of TFBS footprints.

Contributed Talks

09/12/2016	“Analysis of computational footprinting methods for DNase sequencing experiments” at Day of Medical Research of RWTH Aachen University Medical School – Aachen, Germany.
09/11/2016	“Prediction of active transcription factor binding sites using computational footprinting data” at RECOMB/ISCB Conference on Regulatory and Systems Genomics with DREAM Challenges – Phoenix, AZ, USA.
09/09/2015	“Computational approaches to correct biases generated by next-generation sequencing techniques” at Otto Warburg International Summer School and Research Symposium – Berlin, Germany.
11/07/2015	“HINT-BC: HMM-based identification of transcription factor footprints on bias-corrected DNase-seq data” at International Conference on Intelligent Systems for Molecular Biology and European Conference on Computational Biology (ISMB/ECCB) – Dublin, Ireland.
13/11/2014	“Are computationally predicted footprints result of DNase I cleavage bias?” at RECOMB/ISCB Conference on Regulatory and Systems Genomics with DREAM Challenges – San Diego, CA, USA.
04/11/2013	“Search of cell-specific transcription factor binding sites with DNase hypersensitivity and histone modifications” at International Conference of the AB3C and Brazilian Symposium on Bioinformatics (X-meeting/BSB) – Recife, Pernambuco, Brazil.
22/04/2013	“Improving TFBS prediction by integrating epigenetic features” at 5th Bioinformatics and Stem Cells Satellite Workshop – Cologne, Germany.
16/08/2012	“Prediction of transcription factor binding sites by integrating DNase digestion and histone modification” at Brazilian Symposium on Bioinformatics – Campo Grande, Mato Grosso do Sul, Brazil.
26/11/2010	“Study of methods to identify interactions between polymorphisms” at 18th Congress of Undergraduate Research from UFPE – Recife, Pernambuco, Brazil.
29/06/2010	“Study of methods to identify interactions between polymorphisms” at 14th Undergraduate Research Workshop – Recife, Pernambuco, Brazil.

Professional Experience

01/01/2017 –31/08/2017	Postdoctoral Research Fellow Dana-Farber Cancer Institute, Harvard School of Public Health – Boston, MA, USA. <i>Advisor:</i> Prof. Dr. Xiaole Shirley Liu.
01/09/2016 –31/12/2016	Visiting Research Fellow Dana-Farber Cancer Institute, Harvard School of Public Health – Boston, MA, USA. <i>Advisor:</i> Prof. Dr. Xiaole Shirley Liu.
02/11/2012 –31/07/2016	Research Assistant Helmholtz Institute for Biomedical Engineering, RWTH Aachen University Medical School – Aachen, Germany. <i>Advisor:</i> Prof. Dr. Ivan G. Costa.
01/08/2010 –31/01/2011	Software Developer Integrated System of Academic Management (SIG@) – Recife, Pernambuco, Brazil. <i>Supervisor:</i> Ana Paula Carvalho.
01/02/2009 –31/12/2010	Undergraduate Research Assistant Federal University of Pernambuco – Recife, Pernambuco, Brazil. <i>Advisor:</i> Prof. Dr. Katia S. Guimarães.

Software

01/06/2014	RGT: Regulatory Genomics Analysis Toolbox Available at http://www.regulatory-genomics.org/
21/10/2010	MultiSNP: Multi-Approach SNP-SNP Interaction Analysis Tool Available at https://jaqueira.cin.ufpe.br/pit/faces/index.jsp

Short-Term Courses

13/10/2014 –14/10/2014	Proteomics Informatics Primer Workshop (14h) <i>Place:</i> RWTH Aachen University Medical School, Aachen, Germany.
02/09/2013 –12/10/2013	Epigenetic Control of Gene Expression with Dr. Marnie Blewitt (48h) <i>Place:</i> The University of Melbourne, Coursera (distance learning) – Grade: 100%.
24/06/2013 –28/06/2013	Computational Statistics for Genome Biology (CSAMA) (40h) <i>Place:</i> Department of Economics, Management and Quantitative Methods, University of Milan – Bressanone-Brixen, Italy.
07/01/2013 –29/03/2013	Introduction to Genetics and Evolution with Dr. Mohamed Noor (72h) <i>Place:</i> Duke University, Coursera (distance learning) – Grade: 97.5%.
13/08/2012 –14/08/2012	Bioinformatics Tools for Next Generation Sequencing (8h) <i>Place:</i> Brazilian Bioinformatics School, Campo Grande, Mato Grosso do Sul, Brazil.
13/08/2012 –14/08/2012	Biological Databases (8h) <i>Place:</i> Brazilian Bioinformatics School, Campo Grande, Mato Grosso do Sul, Brazil.
18/06/2012 –10/08/2012	Introduction to Sociology with Dr. Mitchell Duneier (50h) <i>Place:</i> Princeton University, Coursera (distance learning).
14/04/2012 –15/06/2012	Scientific Computing with Python (20h) <i>Place:</i> Pycursos (distance learning).
09/01/2012 –12/03/2012	Security in Linux (40h) <i>Place:</i> Fuctura Institute, Recife, Pernambuco, Brazil.
01/08/2011 –29/08/2011	Networks in Linux (25h) <i>Place:</i> Fuctura Institute, Recife, Pernambuco, Brazil.
16/05/2011 –20/06/2011	System Management in Linux (30h) <i>Place:</i> Fuctura Institute, Recife, Pernambuco, Brazil.
14/02/2011 –15/03/2011	Molecular Biology Short Course (80h) <i>Place:</i> Education Portal (distance learning).
07/02/2011 –11/02/2011	Bioinformatics: Tools and Applications (45h) <i>Place:</i> Federal University of Pernambuco, Recife, Pernambuco, Brazil.
31/01/2011 –04/02/2011	Bioinformatics Summer Course (40h) <i>Place:</i> University of São Paulo, São Paulo, São Paulo, Brazil.
17/01/2011 –28/01/2011	Introduction to Python (40h) <i>Place:</i> Federal University of Pernambuco, Recife, Pernambuco, Brazil.
15/11/2010 –15/11/2010	Perl for Bioinformatics and Computational Biology (3h) <i>Place:</i> AB3C, Ouro Preto, Minas Gerais, Brazil.
31/09/2010 –01/10/2010	Methods for Sequence Alignment (8h) <i>Place:</i> Brazilian Bioinformatics School, Buzios, Rio de Janeiro, Brazil.
31/09/2010 –01/10/2010	Methods for Comparative Genomics (8h) <i>Place:</i> Brazilian Bioinformatics School, Buzios, Rio de Janeiro, Brazil.
31/09/2010 –01/10/2010	Structural Bioinformatics of Proteins (8h) <i>Place:</i> Brazilian Bioinformatics School, Buzios, Rio de Janeiro, Brazil.
31/09/2010 –01/10/2010	Probability and Statistics in Bioinformatics (8h) <i>Place:</i> Brazilian Bioinformatics School, Buzios, Rio de Janeiro, Brazil.
26/07/2010 –30/07/2010	Bioinformatics Winter Course (33h) <i>Place:</i> University of São Paulo, Ribeirão Preto, São Paulo, Brazil.
02/02/2009 –13/02/2009	Introduction to .NET with C# (30h) <i>Place:</i> Federal University of Pernambuco, Recife, Pernambuco, Brazil.
03/09/2007 –15/09/2007	Introduction to C and C++ (30h) <i>Place:</i> Federal University of Pernambuco, Recife, Pernambuco, Brazil.

Conferences

07/05/2017 –09/05/2017	Genome Engineering Practical Workshop <i>Place:</i> Cambridge, MA, USA. <i>Participation:</i> Attendance.
18/04/2017 –18/04/2017	10X Genomics User Group Meeting <i>Place:</i> Cambridge, MA, USA. <i>Participation:</i> Attendance.
03/03/2017 –03/03/2017	Genomic Approaches Towards Precision Cancer Medicine Symposium <i>Place:</i> Boston, MA, USA. <i>Participation:</i> Attendance.
09/12/2016 –09/12/2016	Day of Medical Research of RWTH Aachen University Medical School <i>Place:</i> Aachen, Germany. <i>Participation:</i> Attendance & invited oral presentation.
29/11/2016 –30/11/2016	Single-Cell Genomics Workshop <i>Place:</i> Boston, MA, USA. <i>Participation:</i> Attendance.
06/11/2016 –09/11/2016	RECOMB/ISCB Conference on Regulatory and Systems Genomics with DREAM Challenges <i>Place:</i> Phoenix, AZ, USA. <i>Participation:</i> Attendance & accepted abstract (poster presentation).
20/10/2016 –20/10/2016	Harvard Medical School Epigenetics Symposium <i>Place:</i> Boston, MA, USA. <i>Participation:</i> Attendance.
06/09/2015 –11/09/2015	Otto Warburg International Summer School and Research Symposium <i>Place:</i> Berlin, Germany. <i>Participation:</i> Attendance & accepted abstract (oral presentation).
10/07/2015 –14/07/2015	International Conference on Intelligent Systems for Molecular Biology and European Conference on Computational Biology (ISMB/ECCB) <i>Place:</i> Dublin, Ireland. <i>Participation:</i> Attendance & accepted abstract (poster presentation & oral presentation).
09/11/2014 –14/11/2014	RECOMB/ISCB Conference on Regulatory and Systems Genomics <i>Place:</i> San Diego, CA, USA. <i>Participation:</i> Attendance & accepted abstract (poster presentation).
06/10/2014 –07/10/2014	Computational Biomedicine for Translational Research Symposium (CBTR) <i>Place:</i> Aachen, Germany. <i>Participation:</i> Attendance.
03/11/2013 –06/11/2013	International Conference of the AB3C and Brazilian Symposium on Bioinformatics (X-meeting/BSB) <i>Place:</i> Recife, Pernambuco, Brazil. <i>Participation:</i> Attendance & accepted abstract (oral presentation).
09/09/2013 –11/09/2013	AICES - ACCES - computational biology minisymposium <i>Place:</i> Aachen, Germany. <i>Participation:</i> Attendance.
19/07/2013 –19/07/2013	Helmholtz Symposium <i>Place:</i> Aachen, Germany. <i>Participation:</i> Attendance & poster presentation.
22/04/2013 –22/04/2013	5th Bioinformatics and Stem Cells Satellite Workshop <i>Place:</i> Cologne, Germany. <i>Participation:</i> Attendance & accepted abstract (oral presentation).
13/08/2012 –17/08/2012	Brazilian Symposium on Bioinformatics (BSB) <i>Place:</i> Campo Grande, Mato Grosso do Sul, Brazil. <i>Participation:</i> Attendance & accepted paper (oral presentation).
22/02/2011 –24/02/2011	International Seminar on Electronic Equipment Leavings <i>Place:</i> Recife, Pernambuco, Brazil. <i>Participation:</i> Attendance.
24/11/2010 –26/11/2010	18th Congress of Undergraduate Research from UFPE <i>Place:</i> Recife, Pernambuco, Brazil.

	<i>Participation:</i> Attendance & accepted abstract (oral presentation).
25/11/2010 –25/11/2010	1st Brazilian-German Meeting of Plant Systems Biology and Bioenergy <i>Place:</i> Recife, Pernambuco, Brazil. <i>Participation:</i> Attendance.
15/11/2010 –18/11/2010	6th International Conference of the Brazilian Association for Bioinformatics and Computational Biology <i>Place:</i> Ouro Preto, Minas Gerais, Brazil. <i>Participation:</i> Attendance.
21/10/2010 –23/10/2010	1st Undergraduate Research Meeting and Scientific Forum <i>Place:</i> Recife, Pernambuco, Brazil. <i>Participation:</i> Attendance.
31/08/2010 –03/09/2010	Brazilian Symposium on Bioinformatics (BSB) and International Workshop on Genomic Databases <i>Place:</i> Buzios, Rio de Janeiro, Brazil. <i>Participation:</i> Attendance.
28/06/2010 –30/06/2010	14th Undergraduate Research Workshop <i>Place:</i> Recife, Pernambuco, Brazil. <i>Participation:</i> Attendance & accepted abstract (oral presentation).
05/06/2008 –06/06/2008	4th Seminar in Information Technology <i>Place:</i> Recife, Pernambuco, Brazil. <i>Participation:</i> Attendance.

Further Competences

Languages	Portuguese (native proficiency), English (full professional proficiency – IELTS score: 8.0/9.0 with 9.0 on reading, as of September 15, 2012), Spanish (high proficiency), German (intermediate proficiency), Italian (basic proficiency), French (basic proficiency) & Dutch (basic proficiency).
Programming	Unix-based & Windows operating systems (full professional proficiency). Python, R / bioconductor, Java & Matlab (full professional proficiency). Bash shell script, C-shell, Z-shell & GNU Awk (full professional proficiency). IBM LSF cluster & SLURM cluster (full professional proficiency). C, C++ & C# (high proficiency). Perl & Ruby (intermediate proficiency).
Web	HTML, CSS, JSP, JSF, Javascript, Ajax & .NET (intermediate proficiency).
Database	Oracle, SQL & mySQL (intermediate proficiency).
Misc.	LaTeX, graphical software (e.g. Inkscape), microsoft office & libre office (full professional proficiency).

References

Prof. Dr. Ivan G. Costa

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