

Curriculum Vitae: Vania Bogorny

Short Biography Dr. Vania Bogorny is professor at Departamento de Informatica e Estatística of Universidade Federal de Santa Catarina ([UFSC](#)) Brazil. She received her M.Sc.(2001) and Ph.D.(2006) in Computer Science from [Universidade Federal do Rio Grande do Sul](#), Porto Alegre/Brazil. During the Ph.D. Program she was visitor scholar at [University of Minnesota](#), USA (September/2004 to March/2005), with Prof. Shashi Shekhar's group. From November/2006 to January/2008 she joined the research staff of the [Theoretical Computer Science Group](#), of Hasselt University, Belgium, to work in the context of the European project [GeoPKDD](#). In 2007, she received the Best PhD Thesis Award from the Brazilian Computer Society. She has published in refereed journals and conference proceedings, such as the International Conference on Data Mining (IEEE ICDM), International Symposium on Advances in Geographic Information Systems (ACMGIS), International Conference on Intelligent Systems (IEEE IS), Geoinformática and International Journal of Geographical Information Systems (IJGIS). She has served as reviewer and technical committee member of international journals and recent conferences and workshops (IEEE-STDM, IEEE-SSTDM, GEOINFO, IJGIS, Transportation Research Part C, Geoinformatica, TKDD, TKDE, and DMKD). Her general areas of interest are spatial and spatio-temporal data mining, spatial data modeling, and geographic information systems.

Current Position	
2009 – now	Professor at Departamento de Informatica e Estatística, Universidade Federal de Santa Catarina (UFSC)
	Teaching: Databases and Algorithms
	Program Committee Member : IEEE-STDM, IEEE-SSTDM, GeoInfo, SBIA, SPATIAL ACCURACY
	Journal Reviewer: IJGIS, Transportation Research Part C, DKE, TKDE, Transactions in GIS, DMKD

Education	
2014	Post-Doctoral , INRIA Sophia Antipolis – France (Francois Bremond) Financial Support: CNPq-Brazil
2008	Post-Doctoral , Instituto de Informática, UFRGS, Brazil (Carlos Heuser) Financial Support: CAPES-Brazil
2007	Post-Doctoral , Hasselt University, Belgium (Bart Kuijpers) Financial Support: Hasselt University/GeoPKDD Project
10/2002 - 10/2006	Ph.D. in Computer Science at Universidade Federal do Rio Grande do Sul, UFRGS, Rio Grande do Sul, Brazil. Thesis: Enhancing spatial association rule mining in geographic databases. Financial Support: CNPQ
09/2004 - 03/2005	University of Minnesota , Sandwich Program with prof. Shashi Shekhar) Financial Support: CAPES
2001	M.Sc. in Computer Science at Universidade Federal do Rio Grande do Sul, UFRGS, Rio Grande do Sul, Brasil. Thesis: Providing support to topological integrity constraints to the OpenGIS Abstract Specification Model. Financial Support: CNPQ
1995	B.S. in Computer Science at Universidade de Passo Fundo, UPF, Rio

	Grande do Sul, Brasil. Thesis: Conceptual, logical, and physical design and implementation of a transportation information system
Main Research Projects at UFSC	
2010 – 2013	Discovering Anomalous Behavior in Moving Object Trajectories (financial support – CNPQ)
2012 – 2014	Mining Semantically Enriched Trajectories (Bilateral project between Brazil/Italy (CNR / CNPQ)) Main Members: Chiara Renso, Jose Antonio Fernandes de Macedo, Vania Bogorny, Luis Otavio Campos Alvares
2012 – 2015	SEEK – Semantic Enrichment of Trajectory Knowledge Discovery (Marie Curie FP7) – European Project between: UFSC/Brazil, UFSC/Brazil, PUC/Rio/Brazil, KDDLab Pisa/Italy, CA'Foscari di Venezia/Italy, University of Piraeus/Greece Main Members: Chiara Renso, Jose Antonio Fernandes de Macedo, Vania Bogorny, Luis Otavio Campos Alvares, Renato Fileto, Yannis Theodoridis, Alessandra Raffaeta, Marco Antonio Casanova, Valeria Cesario Times,
2013 - 2016	DESCARTES – Discovering Trajectory Anomalous Behavior from videos and social networks (Financed by CNPQ/Brazil)
Past Activities	
2008	II/UFRGS: research fellow (PRODOC/CAPES) Main Activities: - data models and algorithms for spatio-temporal data mining, specially for moving object trajectories. - semantics in data mining - information retrieval
2006 – 2008	Hasselt University: research staff member Main Activities: - algorithms for spatio-temporal data mining - data models for enriching trajectories with semantic information – semantic data mining
2000 – 2001	Brazilian Army (First Division of the Brazilian Army located in Porto Alegre): Systems Analyst Main Activities: - Object Oriented design and modeling of the Brazilian geographic space, following the UML notation, and using the Rational Rose toolkit. - Implementation of topological integrity constraints in the Gothic DBMS, using the Lull programming language.
1997 – 1999	Mds Consultoria e Informática Ltda – Software House: Systems Analyst and DBA Main Activities: - INGRES database administrator (DBA) at: Trensurb (Metropolitan metro transportation system), Novo Hamburgo county government, Casa Lyra, Pallotti, and IMEC. - Design and development of commercial automation systems.
1995 – 1997	Transportes Waldemar Ltda (Transportation Company, Carazinho-RS): Systems Analyst Main Activities: - Conceptual design and implementation of a transportation information system (database INGRES, Operational System Unix)

Current Students:

Andre Salvaro Furtado (Phd)
Areli Andrei dos Santos (Msc)
Lucas Andre Alencar (Msc)
Mateus Barragana (Msc)
Eduardo Carboni (Msc)

Past Students:

Fernando de Lucca Siqueira
Artur Ribeiro de Aquino
Andrey Tiethbohl Palma (co-advisor)
Anke Hager (co-advisor)

Main Publications

Journal Papers

1. PARENT, C. ; SPACCAPIETRA, S. ; RENSO, C. ; ADRIENKO, G. ; ADRIENKO, N. ; **BOGORNÝ, V.** ; Damiani, M. L. ; GKOUALAS-DIVANIS, A. ; MACEDO, J. A. F. ; PELEKIS, N. ; THEODORIDIS, Y. ; Yan, Z . Semantic trajectories modeling and analysis. ACM Computing Surveys **JCR**, v. 45, p. 1-32, 2013.
2. **BOGORNÝ, V.** ; Renso, Chiara ; Aquino, A. ; SIQUEIRA, F. L. ; Alvares, Luis O. . CONSTAnT - A Conceptual Data Model for Semantic Trajectories of Moving Objects. Transactions in GIS (Print) **JCR**, v. 10, p. n/a-n/a, 2013.
3. **BOGORNÝ, V.** ; AVANCINI, H. M. ; PAULA, B. C. L. ; Kuplich, C. ; ALVARES, Luis Otavio . Weka-STPM: a Software Architecture and Prototype for Semantic Trajectory Data Mining. Transactions in GIS (Print) **JCR**, v. 15, p. 1-20, 2011.
4. ALVARES, Luis Otavio ; Loy, Alisson Moscato ; Renso, Chiara ; **Bogorny, Vania** . An algorithm to identify avoidance behavior in moving object trajectories. Journal of the Brazilian Computer Society (Impresso), v. 17, p. 1-11, 2011.
5. MONREALE, A. ; TRASARTI, R. ; PEDRESKI, D. ; RENSO, C. ; **BOGORNÝ, V.** . C-safety: a Framework for the Anonymization of Semantic Trajectories. Transactions o Data Privacy, v. 4, p. 73-101, 2011.
6. de Lucca Siqueira, Fernando ; **Bogorny, Vania** . Discovering Chasing Behavior in Moving Object Trajectories. Transactions in GIS (Print) **JCR**, v. 15, p. 667-688, 2011.
8. **BOGORNÝ, V.** ; Valiati, Joao F. ; Alvares, Luis O. . Semantic-based pruning of redundant and uninteresting frequent geographic patterns. Geoinformatica (Dordrecht) **JCR**, v. 14, p. 201-220, 2010.
9. **BOGORNÝ, V.** ; KUIJPERS, Bart ; ALVARES, Luis Otavio . ST-DMQL: A Semantic Trajectory Data Mining Query Language. International Journal of Geographical Information Science **JCR**, v. 23, p. 1245-1276, 2009.

Books and Chapters

1. **BOGORNÝ, V.** ; BRAZ, F. J. . Processamento e Armazenamento de Trajetórias. Introdução a Trajetórias de Objetos Móveis: conceitos, armazenamento e análise de dados. 1ed.: 2012.
2. **BOGORNÝ, V.** ; ENGEL, Paulo Martins ; ALVARES, Luis Otavio Campos . Enhancing the Process of Knowledge Discovery in Geographic Databases Using Geo-Ontologies. In: John Erickson. (Org.). Database Technologies: Concepts, Methodologies, Tools, and Applications. : IGI GLOBAL, 2009, v. , p. 2405-2426.

RINZIVIOLO, S. ; TURINI, F. ; **BOGORNÝ, V.** ; Koerner, C. ; KUIJPERS, Bart ; MAY, M. . Geographic Knowledge Discovery. In: D. Pedreschi and F. Giannotti. (Org.). Mobility, Data Mining and Privacy: Geographic Knowledge Discovery. 1ed. Berlin: Springer, 2008, v. , p. 243-266.

4.

BOGORNÝ, V. ; Wachowicz, M. . A Framework for Context-Aware Trajectory Data Mining. In: Cao, L.; Yu, P.S.; Zhang, C.; Zhang, H.. (Org.). Data Mining for Business Applications. Heidelberg: Springer, 2008, v. , p. 225-239.

5.

BOGORNÝ, V. ; VALIATI, Joao ; CAMARGO, Sandro da Silva ; ENGEL, Paulo Martins ; ALVARES, Luis Otavio . Towards elimination of redundant and well known patterns in spatial association rule mining. In: Chountas, Panagiotis; Petrounias, Ilias; Kacprzyk, Janusz. (Org.). Intelligent Techniques and Tools for Novel System Architectures. Xed. Heidelberg: Springer, 2008, v. 109, p. 343-360.

6.

BOGORNÝ, V. ; ENGEL, Paulo Martins ; ALVARES, Luis Otavio . Enhancing the Process of Knowledge Discovery in Geographic Databases using Geo-Ontologies. In: NIGRO, H. O.; CISARO, S.G.; XODO, D.. (Org.). Data Mining with Ontologies: Implementations, Findings, and Frameworks. Hershey: Idea Group, 2007, v. , p. 160-181.

Main Conference Papers

1.

RINZIVIOLO, S. ; SIQUEIRA, F. L. ; GABRIELE, L. ; RENSO, C. ; **BOGORNÝ, V.** . Where Have You Been Today? Annotating Trajectories with DayTag. In: 13th International Symposium on Advances in Spatial and Temporal Databases (SSTD), 2013, Munique. Proceedings of the 13th International Symposium on Advances in Spatial and Temporal Databases, 2013. v. 8098. p. 467-471.

2.

FONTES, V. C. ; ALENCAR, L. A. ; RENSO, C. ; **BOGORNÝ, V.** . Discovering Trajectory Outliers between Regions of Interest. In: GEOINFO, 2013, Campos do Jordao. Simposio Brasileiro de Geoinformatica, 2013. p. 49-60.

3.

Aquino, A. ; ALVARES, Luis Otavio ; RENSO, C. ; **BOGORNÝ, V.** . Towards Semantic Trajectory Outlier Detection. In: GEOINFO, 2013, Campos do Jordao. Simposio Brasileiro de Geoinformatica, 2013. p. 115-126.

4.

BOGORNÝ, V. ; Alvares, Luis O. ; Heuser, C. A. . A conceptual data model for trajectory data mining. In: Sixth international conference on Geographic Information Scienc (GIScience), 2010, Zurich. Sixth international conference on Geographic Information Scienc. Amsterdam: Springer-Verlag, 2010. p. 1-14.

5.

Manso, J. A. ; TIMES, V. C. ; Oliveira, G. ; ALVARES, Luis Otavio ; **BOGORNÝ, V.** . DB-SMoT: A Direction-Based Spatio-Temporal Clustering Method. In: IEEE International Conference on Intelligent Systems (IS), 2010, Londres. Proceedings of the IEEE International Conference on Intelligent Systems, 2010. p. 114-119.

6.

Alvares, Luis O. ; PALMA, Andrey ; Oliveira, G. ; **BOGORNÝ, V.** . Weka-STPM: from trajectory samples to semantic trajectories. In: Workshop de Software Livre, 2010, Porto Alegre. WSL, 2010.

7.

MONREALE, A. ; TRASARTI, R. ; RENSO, C. ; PEDRESCHI, D. ; **BOGORNÝ, V.** . Preserving Privacy in Semantic-Rich Trajectories of Human Mobility. In: SIGSPATIAL ACM GIS 2008 International Workshop on Security and Privacy in GIS and LBS, 2010, California. ACM, 2010.

8.

MORENO, B. ; TIMES, V. C. ; RENSO, C. ; **BOGORNÝ, V.** . Looking inside the stops of trajectories of moving objects. In: Simpósio Brasileiro de Geoinformatica, 2010, Campos do Jordão. SBC. São José dos Campos: INPE, 2010. p. 9-20.

9.

ALVARES, Luis Otavio ; Oliveira, G. ; Heuser, C. A. ; **BOGORNÝ, V.** . A framework for trajectory data preprocessing for data mining. In: International Conference on Software Engineering and Knowledge Engineering, 2009, Boston. Proceedings of the 21st International Conference on Software Engineering and Knowledge Engineering, 2009. p. 698-702.

10.

PALMA, Andrey ; **BOGORNÝ, V.** ; KUIJPERS, Bart ; ALVARES, Luis Otavio . A clustering-based approach for finding interesting places in trajectories. In: 23rd Annual ACM Symposium on Applied Computing, 2008, Fortaleza. Proceedings of the 2008 ACM Symposium on Applied Computing. New York: ACM Press, 2008. p. 863-868.

11.

ALVARES, Luis Otavio ; **BOGORNÝ, V.** ; MACEDO, J. A. F. ; Moelans, B. ; SPACCAPIETRA, S. . Dynamic Modeling of Trajectory Patterns using Data Mining and Reverse Engineering. In: XXVI International Conference on Conceptual Modeling (ER 2007)

2007, Auckland. XXVI International Conference on Conceptual Modeling - ER 2007 - Tutorials, Posters, Panels, and Industrial Contributions. Adelaide: ACS, 2007. v. 83. p. 149-154.

12.

ALVARES, Luis Otavio ; **BOGORNÝ, V.** ; MACEDO, J. A. F. ; Moelans, B. ; KUIJPERS, Bart ; VAISMAN, A. . A Model for Enriching Trajectories with Semantic Geographical Information. In: ACM-GIS, 2007, Seattle. 15th International Symposium on Advances in Geographic Information Systems. New York: ACM Press, 2007. p. 162-169.

13.

BOGORNÝ, V. ; ENGEL, Paulo Martins ; ALVARES, Luis Otavio . GEOARM: an Interoperable Framework to Improve Geographic data Preprocessing and Spatial Association Rule Mining. In: Software Engineering and Knowledge Engineering (SEKE), 2006, San Francisco. Proceedings of the Eighteenth International Conference on Software Engineering and Knowledge Engineering. San Francisco Bay: Knowledge Systems Institute, 2006. v. 18. p. 79-84.

14.

BOGORNÝ, V. ; CAMARGO, Sandro da Silva ; ENGEL, Paulo Martins ; ALVARES, Luis Otavio Camapos . Towards Elimination of well known geographic patterns in spatial association rule mining. In: IEEE International Conference on Intelligent Systems (IS), 2006, Londres. Proceedings of the IEEE International Conference on Intelligent Systems, 2006. v. 3. p. 532-537.

15.

BOGORNÝ, V. ; VALIATI, Joao ; CAMARGO, Sandro ; ENGEL, Paulo ; KUIJPERS, Bart ; ALVARES, Luis Otavio . Mining Maximal Generalized Frequent Geographic Patterns with Knowledge Constraints.. In: IEEE International Conference on Data Mining (ICDM), 2006, Hong Kong. Proceeding of the IEEE International Conference on Data Mining, 2006. v. 6. p. 813-817.

16.

BOGORNÝ, V. ; CAMARGO, Sandro ; ENGEL, Paulo ; ALVARES, Luis Otavio . Mining Frequent Geographic Patterns with Knowledge Constraints.. In: ACM-GIS, 2006, Arlington. Proceedings of the ACM International Symposium on Geographic Information Systems, 2006. v. 14. p. 139-146.