

Scientific Publications

1. A. Travaglini, G. Vinti: *A Mathematical Model for the Analysis of Eye Fundus Images in Healthy and Diabetic Patients*. Part of the LNCS book series, 1418, Springer, 558-576 (2023).
DOI: https://doi.org/10.1007/978-3-031-37117-2_38
2. A. Travaglini, G. Vinti, G.B. Scalera, M. Scialpi: *A large scale analysis for testing a mathematical model for the study of vascular pathologies*. Mathematics, 11 (8), Art. Number 1831 (2023).
DOI: <https://doi.org/10.3390/math11081831>
3. D. Costarelli, M. Seracini, A. Travaglini, G. Vinti: *Alzheimer biomarkers esteem by sampling Kantorovich algorithm*. Math. Methods Appl. Sci., 1–15 (2023).
DOI: <https://doi.org/10.1002/mma.9268>
4. M. Longaroni, L. Rinelli, A. Travaglini, G. Vinti: *Mathematical Models and Algorithms for Processing Retinal OCTA Images*. Part of the LNCS book series, 15892, Springer, 358-378, (2025).
DOI: https://doi.org/10.1007/978-3-031-97638-4_23
5. A. M. Acu, M. Ilina, F. Sofonea, A. Travaglini, G. Vinti: *A Comparison Between Neural Network and Sampling Kantorovich Operators in Terms of Image denoising*. Part of the LNCS book series, 15892, Springer, 379-399, (2025).
DOI: [10.1007/978-3-031-97638-4_24](https://doi.org/10.1007/978-3-031-97638-4_24)
6. M. Cappelletti Montano, V. Leonessa, A. Travaglini: *On the approximation properties of generalized Gamma-type operators in several function spaces*. Annals of Functional Analysis 16 (59), (2025).
DOI: [10.1007/s43034-025-00453-1](https://doi.org/10.1007/s43034-025-00453-1)
7. L. Rinelli, A. Travaglini, N. Vescera, G. Vinti: *Sampling type operators versus AI in medical image processing*. Discrete and Continuous Dynamical Systems - Series S, (2025).
DOI: [10.3934/dcdss.2025147](https://doi.org/10.3934/dcdss.2025147)

Submitted articles

1. A. Travaglini, G. Vinti: *Nonlinear sampling Durrmeyer operators: approximation results in function spaces*. Submitted, (2025).
2. V. Leonessa, A. Travaglini: *On a sequence of integral operators associated with power Lindley distribution*. Submitted, (2025).
3. A.M. Acu, M. S. Sorea, A. Travaglini, G. Vinti: *Nonlinear multivariate sampling Durrmeyer operators: convergence results and applications*. Submitted, (2025).

Articles in preparation

1. R. Corso, A. Travaglini, G. Vinti: *Approximation properties of the mean sampling Durrmeyer operators*. In preparation, (2026).
2. L. Cederle, C. Paganelli, A. Travaglini, F. Vagnarelli, G. Vinti: *Comparing a Conditional GAN with Sampling Kantorovich Algorithm*

to Enhance Low-Dose CT Imaging in Lung Cancer Screening. In preparation, (2026).

3. A. Iuliano, V. Leonessa, A. Travaglini: *On a new generalization of the power Lindley distribution with four parameters*. In preparation, (2026).

Editorial Activities

- **In 2025:** Referee for the journals “Dolomites Research Notes on Approximation” and “Biomedical Signal Processing and Control”.
- **2024-2025: Guest Editor** for the special issue “Mathematical Methods for Image Processing and Understanding” of the international scientific journal “Mathematics”.
- **In 2023:** Referee for the journals “Mathematical Foundations of Computing” and “Mathematics”.