

Matteo Lapucci

PhD Student of [Smart Computing](#) at [Dipartimento di Ingegneria dell'Informazione](#), [Università degli Studi di Firenze](#).



My research interests include constrained, multi-objective and sparse non-linear optimization and optimization methods for machine learning and statistics.

Publications

1. Pareto front approximation through a multi-objective augmented Lagrangian method.
G. Cocchi, M. Lapucci, P. Mansueto.
EURO Journal on Computational Optimization (2021).
DOI: [10.1016/j.ejco.2021.100008](https://doi.org/10.1016/j.ejco.2021.100008)
2. An effective procedure for feature subset selection in logistic regression based on information criteria.
E. Civitelli, M. Lapucci, F. Schoen, A. Sortino.
Computational Optimization and Applications (2021).
DOI: [10.1007/s10589-021-00288-1](https://doi.org/10.1007/s10589-021-00288-1)
3. A Two-Level Decomposition Framework Exploiting First and Second Order Information for SVM Training Problems.
G. Galvan, M. Lapucci, C.-J. Lin, M. Sciandrone.
Journal of Machine Learning Research (2021).
Link: <https://jmlr.org/papers/v22/19-632.html>
4. Comprehensive Disease Control in Systemic Lupus Erythematosus.
F. Ceccarelli, G. Olivieri, A. Sortino, M. Lapucci, M.

Sciandrone et al..

Seminars in Arthritis and Rheumatism (2021).

DOI: [10.1016/j.semarthrit.2021.02.005](https://doi.org/10.1016/j.semarthrit.2021.02.005)

5. Convergent Inexact Penalty Decomposition Methods for Cardinality-Constrained Problems.

M. Lapucci, T. Levato, M. Sciandrone.

Journal of Optimization Theory and Applications (2020).

DOI: [10.1007/s10957-020-01793-9](https://doi.org/10.1007/s10957-020-01793-9)

6. An augmented Lagrangian algorithm for multi-objective optimization.

G. Cocchi, M. Lapucci.

Computational Optimization and Applications (2020).

DOI: [10.1007/s10589-020-00204-z](https://doi.org/10.1007/s10589-020-00204-z)

7. An efficient optimization approach for best subset selection in linear regression, with application to model selection and fitting in autoregressive time-series.

L. Di Gangi, M. Lapucci, F. Schoen, A. Sortino

Computational Optimization and Applications (2019).

DOI: [10.1007/s10589-019-00134-5](https://doi.org/10.1007/s10589-019-00134-5)

8. On the convergence of inexact Augmented Lagrangian methods for problems with convex constraints.

G. Galvan, M. Lapucci

Operations Research Letters (2019).

DOI: [10.1016/j.orl.2019.03.006](https://doi.org/10.1016/j.orl.2019.03.006)

9. An Alternating Augmented Lagrangian method for constrained nonconvex optimization.

G. Galvan, M. Lapucci, T. Levato, M. Sciandrone

Optimization Methods and Software (2019).

DOI: [10.1080/10556788.2019.1576177](https://doi.org/10.1080/10556788.2019.1576177)

My ORCID number: [0000-0002-2488-5486](https://orcid.org/0000-0002-2488-5486)

Talks

1. [ODS 2021 \(Rome\) – A Unifying Framework for Sparsity Constrained Optimization](#)
2. [SIMAI 2020+2021 \(Parma\) – A Two-Level Decomposition Framework Exploiting First and Second Order Information for SVM Training Problems](#)
3. [SIAM Conference on Optimization \(OP21\) – A Penalty Decomposition Approach for Multi-Objective Cardinality-Constrained Optimization Problems.](#)
4. [EUROPT 2021 \(Toulouse, virtual\) – A Derivative-free Adaptation of the Penalty Decomposition Method for Sparse Optimization.](#)
5. [ODS 2019 \(Genova\) – An Efficient Optimization Approach for Subset Selection, with Application to Linear Regression and Auto-Regressive Time Series.](#)

Contacts

[Via di Santa Marta, 3 – 50139 Firenze FI \(Italy\)](#)

E-mail: `matlapucci at gmail dot com`