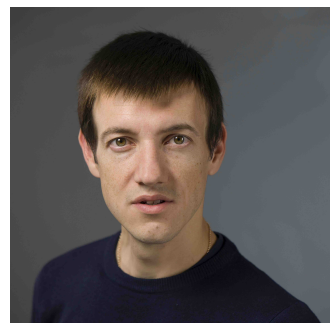


Curriculum Vitae (October 14, 2021)

Personal:

First name: **Pavlo**
Last name: **Mozharovskyi**
Date of Birth: 6th of March 1988
Place of Birth: Kyiv, Ukraine
Nationality: Ukrainian
Address: Télécom Paris
19 place Marguerite Perey
F-91120 Palaiseau, France
Tel: +33 (0) (1 75 31) 97 16
E-mail: pavlo.mozharovskyi@telecom-paris.fr
Web-site: <https://perso.telecom-paristech.fr/mozharovskyi>



Employment:

09/2018 - ...: **Associate Professor** (permanent) in Machine Learning at **Télécom Paris, Institut Polytechnique de Paris** member of the Team Signal, Statistique, Apprentissage (S2A) Information Processing and Communication Laboratory (LTCI)
09/2016 - 08/2018: Assistant Professor (tenure track) in Statistics at National School of Statistics and Information Analysis (ENSAI), member of Center for Research in Economics and Statistics (CREST)
09/2015 - 08/2016: Individual post-doc fellowship from Lebesgue Center of Mathematics (site Agrocampus Ouest, Rennes)
08/2014 - 08/2015: Post-doc at the University of Cologne
10/2011 - 07/2014: Teaching/research assistant at the University of Cologne, Faculty of Management, Economics and Social Sciences
11/2009 - 01/2010, 05-06, 11/2010, 02-03, 05/2011: Internship at Fachhochschule Merseburg, specialty "Informatics and Communication Systems"

Education:

07/2014: **Defended PhD thesis** entitled: "Contributions to depth-based classification and computation of the Tukey depth" (supervisor Prof. Dr. Karl Mosler)
10/2011 - 07/2014 : Doctoral student at the **University of Cologne**
06/2011: Defended master thesis entitled: "Functional Dependability Management of Corporate Information-Telecommunication System"
06/2009: Defended bachelor thesis entitled: "Operational Reliability Control in Information and Telecommunication Systems"
09/2005 - 06/2011: National Technical University of Ukraine "**Kyiv Polytechnic Institute**" Faculty of Informatics and Computing Technique Department of Information and Control in Technical Systems
1995 - 2005: School # 314 in Kyiv

Main fields of research:

- Machine learning, explainability of AI algorithms, computational statistics, data depth, anomaly/novelty detection, multivariate/functional data analysis, robust statistics, missing values, data envelopment analysis.

Software, data, intellectual property:

- R-packages: `ddalpha` (CRAN), `npsf` (CRAN), `TukeyRegion` (CRAN), `imputeDepth` (GitHub), `geometry` (CRAN), `misaem` (CRAN), `curveDepth` (CRAN).
- STATA-commands: `tenonradial`, `teradial`, `teradialbc`, `nptestind`, `nptestrts`.
- MATLAB-package: `LCML`.
- Repository with 50 ready-to-use real-data binary classification tasks.
- Rolick, A. and Mozharovskyi, P. (2013): **Patent** UA 103475 C2, Method of functionality analysis of objects of an information-telecommunication system, N a 2010 12773, Ukraine.
- Telenyk, S., Rolick, O., Litvintsov, O., Mozharovskyi, P., Voloshyn, A., Galushko, D., Vovk, V. (2011): **Author right** UA N 38832 on Computer program “IT-infrastructure control system SmartBase ITS Control”.

Grants:

- ANR JCJC 2021 [246K, PI, 36 months]: National Agency of Research (France), Young Researcher Grant
“Large-Scale Data Depth: Computation and Applications” (LS-Depth-CaP).
- Mobility Grant 2021 [5K, co-PI, 24 months]: Campus France, Programme Bar-
rande (grant number 46745VD),
“Nonparametric Statistics for Complex Data”.
- ANR PRCE 2020 [562K, involved in 2 WPs, 36 months]: National Agency of
Research (France), Collaborative Research Project Enterprises
“Leveraging Interpretable Machines for Performance Improvement and Decision”
(LIMPID).
- Post-doc Fellowship Grant 2015 [PI, 24 months]: Lebesgue Center for Mathematics
(grant number PIA-ANR-11-LABX-0020-01)
“Imputation of Missing Data Based on Data Depth”.

Industrial funding and collaboration:

- Co-PI in a team-based industrial machine-learning consulting contract with Valeo
(01/2021 – 06/2021).

- Participation as investigator in the PSPC Project Espresso funded by BPI France (2017-2020).

Languages:

- Knowledge of **programming languages**: R, Python, Matlab, Stata, C/C++, C#, Pascal/Delphi, Prolog, Assembler, SQL (FoxPro, MSSQL, Oracle).
- Knowledge of **natural languages**: Ukrainian (mother tongue), Russian (mother tongue), English (fluent), German (fluent), French (fluent), Spanish (intermediate).

Journal articles:

- Mosler, K. and Mozharovskyi, P. (2021): Choosing among notions of multivariate depth statistics. *Statistical Science*, in press.
- Lafaye De Micheaux, P., Mozharovskyi, P., and Vimond, M. (2020): Depth for curve data and applications. *Journal of the American Statistical Association*, in press.
- Statzer, C., Jongsma, E., Liu, S. X., Dakhovnik, A., Wandrey, F., Mozharovskyi, P., Züllig, F., and Ewald, C. Y. (2021): Youthful and age-related matreotypes predict drugs promoting longevity. *Aging Cell*, 20, e13441, <https://doi.org/10.1111/acel.13441>.
- Dyckerhoff, R., Mozharovskyi, P., and Nagy, S. (2020): Approximate computation of projection depths. *Computational Statistics and Data Analysis*, 157, 107166.
- Nagy, S., Dyckerhoff, R., and Mozharovskyi, P. (2020): Uniform convergence rates for the approximated halfspace and projection depth. *Electronic Journal of Statistics*, 14(2), 3939-3975.
- Mozharovskyi, P., Josse, J., and Husson, F. (2020): Nonparametric imputation by data depth. *Journal of the American Statistical Association*, 115(529), 241–253.
- Badunenko, O. and Mozharovskyi, P. (2020): Statistical inference for the Russel measure of technical efficiency. *Journal of the Operational Research Society*, 71(3), 517–527.
- Pokotylo, O., Mozharovskyi, P., and Dyckerhoff, R. (2019): Depth and depth-based classification with R-package `ddalpha`. *Journal of Statistical Software*, 91(5), 1–46.
- Liu, X., Mosler, K., and Mozharovskyi, P. (2019): Fast computation of Tukey trimmed regions and median in dimension $p > 2$. *Journal of Computational and Graphical Statistics*, 28(3), 682–697.
- Mosler, K. and Mozharovskyi, P. (2017): Fast *DD*-classification of functional data. *Statistical Papers*, 58(4), 1055–1089.

- Mozharovskyi, P. and Vogler, J. (2016): Composite marginal likelihood estimation of spatial autoregressive probit models feasible in very large samples. *Economics Letters*, 148, 87–90.
- Badunenko, O. and Mozharovskyi, P. (2016): Nonparametric frontier analysis using STATA. *Stata Journal*, 16(3), 550–589.
- Dyckerhoff, R. and Mozharovskyi, P. (2016): Exact computation of the halfspace depth. *Computational Statistics and Data Analysis*, 98, 19–30.
- Mozharovskyi, P., Mosler, K., and Lange, T. (2015): Classifying real-world data with the $DD\alpha$ -procedure. *Advances in Data Analysis and Classification*, 9(3), 287–314.
- Lange, T., Mosler, K., and Mozharovskyi, P. (2014): Fast nonparametric classification based on data depth. *Statistical Papers*, 55(1), 49–69.
- Lange, T. and Mozharovskyi, P. (2010): Depth determination for multivariate samples (in Russian). *Inductive modeling of complex systems*, I 2, 101–119.
- Grishko, V.F. and Mozharovskyi, P.F. (2009): Management-information system hardware reliability evaluation (in Ukrainian). *Mathematical Machines and Systems*, 3, 194–201.

Conference proceedings:

- Parekh, J., Mozharovskyi, P., and D’Alché-Buc, F. (2021): A framework to learn with interpretation. *NeurIPS 2021*, in press.
- Staerman, G., Laforgue, P., Mozharovskyi, P., and D’Alché-Buc, F. (2021): When OT meets MoM: Robust estimation of Wasserstein distance. In: Banerjee, A. and Fukumizu, K. (eds.) *Proceedings of The 24th International Conference on Artificial Intelligence and Statistics (AISTATS 2021)*, 130, 136-144.
- Beaudoin, V., Bloch, I., Bounie, D., Cléménçon, S., D’Alché-Buc, F., Eagan, J., Maxwell, W., Mozharovskyi, P., and Parekh, J. (2020): Identifying the “right” level of explanation in a given situation. In: Saffiotti, A., Serafini, L., and Lukowicz, P. (eds.), *Proceedings of the First International Workshop on New Foundations for Human-Centered AI (NeHuAI 2020 with ECAI 2020)*, 63–66.
- Staerman, G., Mozharovskyi, P., and Cléménçon, S. (2020): The area of the convex hull of sampled curves: a robust functional statistical depth measure. In: Chiappa, S. and Calandra, R. (eds.), *Proceedings of Machine Learning Research (AISTATS 2020)*, 108, 570-579.
- Staerman, G., Mozharovskyi, P., Cléménçon, S., and D’Alché-Buc, F. (2019): Functional isolation forest. In: Lee, W. S. and Suzuki, T. (eds.), *Proceedings of Machine Learning Research (ACML 2019)*, 101, 332-347.
- Lange, T., Mosler, K., and Mozharovskyi, P. (2014): $DD\alpha$ -classification of asymmetric and fat-tailed data. In: Spiliopoulou, M., Schmidt-Thieme, L., and Janning, R. (eds.), *Data Analysis, Machine Learning and Knowledge Discovery*, Springer, Berlin, 71–78.

- Lange, T. and Mozharovskyi, P. (2014): The alpha-procedure: a nonparametric invariant method for automatic classification of multi-dimensional objects. In: Spiliopoulou, M., Schmidt-Thieme, L., and Janning, R. (eds.), *Data Analysis, Machine Learning and Knowledge Discovery*, Springer, Berlin, 79–86.
- Lange, T., Mosler, K., and Mozharovskyi, P. (2013): Efficient depth-based classification using a projective invariant of class membership (in Russian). *Control Systems and Computers*, 2, 47–58.
- Lange, T., Mozharovskyi, P., and Barath, G. (2011): Two approaches for solving tasks of pattern recognition and reconstruction of functional dependencies. *Proceedings of ASMDA Conference*, Rome, 7–10 June 2011 (supplemented with examples and benchmark results, Statistical Week, Leipzig, 19–23 September 2011).
- Rolick, A., Mozharovskyi, P., and Mart, B. (2010): Application of depth-trimmed regions in IT-infrastructure control systems (in Russian). Coll. of Papers of the 10th Int. Conf. *Intellectual Analysis of Information*, Kyiv, 18-21 May 2010, 214–221.

Scientific Reports:

- Beaudouin, V., Bloch, I., Bounie, D., Cl  men  on, S., D’Alch  -Buc, F., Eagan, J., Maxwell, W., Mozharovskyi, P., and Parekh, J. (2020): Flexible and context-specific AI explainability: A multidisciplinary approach. [arXiv:2003.07703](https://arxiv.org/abs/2003.07703).
- Mozharovskyi, P. (2016): Tukey depth: linear programming and applications. [arXiv:1603.00069](https://arxiv.org/abs/1603.00069).

PhD-thesis:

- Mozharovskyi, P. (2015): *Contributions to depth-based classification and computation of the Tukey depth*. Dr. Kova   Verlag, Hamburg.

Supervised PhD students:

- Guillaume Staerman (January 2019 - ...).
- Jeyneel Parekh (September 2019 - ...).

Selected invited talks and organized sessions:

- Invited to an organized session at *International Conference of the ERCIM WG* (London, December 2021, forthcoming).
- Invited presentation (tutorial) at *Dagstuhl Seminar* (online, September 2020).
- Organized a session by invitation for *International Conference of the ERCIM WG* (London, December 2019).
- Invited to an organized session at *International Conference of the ERCIM WG* (London, December 2019).

- Invited plenary talk at the *Workshop on Set Optimization and Statistics* (Brunico/Bruneck, November 2019).
- Organized a session by invitation for *Workshop Cronos & MDA* (Limassol, April 2019).
- Invited presentation at *ECARES Research Seminar Econometrics and Statistics* (Brussels, March 2019).
- Invited presentation at *ATMS Workshop* (Leuven, August 2018).
- Invited presentation at *ENSAE Statistical Research Seminar* (Paris, May 2017).
- Invited presentation for *Café des Statistiques at Ecole Polytechnique* (Paris, September 2016).
- Invited to an organized session at *German Statistical Week* (Hamburg, September 2015).

Reviewer for:

- Austrian Journal of Statistics, Australian & New Zealand Journal of Statistics, Advances in Statistical Analysis, Computational Statistics, Computational Statistics & Data Analysis, European Journal of Operational Research, Journal of Computational and Graphical Statistics, Journal of Economic Surveys, Journal of Forecasting, Journal of Machine Learning Research, Journal of Nonparametric Statistics, Journal of Statistical Planning and Inference, Kybernetika, PLOS One, Statistical Papers, Statistics and Computing, TEST, Transactions on Pattern Analysis and Machine Intelligence.
- Permanent reviewer for Mathematical Reviews (MathSciNet).
- Reviewer for Swiss National Science Foundation, Labex DigiCosme, Czech Science Foundation.