

CV - Lionel Tabourier (January 2026)

Contact Information:

LIP6, Sorbonne Université
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Current situation (since 2025): Professor in Computer Science
Complex Networks team, LIP6, Sorbonne Université (previously UPMC) / CNRS

Career:

- fev.-aug. 2025** Visiting researcher at HNHP (MNHN/UPVD/CNRS, Paris).
2014-2025 Associate Professor in Computer Science at Sorbonne Université.
2018-2024 *Complex Networks* team leader (LIP6).
2017-2018 Visiting researcher at ISC-PIF (CNRS, Paris).
2012-2014 Post-Doc in Applied Mathematics at naXys (University of Namur, Belgium).
2011-2012 Post-Doc in Computer Science at LIP6 (UPMC).
2010-2011 Teaching Assistant (ATER) in Computer Science at LIP6 (UPMC).
2009-2010 Engineer at the CRÉA (École Polytechnique) for *Webfluence* research project.
2006-2010 PhD candidate at SPEC (CEA Saclay):
2006-2009 Trainee Teaching Assistant in Physics at UPMC.

2006 Research internship at LIAFA (CS laboratory, Paris 7 University):
(April to July) “Analysis of social networks periphery” (supervisor: Christophe Prieur)
2004 Research internship at LPS (Statistical Physics Laboratory, ENS Paris):
(May to July) “Road traffic modeling” (supervisor: Cécile Appert-Rolland)
2003 Research internship at the Seismology Laboratory of the IPGP:
(June to July) “Crack speed in earthquakes” (supervisor: Pascal Favreau).

Education and diplomas:

- 2018** **Habilitation à Diriger les Recherches** - qualification to supervise PhD students.
“From a static to a dynamic analysis of complex networks.”
reviewers: Marco Fiore, Petter Holme, Christine Largeron
examiners: Étienne Birmelé, Vittoria Colizza, Clémence Magnien, Céline Robardet
- 2010** **PhD**, Université Pierre et Marie Curie (UPMC, now Sorbonne Université).
“Comparison method of complex graphs topologies applied to social networks analysis”.
reviewers: Éric Fleury, Pablo Jensen
examiners: Paul Bourgine, Matthieu Latapy, Camille Roth
supervisors: Hugues Chaté, Annick Lesne
- 2006-2009** Master’s degree in history and philosophy of science at Paris 7 University.
- 2005-2006** Master’s degree in statistical physics at the ENS Lyon.
- 2005** Passed the *Agrégation de physique*.
- 2004-2005** Training for the *Agrégation de physique* - national physics teaching qualification.
- 2002-2004** Bachelor’s Degree in general physics at the ENS Lyon.
- 2002** Admitted to the École Normale Supérieure de Lyon (ENS Lyon).
- 1999-2002** Preparatory school in physics - for the competition for the *Grandes Écoles*.

Publications:

- International Journals:

* *Co-evolution of groups and opinions in an agent-based model.*

D. Cassells, A. Vendeville, **L. Tabourier**, P. Ramaciotti.

PLoS One 20 (12), e0338486, 2025.

* *Faster maximal clique enumeration in large real-world link streams.*

A. Baudin, C. Magnien, **L. Tabourier**.

Journal of Graph Algorithms and Applications, 2024.

* *Probabilistic k-swap method for uniform graph generation beyond the configuration model.*

L. Tabourier, J. Karadayi.

Journal of Complex Networks, 2024.

* *[Re] Speedup graph processing by graph ordering.*

F. Lécuyer, M. Danisch, **L. Tabourier**.

ReScience C, 2021.

* *Measuring diversity in heterogeneous information networks.*

P. Ramaciotti Morales , R. Lamarche-Perrin, R. Fournier-S'Niehotta, R. Poulain, **L. Tabourier**, F. Tarissan.

Theoretical Computer Science, 2021.

* *RankMerging: A supervised learning-to-rank framework to predict links in large social networks.*

L. Tabourier, D. Bernardes, A.S. Libert, R. Lambiotte.

Machine Learning Journal, 2019.

* *Spreading dynamics in a cattle trade network: Size, speed, typical profile and consequences on epidemic control strategies.*

A. Payen, **L. Tabourier**, M. Latapy.

PLoS ONE, 2019.

* *Predicting interactions between individuals with structural and dynamical information.*

T. Arnoux, **L. Tabourier**, M. Latapy.

Journal of Interdisciplinary Methodologies and Issues in Sciences, 2019.

* *Characterizing and predicting mobile application usage.*

K.W. Lim, S. Secci, **L. Tabourier**, B. Tebbani.

Computer Communications, 2016.

* *Predicting links in ego-networks using temporal information.*

L. Tabourier, A.S. Libert, R. Lambiotte.

EPJ Data Science, 2016.

* *Burstiness and spreading on temporal networks.*

R. Lambiotte, **L. Tabourier**, J.C. Delvenne.

European Physical Journal B, 2013.

* *Internal links and pairs as a new tool for the analysis of bipartite complex networks.*

O. Allali, **L. Tabourier**, C. Magnien, M. Latapy.

Social Network Analysis and Mining, 2013.

* *Firm-network characteristics and economic robustness to natural disasters.*

F. Henriet, S. Hallegatte, **L. Tabourier**.

Journal of Economic Dynamics and Control, 2012.

* *Intrinsically dynamic communities from evolving, directed network data.*

B. Mitra, **L. Tabourier**, C. Roth.

Computer Networks, 2012.

* *Generating constrained random graphs using multiple edge switches.*

L. Tabourier, C. Roth, J.P. Cointet.

Journal of Experimental Algorithmics, 2011.

* *Directedness of information flow in mobile phone communication networks.*

F. Peruani, **L. Tabourier**.

PLoS ONE, 2011.

* *Citations among blogs in a hierarchy of communities: method and case study.*

A. Salah Brahim, B. Le Grand, **L. Tabourier**, M. Latapy.

Journal of Computational Sciences, 2011.

- International Conferences and Workshops:

* *Modeling both pairwise interactions and group effects in polarization on interaction networks.*

D. Cassells, **L. Tabourier**, P. Ramaciotti Morales.

Proceedings of *CompleNet 2024*.

* *LSCPM: Communities in Massive Real-World Link Streams by Clique Percolation Method.*

A. Baudin, **L. Tabourier**, C. Magnien.

Proceedings of *TIME 2023*.

* *Tailored vertex ordering for faster triangle listing in large graphs.*

F. Lécuyer, L. Jachiet, C. Magnien, **L. Tabourier**.

Proceedings of *ALENEX 2023*.

* *Testing the Impact of Semantics and Structure on Recommendation Accuracy and Diversity.*

P. Ramaciotti Morales, **L. Tabourier**, R. Fournier-S'niehotta.

Proceedings of *ASONAM 2020*.

* *A random model that relies on maximal bicliques to preserve the overlaps in bipartite networks.*

F. Tarissan, **L. Tabourier**.

Proceedings of *CNA 2019*.

* *Role of the website structure in the diversity of browsing behaviors.*

P. Ramaciotti Morales, **L. Tabourier**, S. Ung, C. Prieur.

Proceedings of *Hypertext 2019*.

* *Ego-betweenness centrality in link streams.*

M. Ghanem, F. Coriat, **L. Tabourier**.

Proceedings of *SNA (workshop ASONAM 2017)*.

* *Combining structural and dynamic information to predict activity in link streams.*

T. Arnoux, **L. Tabourier**, M. Latapy.

Proceedings of *ASONAM 2017*.

* *Impact of temporal features of cattle exchanges on the size and speed of epidemic outbreaks.*

A. Payen, **L. Tabourier**, M. Latapy.

Proceedings of *ICCSA 2017*, Agricultural and Environmental Big Data Analytics session.

* *RankMerging: Learning to rank in large-scale social networks.*

L. Tabourier, A.S. Libert, R. Lambiotte.

Proceedings of *DyNak II (workshop PKDD 2014)*.

* *A data-driven analysis to question epidemic models for citation cascades on the blogosphere.*

A. Salah Brahim, **L. Tabourier**, B. Le Grand.

Proceedings of *ICWSM 2013*.

* *How to detect causality effects on large dynamical communication networks.*

L. Tabourier, A. Stoica, F. Peruani.

Proceedings of *Comnets 2012*.

- Books Chapters:

* *Scalable Algorithms to Measure User Influence in Social Networks.*

N. Arhachoui, E. Bautista, M. Danisch, A. Giovanidis, **L. Tabourier**.

in *Lecture Notes in Social Networks*, 2024.

* *Interaction Prediction Problems in Link Streams.*

T. Arnoux, **L. Tabourier**, M. Latapy.

in *Dynamics on and of complex networks III*, 2019.

- French speaking Journals:

* *Génération de graphes aléatoires par échanges multiples d'arêtes.*

L. Tabourier, J.P. Cointet, C. Roth.

Journal de la Société Française de Statistique, 2017.

- French speaking Conferences and Workshops:

* **Multi-Relational Community Detection in Social Platforms using Graph Neural Networks**

N. Arhachoui, V. Gauthier, A. Giovanidis, **L. Tabourier**.

Proceedings of *FrCCS 2025*.

* **Énumération efficace des cliques maximales dans les flots de liens réels massifs**

A. Baudin, C. Magnien, **L. Tabourier**.

Proceedings of *EGC 2023*.

* *RankMerging: Apprentissage supervisé de classements pour la prédiction de liens dans les grands réseaux sociaux.*

L. Tabourier, A.S. Libert, R. Lambiotte.

Proceedings of *EGC 2015*.

* *Cycles in hypergraph-based networks: signal or noise, artefacts or processes?*

L. Tabourier, J.P. Cointet, C. Roth.

Proceedings of *Algotel 2008*.

- Unpublished works:

* **BBK: a simpler, faster algorithm for enumerating maximal bicliques in large sparse bipartite graphs.**

A. Baudin, C. Magnien, **L. Tabourier**.

arXiv preprint arXiv:2405.04428, 2024.

* **Compressing bipartite graphs with a dual reordering scheme.**

M. Danisch, I. Panagiota, L. Tabourier.

arXiv preprint arXiv:2209.12062, 2022.

Projects and fundings

- **MoNReSo** (2025-2026) CNRS MITI project: coordinator

Null Models for the Analysis of Personal Social Networks

- **Limass** (2019-2021) National Research Agency project: member then coordinator

Linear Algorithms for Massive Real-World Graphs (initial coordinator: M. Danisch)

- **Algodiv** (2016-2019) National Research Agency project: LIP6 principal investigator

Information Diversity and Algorithmic Recommendation

- **TRES** (2017) Regional project: coordinator

Time in Live Entertainment Recommendation

Research supervision

- **Phd students:**

- * Nouamane Arhachoui (since 2023), co-supervision: Vincent Gauthier (Télécom Sud Paris).
Mitigation strategies against fake news diffusion in online social platforms
- * Duncan Cassells (2022-2025), co-supervision: Pedro Ramaciotti Morales (ISC-PIF, CNRS).
Polarization in large socio-informational networks: models and measures
- * Alexis Baudin (2021-2023), co-supervision: Clémence Magnien (LIP6).
Enumeration problems in massive graphs and applications
- * Fabrice Lécuyer (2020-2023), co-supervision: Maximilien Danisch then Clémence Magnien (LIP6).
Sorting nodes to scale to massive real-world networks
- * Aurore Payen (2015-2018), co-supervision: Matthieu Latapy (LIP6).
Importance of temporality in propagation phenomena, illustration on cattle trade networks
- * Thibaud Arnoux (2015-2018), co-supervision: Matthieu Latapy (LIP6).
Predicting interactions in link streams

- **Graduate students:**

- * Léonard Kobilinsky (April-October 2025) with Fabien Tarissan (ENS Paris-Saclay).
- * Cyril Conchon-Kerjan (March-August 2025) with Mehdi Naima (LIP6).
- * Karaneh Zolfaghari Moghaddam (March-August 2025).
- * William Gravil (May-September 2024) with Kévin Vermeulen (LAAS, CNRS).
- * Altynay Shubekova (April-September 2023) with Élodie Laine (LCQB, SU/CNRS).
- * Ruben Patriarca (May-August 2022) with Mehdi Naima (LIP6).
- * Nouamane Arhachoui (February-August 2022) with Anastasios Giovanidis (LIP6).
- * Cécile Pov (April-October 2020) with Fabien Tarissan (ENS Paris-Saclay).
- * Alexandre Wilmet (April-August 2019) with Pedro Ramaciotti Morales (LIP6).
- * Cyril Malbranke (April-August 2018) with Jean Creusefond (Delight).
- * Sylvain Ung (February-August 2018) with Pedro Ramaciotti Morales (LIP6).
- * Yekta Kesenci (May-August 2017) with Christophe Prieur (Télécom Paris-Tech).
- * Berrenur Saylam (February-June 2016) with Raphaël Fournier-S'niehotta (CNAM).
- * Illya Gorodenskyy (March-August 2015) with Anne Fladenmuller (LIP6).
- * Clément Gastaud (May-July 2015).

- **Undergraduate students:**

- * Bryan Anthony Queen (June-August 2024) with Yannick Miras (HNHP, MNHN/UPVD/CNRS).
- * Grégoire Uhrlrich-Meunier (June-July 2016).
- * Maxime Savaro (June-July 2012) with Matthieu Latapy (LIP6).

Program production

- Codes available on <https://www.complexnetworks.fr/programs/>
- * *Probabilistic k-swap*, random graph generator. Main Programmer: J. Karadayi.
- * *ArchéoClass*, classification for archeological data. MPs: C. Oucible, S. Kaci Chaouche.
- * *BBK*, maximal biclique enumeration in large bipartite graphs. MP: A. Baudin.

- * Maximal cliques enumeration in link streams. MP: A. Baudin.
- * *LSCPM*, Temporal communities using link stream clique percolation method. MP: A. Baudin.
- * Ψ -score computation. MP: N. Arhachoui.
- * Computing diversity in Heterogeneous Information Networks. MP: P. Ramaciotti Morales.
- * *Gorder*, node vertices reordering method for efficient cache management. MP: F. Lécuyer.
- * *K-edge switching*, random graph generator.
- * *RankMerging*, supervised learning method for link prediction.

Other scientific production

- **Philosophy of science:**

Article in French about the analogy between deterministic cellular automata and physical systems published in *Lato Sensu, revue de la Société de philosophie des sciences*, 2018.

- **Popular science:**

Article in French about the modelling the epidemic risk using network science published in *Le Prisme à Idées*, 2012.

Visits and presentations

- **Scientific Visits:**

- * *Institut des Systèmes Complexes*, CNRS, France, from September 2017 to August 2018.
- * *Takemura-Masuda Laboratory*, University of Tokyo, Japan, June 2013.
- * *Max Planck Institute for the Physics of Complex Systems*, Germany, July 2011.

- **Conference presentations:**

- * *NetSci, Workshop on Livestock Movement Networks & Infectious Disease*, Paris, June 2018.
- * *11th Workshop on Complex Evolving System Approach in Economics*, Nice, October 2017.
- * *EGC 2015*, Luxemburg, January 2015.
- * *DyNakII (ECML-PKDD 2014 satellite)*, Nancy (France), September 2014.
- * *TNETS'13 (ECCS 2013 satellite)*, Barcelona (Spain), October 2013.
- * *AAAI ICWSM 2013*, Cambridge (United States), July 2013.
- * *Journées Automnales ResCom*, Paris (France), November 2012.
- * *IEEE COMSNETS 2012*, Bangalore (India), January 2012.
- * *NetMob 2011*, Cambridge (United States), October 2011.
- * *DOOCN V (ECCS 2011 satellite)*, Vienna (Austria), September 2011.
- * *DOOCN III (ECCS 2009 satellite)*, Warwick (England), September 2009.
- * *Algotel'08*, Saint-Malo (France), May 2008.

- **Invited talks and seminars:**

- * *HNHP Scientific Seminars*, HNHP (Paris), November 2024.
- * *French Regional Conference in Complex Systems*, ISC-PIF (Paris), June 2022.
- * *Takemura-Masuda Laboratory*, University of Tokyo (Japan), June 2013.
- * *naXys*, University of Namur (Belgium), October 2012.
- * *SAMM*, University Paris 1 Panthéon-Sorbonne (France), April 2012.
- * *ICTEAM*, Catholic University of Louvain (Belgium), March 2012.
- * *Centre de Physique Théorique*, University of Aix-Marseille (France), November 2011.
- * *Max Planck Institute for the Physics of Complex Systems*, Dresden (Germany), July 2011.
- * *LIP6*, University Pierre and Marie Curie, June 2010.

Reviewing activities

- **PhD juries:**

- * Alexis Bénichou (Institut Pasteur, sup. J.B. Masson and C. Vestergaard, 2024), examiner.
- * Justin Loyer (Université Toulouse 3, sup. K. Jaffrèse-Runser and S. Mouyssset, 2022), reviewer.
- * Louis Duvivier (INSA Lyon, sup. C. Robardet and R. Cazabet, 2021), reviewer.
- * Alexandre Darbon (Sorbonne Université, sup. V. Colizza, 2019), examiner.
- * Mouna Rifi (Université Paris 13, sup. Y. Bennani and R. Kanawati, 2019), reviewer.
- * Jérémie Guillon (Sorbonne Université, sup. F. de Vico Fallani, 2018), examiner.

- **Reviews and expertise:**

- * **International Journals:**

- ANS, Computer Communications, Computer Networks, CSON, J. Complex Networks, J.R.Soc.Interface, JSAC, KAIS, Physica A, PLoS ONE, TCS, TKDD, TPDS.

- * **International Conferences:**

- ICWSM (2021, 2020, 2019), WWW (2015, 2014, 2012) , NetSciCom (2011).

- * **Expert** for the National Research Agency (ANR) founding program (2013).

- **PC member:**

- * ICWSM (2024, 2022), TheWebConf (2022), WebSci (2021, 2020), WWW satellites (2018), SNAA (2018), COMSNETS (2017, 2016).

Events Organization

- **Conference Organization:**

- * EUSN 2016: co-organizer of the workshop on Large Networks.
 - * publication chair of TMA 2019, publicity Chair of MobiArch 2015.

- **Seminar Organization:**

- * Codes Sources (Philosophy of science, 2015-2024): <http://codesource.hypotheses.org/>
 - * Complex Networks team (2011-2012): <http://www.complexnetworks.fr/events/>

Teaching activities

- **Teaching responsibilities**

- * *Graph Algorithm Applications* (joint with Mehdi Naima)
since 2025, Master 2 Computer Science, Software Engineering specialty.
- * *Graphs and Networks* (joint with Timur Friedman)
since 2024, Master 2 Computer Science, Computer Networks specialty.
- * *Network Structure and Dynamics* then *Network Analysis and Mining*
2015-2024, Master 2 Computer Science, Computer Networks specialty.

- **Administrative responsibilities**

- * since 2023: Undergraduate joint curriculum Computer Science and Physics at SU.

- **Summary table of teaching activities**

Subject	Where	When
Computer Science and Mathematics for Graduate		
Graph Algorithm Applications	Sorbonne University	2025
Graphs and Networks	Sorbonne University	2024-2025
Network Analysis and Mining	Sorbonne University	2019-2024
Advanced Development Projects Tutoring	Sorbonne Université	2019-2024
Network Data Analysis	Sorbonne Université	2020-2022
Advanced Algorithmics	Sorbonne Université	2019-2020
Network Structure and Dynamics	Sorbonne Université	2014-2019
Synchronization in Complex Networks	University of Namur	2012
Large Interaction Networks	Université Paris 7	2012
Complex Networks	Ho-Chi-Minh City University	2011
Complex Networks	Sorbonne Université	2010
Computer Science and Mathematics for Undergraduate		
Development Projects Tutoring	Sorbonne Université	2019-2025
Introduction to Data Science	Sorbonne Université	2021-2025
Basic Programming in Python	Sorbonne Université	2014-2024
Algorithmics	Sorbonne Université	2018-2020
Programming Environment	Sorbonne Université	2016-2019
Introduction to Complex Networks	Babes-Bolyai University	2017
Basic Programming in C	Sorbonne Université	2017
Basic Algorithmics	Sorbonne Université	2015-2018
Introduction to Databases	Sorbonne Université	2015
Academic Internship Tutoring	Sorbonne Université	2011,2014
Graph Theory	University of Namur	2012-2013
Programming in C	Sorbonne Université	2011
Basic Programming in Scheme	Sorbonne Université	2010
Miscellaneous for Undergraduate		
Fluid Mechanics	Sorbonne Université	2019-2020
Career Guidance	Sorbonne Université	2014-2016
Thermodynamics	Sorbonne Université	2008
Optics	Sorbonne Université	2008
Physics for Medical Students	Sorbonne Université	2007
Mechanics	Sorbonne Université	2006