# Bi LI

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## High Education

Oct. 2011 - Nov. 2014 **Ph.D. student in Computer Sciences**, *under the supervision of David Coudert and Nicolas Nisse*, Research school of Information and Communication Sciences and Technologies, University of Nice, Sophia Antipolis, France.

**Thesis: Tree Decompositions and Routing Problems**.

Sep. 2008 - May. 2015 **Joint Master & Ph.D. student in Applied Mathematics**, *under the supervision of Pr. Xiaodong Hu and Pr. Yunbin Zhao, Institute of Applied Mathematics, Academy of Mathematics and Systems Science Chinese Academy of Sciences, CAS, Beijing, China.*

Sep. 2004 - Jul. 2008. **B. S. in Mathematics**, *Shaanxi Normal University, Xi'an, China.*

## Research Interests

- Graph Theory
  - Tree Decompositions, Path Decompositions
  - Chordality, Hyperbolicity
  - Hamiltonian Cycle
- Combinatorial Optimizations & Network Optimizations
  - Prize Collecting Steiner Tree Problem
  - Broadcasting and Gathering problems
- Algorithms
  - Compact Routing Scheme
  - Distributed Algorithms

## Publications

[Journal] $k$-Chordal Graphs: from Cops and Robber to Compact Routing via Treewidth, A. Kosowski, **B. Li**, N. Nisse and K. Suchan, Algorithmica. 2014 ; pages 1-20, http://dx.doi.org/10.1007/s00453-014-9871-y

[Journal] Risk Models for the Prize Collecting Steiner Tree Problems with Interval Data, E. Alvarez-Miranda, A. Candia, X. Chen, X. Hu, and **B. Li**, Acta Mathematicae Applicatae Sinica, English Serie, 2014,V30(1); pages 1-26, DOI: 10.1007/s10255-014-0269-z

[Journal] Data Gathering and Personalized Broadcasting in Radio Grids with Interferences, J. Bermond, **B. Li**, N. Nisse, H. Rivano, J. Yu, Submitted to Theoretical Computer Science.

[Conference] Minimum Size Tree Decomposition, **B. Li**, F. Moataz, N. Nisse, Presented in the 9th International colloquium on graph theory and combinatorics, June 30-July 4, 2014 (ICGT 2014).

[Conference] $k$-Chordal Graphs: from Cops and Robber to Compact Routing via Treewidth, A. Kosowski, **B. Li**, N. Nisse and K. Suchan, in Proceedings of the 39th International Colloquium on Automata, Languages and Programming (ICALP 2012), track C, Springer LNCS 7392, pages 610-622, University of Warwick, UK, 9-13 July 2012.

[Conference] Efficient Algorithms for the Prize Collecting Steiner Tree Problems with Interval Data, E. Alvarez-Miranda, A. Candia, X. Chen, X. Hu, and **B. Li**, in proceedings of the 6th International Conference on Algorithmic Aspects in Information and Management (AAIM), Lecture Notes in Computer Science, 6124; pages 13-24, 2010

## Professional Experience

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|---|---|
| Nov. 2013 -Dec. 2013 | Visited in Universidad Adolfo Ibanez, Santiago, Chile, work with assistant professor Karol Suchan |
| Dec. 2013 | Helped in organizing OPODIS 2013 |
| Sep. 2013 | Helped in organizing ALGO 2013 |
| July 1 - 5, 2013 | Participated in *Summer School on Graph and Routing Dynamics: Models and Algorithms*, Barcelona, Spain |
| Jun. 17 - 21, 2013 | Participated in *Summer School on Graph Theory*, Oléron, France |
| Jan. 14 - 18, 2013 | Participated in *Winter School on Network Optimization*, Estoril, Portugal |
| Oct. 3, 2012 | Presented *Graph Decompositions: Perfect Graph Theorem* in the Seminar of MASCOTTE team |
| Jun 25 - July 6, 2012 | Participated in *The Numerical Analysis Summer School - Stochastic Optimization*, Cadarache, France |
| Nov. 2010 -Oct. 2011 | Visited in the team project MASCOTTE of INRIA Sophia Antipolis, France, supervised by Jean-Claude Bermond and Nicolas Nisse |

## Attended Conferences

- The 9th International Colloquium on Graph Theory and Combinatorics, June 30 - July 4, 2014, Grenoble, France
  - Presented: *Minimum Size Tree Decompositions*
- The 17th International Conference on Principles of Distributed Systems (OPODIS), December 16 - 18, 2013, Nice, France.
- The 8th International Symposium on Parameterized and Exact Computation (IPEC), September 4 - 6, 2013, Sophia Antipolis, France.
- Les 14émes Journées Graphes et Algorithmes (JGA), November 14 - 16, Clerment-Ferrand, France
  - Presented: *Data Gathering and Personalized Broadcasting in Radio Grids with Interferences*
- The 39th International Colloquium on Automata, Languages and Programming (ICALP), July 9 - 13, 2012, University of Warwick, UK
  - Presented: *k-Chordal Graphs: from Cops and Robber to Compact Routing via Treewidth*
- The 25th International Symposium on Distributed Computing (DISC), September 20-22, 2011, Rome, Italy.
- The 6th International Conference on Algorithmic Aspects in Information and Management, July 19 - 21, 2010, Shandong University, Weihai, China.
  - Presented: *Efficient Algorithms for the Prize Collecting Steiner Tree Problems with Interval Data*
- The 3rd International Symposium on Graph Theory and Combinatorial Algorithms, July 10-11, 2010, Beijing, China.

## Research Projects

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| Jan. 2013 - | Work in project-team COATI (Combinatorics, Optimization, and Algorithms for Telecommunications) |
| Jan. 2013 - | Be Involved in project-team (AlDyNet) Algorithm for large and Dynamic Networks |
| Jan. 2011 - | Be involved in project FP7 EULER, Experimental UpdateLess Evolutive Routing |
| Nov. 2010 -Dec. 2012 | Worked in project-team (MASCOTTE) Méthodes Algorithmiques, Simulation et Combinatoire pour l'OpTimisation des TElécommunications |

## References

- Dr. Xiaodong HU
  - Researcher in Institute of Applied Mathematics, AMSS, CAS, China
  - xdhu@amss.ac.cn
- Dr. David COUDERT
  - Researcher in COATI project-team, Inria, France
  - david.coudert@inria.fr
- Dr. Joseph Yu
  - Instructor in Department of Math. and Statistics, University of Fraser Valley, Canada
  - Joseph.Yu@ufv.ca
- Dr. Karol SUCHAN
  - Associate Professor in University of Adolfo Ibáñez, Chile
  - karol.suchan@uai.cl
- Dr. yunbin ZHAO
  - Senior Lecturer in School of Mathematics, University of Birmingham, UK
  - y.Zhao.2@bham.ac.uk
- Dr. Nicolas NISSE
  - Researcher in COATI project-team, Inria, France
  - nicolas.nisse@inria.fr
- Dr. Jean-Claude BERMOND
  - Researcher in COATI project-team, CNRS, France
  - jean-claude.bermond@inria.fr

## Spoken Languages

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| Chinese | Mother tongue |
| English | Fluent |
| French | Basic |

## Personal Information

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| Nationality | Chinese |
| Gender | Female |
| Date of Birth | August 4, 1986 |