

Curriculum vitae

Dimitrios Pappas



Name: Dimitrios Pappas

Born: 15-02-1965, Athens, Greece

Address: Aristidou 21, Halandri 15234, Athens Greece

Tel: +302106847049, mob +306972323962.

E-mail address: pappdimitris@gmail.com

Profession: Professor of Mathematics, PhD, MSc.

Status: Married, (Eleni Tsigkouni, School Teacher of modern Greek language), two kids (Katerina 19, Stelios 10).

Linkedin Profile:

<http://www.linkedin.com/pub/dimitris-pappas/30/66b/219>

Google Scholar Profile:

<https://scholar.google.com/citations?user=DmktmMoAAAAJ&hl=en>

Research Gate Profile:

https://www.researchgate.net/profile/Dimitrios_Pappas

Specialization and research interests.

Linear Algebra, Numerical Linear Algebra, Computational methods for the Moore-Penrose generalized inverse. Applications in image restoration and signal processing, Financial applications, portfolio selection. Generalized inverses of matrices and operators.

Functional Analysis, Operator theory in Hilbert spaces.

Education:

Post doc researcher, with Prof. N. Fragkos, Athens University of Economics and Business, dept. of Statistics. “*Applications of Optimization in finance*”. Feb. 2013- Feb. 2014

National Technical University of Athens, Department of Applied Mathematics.

PhD Student, Thesis: “*Generalized Inverses and operator algebras* “. 2001- 2006

Supervisor: Professor S. Karanasios.

National Technical University of Athens, (NTUA), Department of Applied Mathematics.

Master’s Degree in Applied Mathematics Oct 2000, *grade: 9.2 /10.*

Dissertation title: “*Nests- nest algebras and diagonal elements of compact operators*”.

1998- 2000

University of Ioannina, Mathematics Department. Oct 1983 - Jan 1990.

French High School of Athens (Lycee Leonin) 1982.

Publications in Scientific journals (#28)

1) S. Karanasios, D. Pappas:

Approximability of the Generalized inverse of an operator, **Journal of Mathematics & Computer Sciences**, 19, no1, April 2006, 73- 77.

2) S. Karanasios, D. Pappas:

Generalized inverses and special type operator algebras, **Facta Universitatis** (Nis) Ser. Math. Inform. 21 (2006), 41- 48.

3) D. Drivaliaris, S. Karanasios, D. Pappas:

Factorizations of EP operators, **Linear Algebra and its Applications**, 429 (2008) 1555- 1567, **IMPACT FACTOR: 0.965**

4) V. Katsikis, D. Pappas:

Fast computing of the Moore- Penrose inverse matrix. **Electronic Journal of Linear Algebra**, 17, 637- 650, Nov. 2008 . **IMPACT FACTOR: 0.463**

5) N. Matzakos, D. Pappas:

EP Matrices: Computation of the Moore- Penrose Inverse via factorizations.

Journal of Applied Mathematics and Computing (2010) 34: 113–127

DOI 10.1007/s12190-009-0311-0

6) V. Katsikis, D. Pappas, S. Chountasis:

Applications of the Moore- Penrose Inverse in digital image restoration.

Mathematical Problems in Engineering Volume 2009 (2009), Article ID 170724, 12 pages. doi:10.1155/2009/170724, **IMPACT FACTOR: 0.644**

7) V. Katsikis, D. Pappas – S. Chountasis:

Digital image reconstruction in the spectral domain utilizing the Moore-Penrose inverse. Accepted for publication, **Mathematical Problems in Engineering**, (2010). Article ID MPE/750352. **IMPACT FACTOR: 0.644**

8) D. Pappas, K. Kiriakopoulos, G. Kaimakamis:

Optimal portfolio selection with singular covariance matrix.

International Mathematical Forum, 5, no 47, (2010) pp 2305- 2318.

9) D. Pappas, A. Petralias, K. Kiriakopoulos, G. Kaimakamis:

The Moore-Penrose Inverse in Portfolio Selection of Exchange Rates.

Bulletin of the Greek Mathematical Society, vol 57, (2010) pp 297- 306.

10) D. Pappas: *Minimization of Constrained Quadratic forms in Hilbert Spaces*

Annals of Functional Analysis, 2 (2011), no. 1, 1–12.

11) V. Katsikis, D. Pappas , A. Petralias:

An improved method for the computation of the Moore- Penrose inverse matrix.

Applied Mathematics and Computation, 217 (2011) pp 9828- 9834.

IMPACT FACTOR: 1.345

12) V. Katsikis, D. Pappas, S. Chountasis, A. Perperoglou:

Reconstruction of radar signals using the Whittaker smoother and the Moore-Penrose inverse. **Applied Mathematical Sciences**, Vol. 6, (2012), no. 25, 1205 – 1219

13) V. Katsikis, D. Pappas :

The restricted weighted generalized inverse of a matrix.

Electronic Journal of Linear Algebra, vol 22, 1156- 1167, (Dec. 2011).

IMPACT FACTOR: 0.463

14) D. Pappas, A. Perperoglou:

Constrained Matrix optimization with applications. **Journal of Applied Mathematics & Computing**, DOI 10.1007/s12190-012-0561-0, (2012)

15) P. Stanimirovic, D. Pappas, V. Katsikis, I. Stanimirovic:

Full-rank representations of outer inverses based on the QR decomposition.

Applied Mathematics and Computation, 218 (2012) , 10321- 10333.

IMPACT FACTOR: 1.345

16) P. Stanimirovic, D. Pappas, V. Katsikis, I. Stanimirovic:

Symbolic computation of $A_{(T,S)}^2$ inverses using QDR factorization.

Linear Algebra and Applications, 437, 1317-1331 (2012),

IMPACT FACTOR: 0.965

17) D. Pappas :

Restricted Linear Constrained Minimization of quadratic functionals

Accepted: **Linear & Multilinear Algebra**, Oct. 2012.

DOI:10.1080/03081087.2012.743023 **IMPACT FACTOR: 0.761**

18) P. Stanimirovic, S. Chountasis, D. Pappas, I. Stojanovic:

Removal of blur in images based on least squares solutions.

Mathematical Methods in the Applied Sciences. Vol 36 (17), pp 2280- 2296,

Nov. 2013 **IMPACT FACTOR: 1.017**

19) P. Stanimirovic, Igor Stojanovic, S. Chountasis, D. Pappas:

Image deblurring process based on separable restoration methods.

Computational and Applied Mathematics. 33 (2): 301-323 · June 2014

DOI 10.1007/s40314-013-0062-2, **IMPACT FACTOR: 0.961**

20) P. Stanimirovic, D. Pappas, S. Miljkovic:

Minimization of quadratic forms using the Drazin-inverse solution (2013)

Linear & Multilinear Algebra, <http://dx.doi.org/10.1080/03081087.2013.771639>

IMPACT FACTOR: 0.761

21) P. Stanimirovic, D. Pappas, V. Katsikis:

Generalized inverse restricted by the normal Drazin equation **Linear & Multilinear Algebra** accepted (2014)

DOI: 10.1080/03081087.2014.908873, **IMPACT FACTOR: 0.761**

22) P. Stanimirovic, D. Pappas, V. Katsikis, M. Cvetkovic:

Outer inverse restricted by a linear system, Accepted, **Linear Multilinear Algebra**.

DOI: 10.1080/03081087.2015.1019200. (2015), **IMPACT FACTOR: 0.761**

23) P. Stanimirovic, Igor Stojanovic, V. Katsikis, D. Pappas, Z. Zdravev:

Application of least squares solutions in image deblurring, **Mathematical Problems in Engineering**, Volume 2015, Article ID 298689, 18 pages. DOI:

10.1155/2015/298689

IMPACT FACTOR: 0.644

24) P. Stanimirovic, Igor Stojanovic, D. Pappas, S. Chountasis, Z. Zdravev:

On removing blur in images using least squares solutions, **Filomat**, Accepted (2015)

IMPACT FACTOR: 0.603

25) S. Chountasis, D. Pappas, V. Katsikis:

Signal Watermarking in bi-dimensional representations using matrix factorizations, **Computational & Applied Mathematics**. DOI: 10.1007/s40314-015-0230-7

(2015) **IMPACT FACTOR: 0.802**

26) P. Stanimirovic, V. Katsikis, D. Pappas:

Computing $\{2, 4\}$ and $\{2, 3\}$ -inverses by using the Sherman-Morrison formula, **Applied Mathematics and Computation**, Accepted 273 (2016), 584–603.

DOI:10.1016/j.amc.2015.10.023

IMPACT FACTOR: 1.345

27) D. Pappas, I. Stanimirovic, V. Katsikis:

Symbolic computation of the Aluthge transform of a matrix, **Mediterranean Journal of Mathematics**,

DOI: 10.1007/s00009-017-0862-5, (2017) **IMPACT FACTOR: 0.599**

28) P. Stanimirovic, V. Katsikis, D. Pappas:

Computation of {2, 4} and {2, 3}-inverses based on rank one updates, **Linear and Multilinear Algebra**, DOI: 10.1080/03081087.2017.1290042, (2017). **IMPACT FACTOR: 0.761**

Total number of citations: 294 (see

<https://scholar.google.com/citations?user=DmktmMoAAAAJ&hl=en>)

Book Chapters (#2)

● P. Stanimirovic, D. Pappas, V. Katsikis. Chapter entitled “Minimization of quadratic forms and Generalized inverses:” *Advances in Linear Algebra research*, pp 1- 56. Editor, I. Kyrchei, Nova Publishers (2015) ISBN: 978-1-63463-565-3, Available from:

https://www.novapublishers.com/catalog/product_info.php?products_id=52464

● S. Chountasis, V. Katsikis, D. Pappas. Chapter entitled “Image reconstruction methods for MATLAB users and the Moore-Penrose Inverse”

MATLAB - A Fundamental Tool for Scientific Computing and Engineering Applications - Volume 1, ISBN: 978-953-51-0750-7, InTech Publishers, (2012)

Available from:

<https://www.intechopen.com/books/matlab-a-fundamental-tool-for-scientific-computing-and-engineering-applications-volume-1/image-reconstruction-methods-for-matlab-users-a-moore-penrose-inverse-approach>

Submitted/working papers:

- 1) D. Pappas, V. Katsikis, “*The Aluthge transform of a matrix and EP matrices*”, working paper.
- 2) D. Pappas, V. Katsikis, I. Stanimirovic, “*Symbolic computation of the Duggal transform*”, submitted.

Publications in International conference Proceedings

- 1) Analysis, Topology, Algebra (ATA 2016) July 3-6 2016, Cacak, Serbia.
“The Aluthge transform of a matrix and EP matrices”
- 2) 2nd International Conference ICRAPAM 2015, Istanbul, Turkey.
June 3- 6 2015, Istanbul Commerce University.
“Outer inverse restricted by a linear system”.

3) 13th Serbian Mathematical Conference, Vrnjacka Banja, May 22-25, 2014.

Two lectures: “Outer Inverses in constrained quadratic optimization” and “Image restoration methods based on least squares solutions” Serbia, May 2014.

4) International Conference on Modern Mathematical Methods in Science and Technology (M3ST 2012) Kalamata, Greece, Aug. 26- 28 2012.

Organized by The Department of Mathematics of the University of Athens and the Hellenic Open University.

“Application of least squares solutions in image deblurring”,

P. Stanimirovic, Igor Stojanovic, S. Chountasis, D. Pappas.

5) International Conference on Modern Mathematical Methods in Science and Technology (M3ST 09) Poros Island, Greece , Thursday 3 – 5

Saturday September 2009. Organized by :

The Department of Mathematics of the University of Athens (UoA),

The Institute of Applied and Computational Mathematics of the Foundation of Research and Technology- Hellas, The Department of Statistics of the Athens University of Economics and Business, The Greek Mathematical Society.

“The Moore-Penrose Inverse in Portfolio Selection of Exchange Rates”,

Dimitrios Pappas, Konstantinos Kiriakopoulos, Athanasios Petralias and George Kaimakamis.

6) The 9th Hellenic European Research on Computer Mathematics & its Applications Conference September 24-26, 2009 (HERCMA 09) Athens University of Economics and Business.

“An application of the Moore- Penrose Inverse to Portfolio selection”.

Dimitrios Pappas, Konstantinos Kiriakopoulos, George Kaimakamis.

ISBN: 978- 960- 88975- 5- 7 <http://www.aueb.gr/pympe/hercma/proceedings2009/>

7) 16th International Workshop on Systems, Signals and Image Processing, (IWSSIP09). Organized by **EURASIP** (European Association for Signal Processing) and **IEEE**, Greece Section. Χαλκίδα, 18-20 Ιουνίου, 2009

Publication in IEEE eXpress Conference Publishing.

Article number: 5367731, IWSSIP 2009.

“Image restoration via fast computing of the Moore-Penrose inverse matrix “, S. Chountasis , V. Katsikis, D. Pappas.

8) NUMAN08, 1-5 Σεπτεμβρίου 2008. International conference in Numerical Analysis. Kalamata, Greece

“A new method of computing the Moore-Penrose Inverse matrix”, V. Katsikis, D. Pappas

Other Publications

1) 9th WSEAS International Conference on SIMULATION, MODELLING and OPTIMIZATION (SMO '09)

Budapest, Hungary, September 3-5, 2009

«A mathematical tool for warehousing Optimization»

G. Kapetanios, V. Vrisagotis, D. Pappas, M. Panta, K. Sassiakos.

ISBN: 978- 960- 474- 113- 7, ISSN : 1790- 2769

2) IBIMA Publishing, *Advances in Cancer Research & Treatment*

“The Development of a Software System for Patients with Breast Cancer Receiving

Chemotherapy Treatment: A Pilot Study”, Maria Skouroliakou, Ekaterini Vourvouhaki, Ioannis Tsamis, Marianna Sykara, Sofia Kyrouti-Markantoni and Dimitrios Pappas.

<http://www.ibimapublishing.com/journals/ACRT/acrt.html>

Vol. 2013 (2013), Article ID 260996, 11 pages, DOI: 10.5171/2013.260996

GRANTS- RESEARCH PROGRAMS

- 1) As a PhD student I was financially supported by two grants, "Protagoras" (EU 65/1384) in 2004 for 24 months for basic research on Operator Theory and "Pythagoras II" in 2005 from the Greek Ministry of Education, for research in Mathematical Physics and applications in Engineering.
- 2) In 2008 I was financially supported from the Research Center, Athens University of Economics and Business, for creating new support and teaching material for the lessons Calculus 1 and calculus 2.
- 3) In the Academic year 2014- 2015 I had a Grant from the National Kapodistrian University of Athens, Economics Department, Research Center, (SARG- NKUA, 7013294) entitled: "Generalized inverses of matrices: Computational methods and applications in Optimization".
- 4) In 2016 I had a Grant from the National Kapodistrian University of Athens, Economics Department, Research Center, (SARG- NKUA, 7013294) entitled: " Hyperpower iterative methods of high efficiency for the computation of outer inverses $A^{(2)}_{T,S}$.

Referee for the following Scientific journals-conferences:

- 1) *Discussiones Mathematicae*, General Algebra and Applications
- 2) *Applied Mathematics Letters*
- 3) *Computers and Mathematics with Applications*
- 4) *Linear Algebra and its Applications*
- 5) *Thai mathematical Journal*.
- 6) *Facta Universitatis*.
- 7) *Journal of Applied mathematics & Computing*
- 8) *Journal of Applied Mathematics*
- 9) *Abstract and Applied Analysis*
- 10) *Karpathian Journal of Mathematics*
- 11) *Journal of Multivariate Analysis*.
- 12) *European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD)* , Athens, Greece , September 5th to 9th, 2011
- 13) *2012 SIAM international Conference on Data Mining*, April 26- 28 2012, Anaheim California, USA.

Professional Experience:

● **Athens University of Economics and Business, Department of Statistics**

Visiting Professor (since Sep. 2007)

Teaching:

- 1) Calculus 1 & 2
- 2) Linear Algebra 2
- 3) Introductory Course, Master's Degree of the Department of Statistics entitled "Quantative Methods in Decision Sciences." (Sep. 2010, 2011 and Sep. 2012)
- 4) Master's Degree of the Department of Statistics entitled "Quantative Methods in Decision Sciences." Course of Applied Linear Algebra (spring semester 2015)
- 5) Matlab and Maple laboratory.

● **Costeas-Geitonas International Baccalaureate (IB) World School,**

Teaching: Mathematics HL, SL and Math Studies SL. (since Sep. 2011)

Further Maths HL, 2014-2016.

SAT maths teacher (Since Sep. 2015)

● **IBWise IB Revision Courses, Vienna, Austria.**

July 2012- now: Revision courses every spring and July-August for IB students.

Wilhelm Exner Gasse 30/10, Vienna, Austria

<http://www.ibwise.com/>

Coordinator: Mrs Nora Schuster. (n.schuster@ibwise.com)

Previous Experience:

• **Myetutor**, startup company specialized in e-learning,
Head of Academic Programs. <http://myetutor.org/> (Aug. 2014- Dec 2015)

• **Tutor for Kuvu Tutors (Nov. 2012 – Dec 2013)**

On line training for IB and A-Levels.

<http://kuvututors.com/splash/partners/kuvu.jsp>

Sep. 2009- Sep. 2011

Doukas School, International Baccalaureate Diploma (IB) Department. Athens, Greece

Teaching:

- 1) Mathematics High and Standard Level
- 2) A- Level Mathematics, GCE Department

Teaching: C1, C2, C3, C4, M1, S1.

Oct. 2007- May 2008

Athens Metropolitan College, Dept of Computer Engineering, Athens , Greece

Visiting Professor

Teaching: Calculus

Sep. 2006- Aug. 2009

Technical Institute of Chalkis, Department of Logistics, Thiva, Greece.

Visiting Professor

Teaching:

- 1) Further Mathematics (Calculus & Linear Algebra)
- 2) Statistics 1 & 2
- 3) Financial Mathematics

Feb. 2007- Sep.2007

• **University of Piraeus, Department of Statistics and Insurance Science**

Visiting Professor.

Teaching: Linear Algebra.

1995- 2005

Private schools “Gnomon” and “Spoudi”, Athens, Greece.

Adresses:

High School Lessons, Gnomon, Kifissias Av. 310, Psychico, Athens Greece.

Working from 1997 to 2006.

High School Lessons, Spoudi, Ethnikis Antistaseos 26, Vrilissia, Athens Greece.

Working from 1995 to 2003..

1993- 1994

Private Lessons of Mathematics

1991-1993

Greek Army Officer

International Baccalaureate Experience- Conferences

IB Examiner, Mathematics High Level, paper 3, options Calculus (In English) since 2014.

MYP (Middle Years Diploma) Moderator (Academic year 2012-13, In French)

- DP Regional Workshop, 25- 27 March 2011
Zurich, Switzerland, Mathematics Standard Level
- In Thinking IB Workshop June 2-3, 2012
Athens, Greece, Mathematics High Level.
- DP Subject specific Seminar, Mathematics SL & HL: A focus on Internal Assessment, 1-3 Feb. 2013, Brussels, Belgium.

Software Teaching: Matlab, Maple, Octave, Mathematica.

Foreign Languages

French: Excellent SORBONNE II (Oct 1981)

English: Very Good, FCE (June 1999, grade A)