

Yusuf Yiğit PİLAVCI

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🌐 Website
🎓 Scholar
🔖 Gitlab
🐙 Github



Education

- 2023, July – Present **Postdoctoral Researcher**, CRISTAL Lab
Design of geometrical and deep priors for inverse problems from bivariate signals.
Supervised by Pierre Chainais.
- 2019 – 2022 **PhD Degree**, Université Grenoble Alpes, GIPSA Lab.
Thesis title: *Wilson's Algorithm for Randomized Linear Algebra*
Supervised by Nicolas Tremblay, Simon Barthelmé and Pierre-Olivier Amblard.
Defended on Nov. 2022.
- 2017 – 2019 **M.Sc. in Computer Science and Engineering**, Politecnico di Milano
Final Grade: 108.0 / 110
Thesis: *Random Spanning Forests, Theory and Applications*
- 2012 – 2017 **Bachelor's degree in Electrical and Electronics Engineering** in Middle East Technical University.
CGPA: 3.79 / 4.00 (10th/375)
- 2014 – 2017 **Minor degree in Computer Engineering** in Middle East Technical University.

Research Publications

Journal Articles



- 1 Y. Y. Pilavci, E. T. Güneyi, C. Cengiz, and E. Vural, "Graph domain adaptation with localized graph signal representations," *Pattern Recognition*, p. 110 628, 2024.
- 2 Y. Y. Pilavci, P.-O. Amblard, S. Barthelme, and N. Tremblay, "Graph tikhonov regularization and interpolation via random spanning forests," *IEEE Transactions on Signal and Information Processing over Networks*, 2021.
- 3 M. Turan, Y. Y. Pilavci, I. Ganiyusufoglu, H. Araujo, E. Konukoglu, and M. Sitti, "Sparse-then-dense alignment-based 3d map reconstruction method for endoscopic capsule robots," *Machine Vision and Applications*, vol. 29, no. 2, pp. 345–359, 2018.

Conference Proceedings



- 1 Y. Y. Pilavci, J. Boulanger, P.-A. Thouvenin, and P. Chainais, "Denoising bivariate signals via smoothing and polarization priors," in *2024 32nd European Signal Processing Conference (EUSIPCO)*, IEEE, 2024, pp. 2602–2606.
- 2 Y. Y. Pilavci, P.-O. Amblard, S. Barthelme, and N. Tremblay, "Variance Reduction for Inverse Trace Estimation via Random Spanning Forests," in *GRETSI 2022 - XXVIIIème Colloque Francophone de Traitement du Signal et des Images*, Nancy, France, Sep. 2022.
- 3 Y. Pilavci, P.-O. Amblard, S. Barthelmé, and N. Tremblay, "Variance reduction in stochastic methods for large-scale regularised least-squares problems," in *30th European Signal Processing Conference, (EUSIPCO)*, 2022.

- 4 Y. Y. Pilavci, P.-O. Amblard, S. Barthelme, and N. Tremblay, "Smoothing graph signals via random spanning forests," in *ICASSP 2020-2020 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, IEEE, 2020, pp. 5630–5634.
- 5 Y. Y. Pilavci and N. Farrugia, "Spectral graph wavelet transform as feature extractor for machine learning in neuroimaging," in *ICASSP 2019-2019 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, IEEE, 2019, pp. 1140–1144.




Teaching Experience

- 2023 – 2024  **IMT Nord**
 Security, Authentication and Forensics, Practical work - hour(s) : 3
 Compression and error-correcting codes, Group lessons - hour(s) : 3
 Compression and error-correcting codes, Tutorial - hour(s) : 9
 Signal theory, Tutorial - hour(s) : 12
- 2024 – 2025  **IMT Nord**
 Signal theory, Tutorial- hour(s) : 20
 Tools for data science, Practical work, 3
- Centrale Lille**
 Advanced algorithms and programming,
 Tutorial-hours(s): 12 and Practical work-hours(s) : 22




Advance Courses

- 25-29 Jan. 2021  **Mathematics, Signal Processing and Learning**, CIRM, Marseille/France
 A research school on basics and various advanced topics in machine learning, signal processing, and optimization.
- 04-07 Apr. 2022  **Statlearn'22** Cargèse/France
 A spring school on basics and various advanced topics in statistics and optimization.

Skills

- Languages  Turkish (Maternal), English (Fluent), French (Beginner)
- Coding  Python, Julia, C/C++
- Software  Matlab, \LaTeX

Industrial Experience

- 2017 Feb. - May.  **Candidate Engineer, ASELSAN, Ankara/Turkey**
 Trained and worked as a software engineer by using C++/C, Unix and Java.
- 2016 Jun. - Jul.  **Summer Intern, ASELSAN, Ankara/Turkey**
 Studied and observed on Real Time Operating Systems on multi-core processors.
-  **Summer Intern, Huawei, Ankara/Turkey**
 Studied and observed on fiber optical transmission systems and signal modulations.