

# Olga KLOPP

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Pays d'origine: Russie

## INTERETS DE RECHERCHE

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Analyse des données statistiques

## FORMATION

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- |      |   |
|------|---|
| 2016 | HDR, Université Paris X Nanterre, France                                    |
| 2004 | Doctorat en Mathématiques, Université Nationale Autonome de Mexico, Mexique |
| 1997 | Master en Mathématiques, Université d'État Lomonossov de Moscou, Russie     |

## EXPERIENCE PROFESSIONNELLE

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### Positions académiques principales

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|----------------|---|
| 2023 - Présent | Professeur, ESSEC Business School, France                               |
| 2017 - 2023    | Professeur associé, ESSEC Business School, France                       |
| 2012 - 2017    | Maître de conférences, Université Paris X Nanterre, France              |
| 2004 - 2008    | Maître de conférences, Université Nationale Autonome de Mexico, Mexique |

### Autres affiliations académiques

- |             |   |
|-------------|---|
| 2018 - 2024 | Responsable académique DD CentraleSupélec et ENSAE, ESSEC Business School, France |
| 2018 - 2023 | Responsable de filière scientifique, ESSEC Business School, France                |
| 2017 - 2017 | Délégation CNRS, Centre de recherche en économie et statistique (CREST), France   |
| 2010 - 2012 | Post-Doctorant, Centre de recherche en économie et statistique (CREST), France    |

## PUBLICATIONS

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### Articles

KLOPP, O., PANOV, M., SIGALLA, S. et TSYBAKOV, A. (2023). Assigning Topics to Documents by Successive Projections. *Annals of Statistics*, 51(5), pp. 1989-2014.

- GAUCHER, S., KLOPP, O. et ROBIN, G. (2021). Outlier detection in networks with missing links. *Computational Statistics and Data Analysis*, 164, pp. 107308.
- GAUCHER, S. et KLOPP, O. (2021). Maximum likelihood estimation of sparse networks with missing observations. *Journal of Statistical Planning and Inference*, 215, pp. 299-329.
- ROBIN, G., KLOPP, O., JOSSE, J., MOULINES, E. et TIBSHIRANI, R. (2019). Main Effects and Interactions in Mixed and Incomplete Data Frames. *Journal of the American Statistical Association*, 115(531), pp. 1292-1303.
- KLOPP, O., LU, Y., TSYBAKOV, A.B. et ZHOU, H.H. (2019). Structured Matrix Estimation and Completion. *Bernoulli: A Journal of Mathematical Statistics and Probability*, 4B(25), pp. 3883-3911.
- KLOPP, O. et VERZELEN, N. (2018). Optimal Graphon Estimation in Cut Distance. *Probability Theory and Related Fields*, 174, pp. 1033-1090.
- KLOPP, O., CARPENTIER, A., LÖFFLER, M. et NICKL, R. (2018). Adaptive confidence sets for matrix completion. *Bernoulli: A Journal of Mathematical Statistics and Probability*, 24(4A), pp. 2429-2460.
- KLOPP, O. et GAIFFAS, S. (2017). High dimensional matrix estimation with unknown variance of the noise. *Statistica Sinica*, 27(1), pp. 115-145.
- KLOPP, O., TSYBAKOV, A. et VERZELEN, N. (2017). Oracle inequalities for network models and sparse graphon estimation. *Annals of Statistics*, 45(1), pp. 316-354.
- KLOPP, O., LOUNICI, K. et TSYBAKOV, A. (2017). Robust Matrix Completion. *Probability Theory and Related Fields*, 169(43862), pp. 523-564.
- KLOPP, O., LAFOND, J., MOULINES, E. et SALMON, J. (2015). Adaptive Multinomial Matrix Completion. *The Electronic Journal of Statistics*, 9(2), pp. 2950-2975.
- KLOPP, O. et TSYBAKOV, A. (2015). Estimation of matrices with row sparsity. *Problems of Information Transmission*, 51(4), pp. 335-348.
- KLOPP, O. (2015). Matrix completion by singular value thresholding : sharp bounds. *The Electronic Journal of Statistics*, 9(2), pp. 2348-2369.
- KLOPP, O. et PENSKY, M. (2015). Sparse high-dimensional varying coefficient model : non-asymptotic minimax study. *Annals of Statistics*, 43(3), pp. 1273-1299.
- KLOPP, O. (2014). Noisy low-rank matrix completion with general sampling distribution. *Bernoulli: A Journal of Mathematical Statistics and Probability*, 20(1), pp. 282-303.
- KLOPP, O. et PENSKY, M. (2013). Non-asymptotic approach to varying coefficient model. *The Electronic Journal of Statistics*, 7, pp. 454-479.
- KLOPP, O. (2011). Rank penalized estimators for high-dimensional matrices. *The Electronic Journal of Statistics*, 5, pp. 1161-1183.

### Chapitres d'ouvrage

- CARPENTIER, A., KLOPP, O. et LÖFFLER, M. (2019). Constructing Confidence Sets for the Matrix Completion Problem. Dans: *Nonparametric Statistics*. 1st ed. Springer, pp. 103-119.

### Actes d'une conférence

- ROBIN, G., WAI, H.T., JOSSE, J., KLOPP, O. et MOULINES, A. (2018). Low-Rank Interactions and Sparse Additive Effects Model for Large Data Frames. Dans: *Advances in Neural Information Processing Systems 31 (NIPS 2018)*.

KLOPP, O., LAFOND, J., MOULINES, E. et SALMON, J. (2014). Probabilistic low-rank matrix completion on finite alphabets. Dans: *NIPS*. Montréal: Neural Information Processing Systems.

## Conférences

KLOPP, O. (2024). Denoising over network with applications to partially observed epidemics. Dans: 2024 Statistical Machine Learning for High Dimensional Data. Singapore.

KLOPP, O. (2024). Low-rank density estimation. Dans: 2024 Workshop on Heterogeneous and Distributed Data. Warwick.

KLOPP, O., DONNAT, C. et VERZELEN, N. (2024). Signal denoising on the graph with applications to the study of the epidemic spread. Dans: 2024 International Symposium on Nonparametric Statistics. Braga.

GAUCHER, S. et KLOPP, O. (2023). Optimality of Variational Inference for Stochastic Block Model. Dans: Workshop on Eco-Stat Asymptotics 2023 WESA2023. Verona.

ENIKEEVA, F. et KLOPP, O. (2023). Change Point Detection in Dynamic Networks. Dans: 2023 Change Point Workshop at Warwick. Warwick.

GAUCHER, S. et KLOPP, O. (2023). Optimality of Variational Inference for Stochastic Block Model. Dans: 12th Workshop on High Dimensional Data Analysis (HDDA-XII) 2023. Paris.

KLOPP, O. (2023). Denoising Over Network with Application to Discrete-time Epidemic Process. Dans: 2023 Graph Limits and Processes on Networks Reunion. Berkeley.

GAUCHER, S. et KLOPP, O. (2022). Optimality of Variational Inference for Stochastic Block Model. Dans: 2022 Graph Limits, Nonparametric Models, and Estimation. Berkeley.

KLOPP, O., PANOV, M., SIGILLA, S. et TSYBAKOV, A. (2022). Assigning Topics to Documents by Successive Projections. Dans: 2022 Institute of Mathematical Statistics (IMS) Annual Meeting. London.

GAUCHER, S., KLOPP, O. et ROBIN, G. (2022). Outlier Detection in Networks. Dans: 2022 International Symposium on Nonparametric Statistics (ISNPS). Paphos.

GAUCHER, S. et KLOPP, O. (2021). Optimality of variational inference for stochastic block model with missing links. Dans: 35th Conference on Neural Information Processing Systems (NeurIPS2021). Virtual.

KLOPP, O. (2020). Link Prediction in Sparse Graphon Model. Dans: 2020 EURANDOM Workshop: Graph Limits.

KLOPP, O. (2020). Robust network analysis. Dans: 13th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2020), Virtual Conference.

KLOPP, O. (2019). Matrix Completion: Old and New. Dans: 2019 Structural Inference in High-Dimensional Models 2.

KLOPP, O. (2019). Sparse Network Estimation. Dans: 2019 The Power of Graphs in Machine Learning and Sequential Decision -making.

KLOPP, O. (2019). Sparse Network Estimation. Dans: High dimensional probability and algorithms.

KLOPP, O. (2019). Modèles de réseaux parcimonieux. Dans: 2019 Colloquium de Montpellier.

KLOPP, O., TSYBAKOV, A. et VERZELEN, N. (2018). Network Models and Sparse Graphon Estimation. Dans: 14th Franco-Romanian Conference on Applied Mathematics.

- KLOPP, O. et VERZELEN, N. (2018). Optimal Graphon Estimation in Cut Distance. Dans: 27th Nordic Conference in Mathematical Statistics (NORDSTAT) 2018.
- KLOPP, O. et VERZELEN, N. (2018). Optimal Graphon Estimation in Cut Distance. Dans: Tercera jornada Franco-Chilena de Estadística.
- KLOPP, O., LOUNICI, K., TSYBAKOV, A.B. et ALAYA, M.Z. (2018). Robust Matrix Completion/Collective Matrix Completion. Dans: 40th Conference on Stochastic Processes and their Applications (SPA 2018).
- KLOPP, O., LU, Y., TSYBAKOV, A.B. et ZHOU, H.H. (2018). Structured Matrix Estimation and Completion. Dans: 4th Conference of the International Society for Nonparametric Statistics.
- KLOPP, O., TSYBAKOV, A. et VERZELEN, N. (2018). Network models. Dans: Tercera jornada Franco-Chilena de Estadística. Valparaiso.
- KLOPP, O., TSYBAKOV, A. et VERZELEN, N. (2018). Network models and sparse graphon estimation. Dans: NordStat 2018. Tartu.
- KLOPP, O., LOUNICI, K., TSYBAKOV, A. et ALAYA, M. (2018). Variety and Veracity of the Data in Matrix Completion. Dans: The 40th Conference on Stochastic Processes and their Applications. Gothenburg.
- KLOPP, O. et VERZELEN, N. (2017). Optimal Graphon Estimation in Cut Distance. Dans: Workshop on Community Detection and Network Reconstruction 2017.
- KLOPP, O. (2017). Optimal graphon estimation in cut distance. Dans: The Foundations in Computational Mathematics Conference. Barcelona.
- KLOPP, O. (2017). Optimal graphon estimation in cut distance. Dans: Statistics meets Stochastics 2. Moscow.
- KLOPP, O. (2016). Confidence sets for matrix completion. Dans: Advances in nonparametric and high-dimensional Statistic. Frejus.
- KLOPP, O. (2016). Matrix Completion. Dans: Multimedia Inpainting Workshop. Rennes.
- KLOPP, O. (2016). Network models and sparse graphon estimation. Dans: NIPS workshop. Barcelona.
- KLOPP, O. (2016). Oracle inequalities for network models and sparse graphon estimation. Dans: Joint Statistical Meeting. Chicago.
- KLOPP, O. (2016). Oracle inequalities for network models and sparse graphon estimation. Dans: 3rd ISNPS conference. Avignon.
- KLOPP, O. (2016). Oracle inequalities for network models and sparse graphon estimation. Dans: Modern problems of stochastic analysis and statistics. Moscow.
- KLOPP, O. (2015). 1-bit Matrix Completion. Dans: Indian Russian Conference in Statistics and Probability. Delhi.
- KLOPP, O. (2015). Oracle inequalities for network models and sparse graphon estimation. Dans: Meeting in Mathematical Statistics. Frejus.
- KLOPP, O. (2015). Oracle inequalities for network models and sparse graphon estimation. Dans: 2nd Heidelberg - Mannheim Stochastic Colloquium.
- KLOPP, O. (2015). Robust Matrix Completion. Dans: ISNPS Biosciences, Medicine, and novel Non-parametric Methods. Graz.

KLOPP, O. (2015). Robust Matrix Completion. Dans: The First International Conference on missing values MissData. Rennes.

## AUTRES ACTIVITES DE RECHERCHE

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### Membre d'un comité de lecture

2016 - 2022 Bernoulli: A Journal of Mathematical Statistics and Probability

### Organisation d'une conférence

2017 Co-organisatrice du Working Group on Risk (Groupe de Travail sur le Risque), ESSEC Business School, France

## ENSEIGNEMENT

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2020 Statistical Inference, ESSEC Business School, France

2019 Modelisation Statistiques, ESSEC Business School, France

2017 Big Data Analytics, ESSEC Business School, France

2016 Mini-cours: "Analyse des réseaux statistiques", Higher School of Economics (HSE),