

Guillaume Braun

PhD Candidate

Education

- 2020- Dec. **Applied Mathematics and Computer Science Thesis**, PhD, Inria Lille - Nord Europe-2022
MODAL team, France
Topic : « Efficient iterative methods for clustering and matching problems on graphs »
Supervisors : Christophe Biernacki, Hemant Tyagi.
- 2015-2017 **Civil servant student at Ensai**, National School for Statistics and Information Analysis, Rennes, France.
- 2014–2015 **Master’s Degree in Functional Analysis**, Université de Franche-Comté, Besançon, France, *first class honors*.
 - 2012 « **Agrégation de mathématiques** », French competitive exam to qualify High School teachers in Mathematics.
- 2010–2011 **Master’s Degree in Math Education**, Université de Strasbourg, France.

Work Experience

- Since 2015 **Insee statistician Attaché (civil servant statistician)**.
- 2011–2015 **High-school Teacher**.

Publications and preprints

- 2022 **Minimax Optimal Clustering of Bipartite Graphs with a Generalized Power Method**, G. Braun, H. Tyagi, ArXiv : 2205.12104, submitted to Information and Inference.
- 2022 **Seeded graph matching for the correlated Wigner model via the projected power method**, E. Araya, G. Braun, H. Tyagi (*), ArXiv : 2204.04099, submitted to JMLR.
(*): authors in alphabetical order
- 2021 **An iterative clustering algorithm for the Contextual Stochastic Block Model with optimality guarantees**, G. Braun, H. Tyagi, C. Biernacki, ICML 2022, p.2257-2291.
- 2020 **Clustering on multilayer graphs with missing values**, G. Braun, H. Tyagi, C. Biernacki, AISTATS 2021, p.2260-2268.

Talks and Posters

- 2022 **Clustering Bipartite graphs with the Generalized Power Method**, *Lightning talk*, SIAM workshop on Network Science (NS22) .
- 2022 **An iterative clustering algorithm for the Contextual Stochastic Block Model with optimality guarantees**, *Poster Session and spotlight talk*, ICML 2022.
- 2021 **An iterative clustering algorithm for the Contextual Stochastic Block Model with optimality guarantees**, MODAL seminar (online).

- 2021 **Clustering graphs with side information**, SPSR Workshop - Bucharest (online).
2021 **Clustering on multilayer graphs with missing values**, *Poster Session*, AISTATS 2021 (online).
2020 **Clustering on multilayer graphs with missing values**, MODAL seminar (online).

Additional duties

Reviewer for *AISTATS 2021, AISTATS 2022, ICML 2022*.

June - July 2022 **Internship supervisor** of *Maxence Buisson*, a third year undergraduate student in Engineering School.

Skills

Computer **R, Python, SQL**

Languages **French** (native), **English** (fluent, TOEIC 925), **Japanese** (fluent, JLPT N1)

References

Hemant Tyagi

Inria Lille - Nord Europe
Parc scientifique de la Haute-Borne
40 avenue Halley - Bât A - Park Plaza
59650 Villeneuve d'Ascq – France
✉ hemant.tyagi@inria.fr

Christophe Biernacki

Inria Lille - Nord Europe
Parc scientifique de la Haute-Borne
40 avenue Halley - Bât A - Park Plaza
59650 Villeneuve d'Ascq – France
✉ christophe.biernacki@inria.fr
☎ +33 3 59 57 78 58