Cristina Isabel Correia Diogo

Professora Associada
Centro de Análise Matemática, Geometria e Sistemas Dinâmicos (IST-UL)
Department of Mathematics (ISTA)

Contacts

E-mail	cristina.diogo@iscte-iul.pt
Office	D2.02
Telephone	217650302 (Ext: 220768)
Post Box	302

Academic Qualifications

University/Institution	Type	Degree	Period
Universidade do Minho	PhD	Ciências	2009
Instituto Superior Técnico - UTL	M.Sc.	Matemática Aplicada	2004
Faculdade de Ciências e Tecnologia - UNL	Licenciate	Matemática (Ensino de)	2001

Teaching Activities

Teaching Year	Sem.	Course Name	Degree(s)	Coord.

2025/2026	1º	Linear Algebra Fundamentals	Bachelor Degree in Data Science;	Yes
2025/2026	1º	Linear Algebra	Bachelor Degree in Telecommunications and Computer Engineering;	Yes
2024/2025	1º	Linear Algebra	Bachelor Degree in Telecommunications and Computer Engineering;	Yes
2024/2025	1º	Algebra		No
2023/2024	1º	Linear Algebra	Bachelor Degree in Telecommunications and Computer Engineering;	Yes
2022/2023	1º	Linear Algebra	Bachelor Degree in Computer Engineering;	Yes
2022/2023	1º	Mathematics		No
2021/2022	1º	Linear Algebra	Bachelor Degree in Telecommunications and Computer Engineering;	Yes
2021/2022	1º	Mathematics		No
2020/2021	1º	Linear Algebra	Bachelor Degree in Telecommunications and Computer Engineering;	Yes
2020/2021	1º	Mathematics		No
2019/2020	2º	Topics of Elementary Mathematics I		Yes
2019/2020	1º	Mathematics		No

Supervisions

- **M.Sc. Dissertations**

- Concluded

	Student Name	Title/Topic	Language	Institution	Concluding Year
1	Verónica Micaela Botelho Vasconcelos Fernandes	Remotely Piloted Aircraft Systems in fire fighting: Emergency information systems	Portuguese	Iscte	2020
2	Ana Rita Carocha Alcobia	Technologies and senior population: Challenges and Opportunities	Portuguese	Iscte	2019

Total Citations

Web of Science®	119
Scopus	102

Publications

• Scientific Journals

- Scientific journal paper

1	Carvalho, L., Diogo, C., Mendes, S. & Soares, H. (2025). Quaternionic essential numerical range of complex operators. Linear and Multilinear Algebra. 73 (7), 1332-1345
2	Carvalho, L., Diogo, C., Mendes, S. & Soares, H. (2024). A note on the essential numerical range of block diagonal operators. Forum Mathematicum. 36 (5), 1147-1157 - Times Cited Web of Science®: 1 - Times Cited Scopus: 1 - Times Cited Google Scholar: 2
3	Carvalho, L., Diogo, C., Mendes, S. & Soares, H. (2024). On the relation between S-spectrum and right spectrum. Complex Analysis and Operator Theory. 19 (1) - Times Cited Google Scholar: 2
4	Carvalho, L., Diogo, C., Mendes, S. & Soares, H. (2024). On the convexity of the quaternionic essential numerical range. Proceedings of the Edinburgh Mathematical Society. 67 (3), 838-851 - Times Cited Web of Science®: 2 - Times Cited Scopus: 2 - Times Cited Google Scholar: 3
5	Carvalho, L., Diogo, C. & Mendes, S. (2023). S-spectrum and numerical range of a quaternionic operator. Journal of Mathematical Analysis and Applications. 519 (2) - Times Cited Web of Science®: 4 - Times Cited Scopus: 4
6	Carvalho, L., Diogo, C. & Mendes, S. (2022). A new perspective on the quaternionic numerical range of normal matrices. Linear and Multilinear Algebra. 70 (20), 5068-5074 - Times Cited Scopus: 4
7	Carvalho, L., Diogo, C. & Mendes, S. (2021). Quaternionic numerical range of complex matrices. Linear Algebra and its Applications. 620, 168-181 - Times Cited Web of Science®: 6 - Times Cited Scopus: 6
8	Diogo, C. (2020). Faces of sets of operators with the numerical range in a prescribed polyhedron. Journal of Mathematical Analysis and Applications. 490 (2)
9	Carvalho, L., Diogo, C. & Mendes, S. (2020). The star-center of the quaternionic numerical range. Linear Algebra and its Applications. 603, 166-185 - Times Cited Web of Science®: 5 - Times Cited Scopus: 6

10	Carvalho, L., Mendes, S. & Diogo, C. (2019). On the convexity and circularity of the numerical range of nilpotent quaternionic matrices. New York Journal of Mathematics. 25, 1385-1404 - Times Cited Web of Science®: 6 - Times Cited Scopus: 7
11	Carvalho, L., Diogo, C. & Mendes, S. (2019). A bridge between quaternionic and complex numerical ranges. Linear Algebra and its Applications. 581, 496-504 - Times Cited Web of Science®: 7 - Times Cited Scopus: 7
12	Bracic, J., Diogo, C. & Zajac, M. (2018). Reflexive sets of operators. Banach Journal of Mathematical Analysis. 12 (3), 751-771 - Times Cited Web of Science®: 3 - Times Cited Scopus: 2
13	Bracic, J. & Diogo, C. (2017). Simultaneous zero inclusion property for spatial numerical ranges. Journal of Mathematical Analysis and Applications. 449 (2), 1413-1423 - Times Cited Web of Science®: 2 - Times Cited Scopus: 2
14	Bracic, J. & Diogo, C. (2016). Operators with a given part of the numerical range. Mathematica Slovaca. 66 (1), 275-280
15	Bracic, J. & Diogo, C. (2015). Hildebrandt's theorem for the essential spectrum. Opuscula Mathematica. 35 (3), 279-285 - Times Cited Scopus: 1
16	Diogo, C. (2015). Algebraic properties of the set of operators with 0 in the closure of the numerical range. Operators and Matrices. 9 (1), 83-93 - Times Cited Web of Science®: 4 - Times Cited Scopus: 3
17	Bracic, J. & Diogo, C. (2015). Relative numerical ranges. Linear Algebra and its Applications. 485, 208-221 - Times Cited Web of Science®: 1 - Times Cited Scopus: 1
18	Câmara, M. C., Diogo, C. & Spitkovsky, I. M. (2015). Toeplitz operators of finite interval type and the table method. Journal of Mathematical Analysis and Applications. 432 (2), 1148-1173
19	Câmara, M. C., Diogo, C., Karlovich, Y. I. & Spitkovsky, I. (2012). Factorizations, Riemann-Hilbert problems and the corona theorem. Journal of the London Mathematical Society . 86 (3), 852-878 - Times Cited Web of Science®: 5 - Times Cited Scopus: 6
20	C. Benhida, Câmara, M. C. & Diogo, C. (2010). Some properties of the kernel and the cokernel of Toeplitz operators with matrix symbols. Linear Algebra and its Applications. 432 (1), 307-317 - Times Cited Web of Science®: 13 - Times Cited Scopus: 11
21	Câmara, M. C., Diogo, C. & Rodman, L. (2010). Fredholmness of Toeplitz operators and corona problems. Journal of Functional Analysis. 259 (5), 1273-1299 - Times Cited Web of Science®: 12 - Times Cited Scopus: 15

22	Câmara, M. C. & Diogo, C. (2008). Invertibility of Toeplitz operators and corona conditions in a strip. Journal of Mathematical Analysis and Applications. 342 (2), 1297-1317 - Times Cited Web of Science®: 7 - Times Cited Scopus: 6

• Conferences/Workshops and Talks

- Publication in conference proceedings

1	Alcobia, A., Alturas, B. & Diogo, C. (2020). Technologies and senior population: Challenges and opportunities. In Álvaro Rocha, Bernabé Escobar Peréz, Francisco Garcia Peñalvo, Maria del Mar Miras, Ramiro Gonçalves (Ed.), 2020 15th Iberian Conference on Information Systems and Technologies (CISTI). Sevilla: IEEE. - Times Cited Scopus: 1 - Times Cited Google Scholar: 1
2	Bracic, J. & Diogo, C. (2015). On the relative numerical ranges of an operator. In Michal Zajac, Igor Bock (Ed.), 10th Workshop Functional Analysis and its Applications. (pp. 12-13).
3	Bracic, J. & Diogo, C. (2013). Set of operators with 0 in the closure of the numerical range. In Michal Zajac, Igor Bock (Ed.), Proceedings of the 9th Workshop on Functional Analysis and its Applications in Mathematical Physics and Optimal Control. (pp. 13-14). Nemecka
4	Diogo, C. (2013). Factorization for a class of Triangular matrix functions and related Riemann- Hilbert problems. In Michal Zajac, Igor Bock (Ed.), Proceedings of the 9th Workshop on Functional Analysis and its Applications in Mathematical Physics and Optimal Control. (pp. 18-19). Nemecka

- Talk

1	Diogo, C., Carvalho, L., Mendes, S. & Soares, H. (2025). FROM COMPLEX TO QUATERNIONIC NUMERICAL RANGE. IX International Workshop on Non-Associative Algebras in Lisbon.
2	Diogo, C., Carvalho, L. & Mendes, S. (2025). NUMERICAL RANGE IN THE REALM OF QUATERNIONS. NTQO 2025.
3	Soares, H., Carvalho, L., Diogo, C. & Mendes, S. (2025). On the relation between S-spectrum and right spectrum. IWOTA2025.
4	Soares, H., Mendes, S., Diogo, C. & Carvalho, L. (2025). The right spectrum and the S-spectrum. Workshop on New Trends in Quaternions and Octonions - NTQO 2025.
5	Soares, H., Diogo, C., Mendes, S. & Carvalho, L. (2024). Quaternionic essential numerical range of complex operators. 35th International Workshop on Operator Theory and its Applications.
6	Mendes, S., Carvalho, L., Diogo, C. & Soares, H. (2024). S-spectrum and Numerical Range of Bounded Operators on Quaternionic Hilbert Spaces. Eighth Workshop New Trends in Quaternions and Octonions - NTQO 2024.
7	Diogo, C., Carvalho, L. & Mendes, S. (2024). Characterizing quaternionic numerical range through complex numerical range. IWOTA 2024.
8	Diogo, C., Carvalho, L. & Mendes, S. (2024). On quaternionic numerical range and its relation with S-spectrum. International Conference on Hypercomplex Analysis and its Applications.

9	Soares, H., Carvalho, L., Mendes, S. & Diogo, C. (2023). On the convexity of the quaternionic essential numerical range. 16th Workshop on Numerical Ranges and Numerical Radii.
10	Diogo, C., Carvalho, L. & Mendes, S. (2023). Quaternionic numerical range. Seminar - Center for Research Development in Mathematics and Applications Functional Analysis and Applications Group.
11	Diogo, C., Carvalho, L. & Mendes, S. (2023). S-spectrum and numerical range of a quaternionic operator. 16th Workshop on Numerical Ranges and Numerical Radii.
12	Mendes, S., Carvalho, L. & Diogo, C. (2023). Aspects of quaternionic linear operators: S-spectrum and numerical range. Workshop on Operator Theory, Complex Analysis, and Applications 2023 - WOTCA 2023.
13	Soares, H., Diogo, C., Mendes, S. & Carvalho, L. (2022). Quaternionic Numerical Range. Encontro Anual do CIMA.
14	Soares, H., Diogo, C., Mendes, S. & Carvalho, L. (2022). Quaternionic Numerical Range. Encontro Nacional da Sociedade de Matemática Portuguesa 2022.
15	Diogo, C., Mendes, S. & Carvalho, L. (2020). A bridge between quaternionic and complex numerical ranges. New Trends in Quaternions and Octonions.
16	Mendes, S., Carvalho, L. & Diogo, C. (2020). The star-center of the quaternionic numerical range. New Trends in Quaternions and Octonions.
17	Mendes, S., Carvalho, L. & Diogo, C. (2019). On the convexity and circularity of the numerical range for quaternionic matrices. New Trends in Quaternions and Octonions.
18	Bracic, J. & Diogo, C. (2018). Sets of operators determined by the numerical range. Seminário do Centro de Matemática da Universidade de Coimbra.
19	Diogo, C. (2018). Set of operators with numerical range in a prescribed set. Functional Analysis and Applications Seminar.
20	Diogo, C. (2018). Faces of sets of operators with numerical range in a prescribed polyhedron. Workshop on Numerical Ranges and Numerical Radii.
21	Bracic, J. & Diogo, C. (2018). Simultaneous zero inclusion property for spatial numerical ranges. Workshop on Numerical Ranges and Numerical Radii .
22	Diogo, C. (2018). Sets of operators determined by the numerical range. Encontro Nacional da Sociedade Portuguesa de Matemática .
23	Bracic, J. & Diogo, C. (2016). Relative numerical ranges. Encontro Nacional da Sociedade Portuguesa de Matemática 2016 .
24	Bracic, J. & Diogo, C. (2015). Relative numerical ranges. Seminar for Algebra and Fuctional Analysis.
25	Bracic, J. & Diogo, C. (2015). On the relative numerical ranges of an operator. 10th Workshop Functional Analysis and its Applications. 1, 12-13
26	Diogo, C. & Janko Bracic (2014). Sets of operators with a given part of the numerical range. Functional Analysis and Applications Seminar.

27	Diogo, C. & Janko Bracic (2014). Removing zero from the numerical range. 4th Small Workshop on Operator Theory.
28	Diogo, C. & Janko Bracic (2014). Zero in the closure of the numerical range. Matrices & Operators.
29	Diogo, C. & Janko Bracic (2014). Algebraic properties of the set of operators with 0 in the closure of the numerical range. Operator Theory Seminar.
30	Diogo, C. & Janko Bracic (2014). Properties of the set of operators with a given part of the numerical range. Seminário de Análise e Aplicações.
31	Diogo, C. & Janko Bracic (2014). Set of operators with 0 in the closure of the numerical range. 16th Workshop on Applications and Generalizations of Complex Analysis.
32	Diogo, C. & Janko Bracic (2014). Eliminating zero from the numerical range through multiplication by operators from a given set. Wiener-Hopf Workshop.
33	Janko Bracic & Diogo, C. (2014). Elimination of the zero from the numerical range. Operator Theory Seminar.
34	Janko Bracic & Diogo, C. (2013). The numerical range. Seminário do Departamento de Matemática.
35	Diogo, C. (2013). Criteria for factorability for a class of triangular matrix functions. Centro de estudos e de Desenvolvimento da Matemática no Ensino Superior.
36	Diogo, C. (2013). Factorization for a class of triangular matrix functions and related Riemann-Hilbert problems. 9th Workshop on Functional Analysis and its Applications.
37	Diogo, C. (2013). Fredholm properties for a class of Toeplitz operators with symbols with a gap around zero. Sz.-Nagy Centennial Conference.
38	Diogo, C. (2013). Wiener-Hopf factorization for a class of analytic matrix symbols associated with finite interval convolution operators . Operator Theory Seminar.
39	Diogo, C. (2013). Wiener-Hopf factorization for a class of analytic matrix symbols. 15th Workshop on Applications and Generalizations of Complex Analysis.
40	Janko Bracic & Diogo, C. (2013). Set of operators with 0 in the closure of the numerical range. 9th Workshop on Functional Analysis and its Applications.
41	Diogo, C. (2012). Solving Riemann-Hilbert problems with the table method. Ciclo de Seminários em Geometria, Topologia e Física-Matemática, Centro de Matemática da Universidade do Minho.
42	Diogo, C. (2012). Almost periodic Riemann-Hilbert problems, Toeplitz operators and the table method. WOTCA 2012 - Workshop on Operator Theory, Complex Analysis and Applications.
43	Diogo, C. (2012). Factorization, Riemann-Hilbert problems and the corona theorem. 14th Workshop on Applications and Generalizations of Complex Analysis.
44	Diogo, C. (2012). Corona Conditions and symbols with a gap around zero. International Conference in Operator Theory and Applications.

45	Diogo, C. (2012). Corona Conditions and symbols with a gap around zero. Operator Theory, Complex Analysis and Applications Seminar.

• Other Publications

- Recensions in journals

1	Diogo, C. (2017). On the S-universal elementary operators. Zentralblat MATH Review.
2	Diogo, C. (2017). Characterizations of the support function of the numerical range of the product of positive contractions. Zentralblat MATH Review.
3	Diogo, C. (2016). Maps compressing and expanding the numerical range on C*-algebras. Zentralblat MATH Review.
4	Diogo, C. (2016). Multiplicative preservers of higher-dimensional numerical ranges. Zentralblat MATH Review. - Times Cited Web of Science®: 1 - Times Cited Scopus: 1
5	Diogo, C. (2015). On the factorization of some block triangular almost periodic matrix functions. MathSciNet.
6	Diogo, C. (2015). R-linear and Riemann-Hilbert problems for multiply connected domains. MathSciNet.
7	Diogo, C. (2015). The numerical range and the spectrum of a product of two orthogonal projections. Zentralblat MATH Review.
8	Diogo, C. (2015). Kernels of Asymmetric Toeplitz Operators and Applications to Almost Periodic Factorization. Zentralblat MATH Review.
9	Diogo, C. (2014). Subnormal and quasinormal Toeplitz operators with matrix-valued rational symbols. MathSciNet. - Times Cited Web of Science®: 16 - Times Cited Scopus: 16
10	Diogo, C. (2014). A brief history of the strong Szego limit theorem. Zentralblat MATH Review.
11	Diogo, C. (2014). Thin sequences in the corona of H^\infty. MathSciNet.
12	Diogo, C. (2014). Canonical factorization of rational matrix functions. MathSciNet.
13	Diogo, C. (2013). A remark on a polynomial matrix factorization theorem. MathSciNet. 1-1
14	Diogo, C. (2013). Toeplitz operators on Bergman spaces of polyanalytic functions. MathSciNet. 1-1
15	Diogo, C. (2013). Finite rank sums of products of Toeplitz and Hankel operators. MathSciNet. 1-1 - Times Cited Web of Science®: 5
16	Diogo, C. (2013). A constructive proof of the Leech theorem for rational matrix functions. MathSciNet. 1-1 - Times Cited Web of Science®: 9
17	Diogo, C. (2013). Wiener-Hopf Operators with Oscillating Symbols on Weighted Lebesgue Spaces. MathSciNet. 1-1

18	Diogo, C. (2013). Right Invertible Multiplication Operators and Stable Rational Matrix Solutions to an Associated Bezout Equation, II: Description of all solutions. MathSciNet. 1-2
19	Diogo, C. (2012). The Riemann-Hilbert problems with isolated poles. MathSciNet. 1-1
20	Diogo, C. (2012). The Riemann-Hilbert Boundary Value Problem with a Countable Se of Coefficient Discontinuities and two-side Curling at Infinity of the Order Less than 1/2. MathSciNet. 1-1
21	Diogo, C. (2011). The corona theorem and stable rank for the algebra C+BHoo. MathSciNet. 1-1
22	Diogo, C. (2011). Polynomial approximation and generalized Toeplitz operators. MathSciNet. 1-1
23	Diogo, C. (2011). Right Invertible Multiplication Operators and Stable Rational Matrix Solutions to an Associated Bezout Equation, I: The Least Squares Solution. MathSciNet. 1-1 - Times Cited Web of Science®: 8
24	Diogo, C. (2011). Homogeneous subsets of a Lipschitz graph and the Corona Theorem. MathSciNet. 1-1 - Times Cited Web of Science®: 2
25	Diogo, C. (2011). The corona problem with two pieces of data. MathSciNet. 1-1

Academic Management Positions

Director (2025)
Unit/Area: School of Technology and Architecture

Membro (Docente) (2025 - 2028)
Unit/Area: Comissão Científica

Director (2025)
Unit/Area: School of Technology and Architecture

Sub-diretor (2025 - 2028)
Unit/Area: School of Technology and Architecture

Director (2024)
Unit/Area: School of Technology and Architecture

Sub-diretor (2021 - 2025)
Unit/Area: School of Technology and Architecture

Presidente (2021 - 2025)
Unit/Area: Comissão Científica

Membro (Docente) (2021 - 2025)
Unit/Area: Comissão Científica

Director (2021 - 2025)
Unit/Area: Department of Mathematics

Membro (Docente) (2021 - 2025)
Unit/Area: Plenário da Comissão Científica

Presidente (2017 - 2021)
Unit/Area: Comissão Científica

Director (2017 - 2021)
Unit/Area: Department of Mathematics

Membro (Docente) (2017 - 2021)
Unit/Area: Plenário da Comissão Científica

Membro (Docente) (2017 - 2021)
Unit/Area: Comissão Científica

Coordenador de ECTS (2017)
Unit/Area: Department of Mathematics

Coordenador de ECTS (2014 - 2017)
Unit/Area: Department of Mathematics

Sub-diretor (2013 - 2017)
Unit/Area: Department of Mathematics

Coordenador de ECTS (2011 - 2012)
Unit/Area: Department of Quantitative Methods

Sub-diretor (2010 - 2012)
Unit/Area: Department of Quantitative Methods