

July 30, 2022

Spyridon Pougkakiotis

CONTACT INFORMATION

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INTERESTS

Optimization, Computational Mathematics, Operational Research, Mathematical Programming

EXPERIENCE

Postdoctoral Research Associate

Yale University, Department of Electrical Engineering April 2022 – present
Research position on stochastic and nonlinear optimization with Dr. Dionysios Kalogerias

Research Assistant

University of Edinburgh, School of Mathematics September 2020 – June 2021
Reserach for a Google-funded project with name “Fast $(1+x)$ -order methods for linear programming”

Teaching

University Of Edinburgh, School of Mathematics September 2017 – August 2020
Tutoring (PG) “Mathematics Revision Course”

Tutoring

University Of Edinburgh, School of Mathematics September 2018 – August 2021
Tutoring (PG) “Large-Scale Optimization for Data Science”

University Of Edinburgh, School of Mathematics September 2018 – August 2020
Tutoring (UG-PG) “Fundamentals of Optimization”

University Of Edinburgh, School of Engineering September 2018 – August 2019
Tutoring (UG-PG) “Engineering Mathematics”

University Of Edinburgh, School of Mathematics September 2017 – August 2020
Tutoring (PG) “Optimization Methods in Finance”

University Of Edinburgh, School of Mathematics September 2017 – August 2020
Tutoring (UG-PG) “Fundamentals of Operational Research”

University Of Edinburgh, School of Mathematics September 2017 – August 2018
Tutoring (UG) “Linear Programming, Modelling and Solution”

Referee for Scientific Journals

<i>Journal of Optimization Theory and Applications</i>	July 2022 – present
<i>Computational and Applied Mathematics</i>	May 2022 – present
<i>SIAM Journal on Matrix Analysis and Applications</i>	September 2021 – present
<i>Numerical Algorithms</i>	September 2019 – present
<i>SIAM Journal on Optimization</i>	April 2019 – present
<i>Optimization Methods and Software</i>	May 2018 – present
<i>Computational Optimization and Applications</i>	February 2018 – present
<i>Mathematical Programming</i>	December 2017 – present

EDUCATION	University Of Edinburgh , Edinburgh, Scotland, UK. PhD in Operational and Operational Research	September 2017 – December 2021 (Supervisor: Jacek Gondzio)
	University Of Edinburgh , Edinburgh, Scotland, UK. MSc in Operational Research with Computational Optimization	September 2016 -August 2017 (82.4/100, Distinction)
	University Of Athens , Athens, Greece. 4-Year BSc in Informatics And Telecommunications	September 2012 - July 2016 (9.09/10, Top 1%)

AWARDS AND FELLOWSHIPS	• Principal's Career Development Scholarship - PhD funding Sep. 2017-Jan 2021	The University of Edinburgh
	• A. G. Leventis Scholarship - Educational Grant Sep. 2017-Dec. 2020	A. G. Leventis Foundation
	• Highly Skilled Workforce Scholarship - Full MSc Funding June 2016	The University Of Edinburgh

TECHNICAL SKILLS	Programming and Scripting Languages: C, Julia, Shell Scripting Operating Systems: Linux, Windows Tools: MATLAB, LaTeX
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PUBLICATIONS

Journal Papers

- V. De Simone, D. di Serafino, J. Gondzio, S. Pougkakiotis, M. Viola, "Sparse Approximations with Interior Point Methods", *arXiv preprint arXiv:2102.13608*, 2021 (Accepted at SIAM Review)
- S. Pougkakiotis, J. Gondzio, "An Interior Point-Proximal Method of Multipliers for Linear Positive Semi-Definite Programming", *Journal of Optimization Theory and Applications*, 192(1), 97–129, 2022
DOI: <https://doi.org/10.1007/s10957-021-01954-4>

- L. Bergamaschi, J. Gondzio, Á. Martínez, J. W. Pearson, S. Pougkakiotis, "A New Preconditioning Approach for an Interior Point-Proximal Method of Multipliers for Linear and Convex Quadratic Programming", *Numerical Linear Algebra with Applications*, e2361, 2021
DOI: <https://doi.org/10.1002/nla.2361>
- S. Pougkakiotis, J. Gondzio, "An Interior Point-Proximal Method of Multipliers for Convex Quadratic Programming", *Computational Optimization and Applications*, 78(2), 307–351, 2021
DOI: <https://doi.org/10.1007/s10589-020-00240-9>
- S. Pougkakiotis, J. W. Pearson, S. Leveque, J. Gondzio, "Fast Solution Methods for Convex Quadratic Optimization of Fractional Differential Equations", *SIAM Journal on Matrix Analysis and Applications*, 41(3), 1443–1476, 2020
DOI: <https://doi.org/10.1137/19M128288X>
- S. Pougkakiotis, J. Gondzio, "Dynamic Non-Diagonal Regularization in Interior Point Methods for Linear and Convex Quadratic Programming", *Journal of Optimization Theory and Applications* 181(3), 905–945, 2019
DOI: <https://doi.org/10.1007/s10957-019-01491-1>

Conference Papers

- P. Bouboulis, S. Pougkakiotis, S. Theodoridis, "Efficient KLMS and KRLS Algorithms: A Random Fourier Feature Perspective", *Statistical Signal Processing Workshop (SSP)*, 2016 IEEE

Preprints

- S. Pougkakiotis, D. S. Kalogerias, "A zeroth-order proximal stochastic gradient method for weakly convex stochastic optimization", *arXiv preprint arXiv:2205.01633*, 2022
- S. Pougkakiotis, J. Gondzio, "A semismooth Newton-proximal method of multipliers for ℓ_1 -regularized convex quadratic programming", *arXiv preprint arXiv:2201.10211*, 2022
- J. Gondzio, S. Pougkakiotis, J. W. Pearson, "General-purpose preconditioning for regularized interior point methods", *arXiv preprint arXiv:2107.06822*, 2022

WORKSHOPS AND CONFERENCES

Invited Speaker

- "USNA Optimization and Operational Research Conference" USNA
2–4 June, 2021
- "Communications in Numerical Linear Algebra" Independent
26 April, 2021
- "3rd IMA and OR Society Conference on Mathematics of Operational Research" The
Operational Research Society
20–23 April, 2021
- "Workshop on Fast Solvers for Fractional Diffusion Problems" Univesity of Strathclyde
2 April, 2020
- "Numerical Linear Algebra for PDEs and Large Scale Optimization" University of Padova
17–18 February, 2020
- "Advances in Linear Algebra and Huge-Scale Optimization" University of Edinburgh
1–2 July, 2019
- "Strathclyde-Edinburgh Seminar" University of Strathclyde
31 January, 2019

Contributing Speaker

- “18th Workshop on Advances in Continuous Optimization” ENAC
7–9 July, 2021
- “6th International Conference on Continuous Optimization” Technical University of Berlin
3–8 August, 2019
- “17th Workshop on Advances in Continuous Optimization” University of Strathclyde
28–29 June, 2019
- “23rd International Symposium on Mathematical Programming” University of Bordeaux
1–6 July, 2018
- “6th IMA Conference on Numerical Linear Algebra and Optimization” University of
Birmingham
27–29 June, 2018

Attendee

- “LMS-EPSRC Durham Symposium on Model Order Reduction” University of Durham
7–17 August, 2017

REFERENCES

Available upon request.