

Diogo Oliveira e Silva

Curriculum Vitæ

October 2021

PERSONAL

Full Name. Diogo Gaspar Teixeira de Oliveira e Silva

Citizenship. Portuguese

Address. School of Mathematics
University of Birmingham
Edgbaston, Birmingham
B15 2TT, England, UK

Phone Number. +44 (0) 121 414 6200

E-mail. D.OliveiraESilva@bham.ac.uk

Website. <http://web.mat.bham.ac.uk/~oliveird/>

Languages. Portuguese, English, German, Italian, French, Spanish, Russian

EDUCATION

Habilitation in Mathematics

- Universität Bonn, 2017
- Thesis: *Sharp Fourier Restriction Theory*
- Committee: Rupert Frank, Dirk Hundertmark, Herbert Koch, Christoph Thiele

PhD in Mathematics

- University of California, Berkeley, 2012
- Thesis: *Oscillatory integrals and extremal problems in harmonic analysis*
- Advisor: Michael Christ
- Committee: Michael Christ, Noureddine El Karoui, Daniel Tataru

Licenciatura em Matemática Pura

- Universidade do Porto, 2006
- Final score: 19.4 out of 20

APPOINTMENTS

Associate Professor

- University of Birmingham, 2020–

Lecturer in Mathematical Analysis (Assistant Professor with Tenure)

- University of Birmingham, 2018–2020

Akademischer Rat auf Zeit (Assistant Professor without Tenure)

- Universität Bonn, 2014–2017

Hausdorff Postdoc

- Hausdorff Center for Mathematics, Bonn, 2012–2014

RESEARCH PUBLICATIONS

Preprints

35. *On the discrete nonlinear Hausdorff–Young inequality for the $SU(1, 1)$ -valued Fourier products* (with V. Kovač and J. Rupčić), arXiv:2109.06532. *Submitted.*
34. *Stability of sharp Fourier restriction to spheres* (with E. Carneiro and G. Negro), arXiv:2108.03412. *Submitted.*
33. *Intermittent symmetry breaking and stability of the sharp Agmon–Hörmander estimate on the sphere* (with G. Negro), arXiv:2107.14273. *Submitted.*
32. *The Tomas–Stein inequality under the effect of symmetries* (with R. Mandel), arXiv:2106.08255. *Submitted.*
31. *New sign uncertainty principles* (with F. Gonçalves and J. Ramos), arXiv:2003.10771. *Submitted.*

In Press

30. *Band-limited maximizers for a Fourier extension inequality on the circle* (with C. Thiele and P. Zorin-Kranich), arXiv:1806.06605. *To appear in Experimental Mathematics.* Published online: 7 April 2019.

In Print

29. *Restriction inequalities for the hyperbolic hyperboloid* (with B. Bruce and B. Stovall), *J. Math. Pures Appl.* **149** (2021), 186–215.
28. *On regularity and mass concentration phenomena for the sign uncertainty principle* (with F. Gonçalves and J. Ramos), *J. Geom. Anal.* **31** (2021), no. 6, 6080–6101.
27. *Global maximizers for adjoint Fourier restriction inequalities on low dimensional spheres* (with R. Quilodrán). *J. Funct. Anal.* **280** (2021), no. 7, 108825.
26. *Smoothness of solutions of a convolution equation of restricted-type on the sphere* (with R. Quilodrán). *Forum Math. Sigma* **9** (2021), Paper No. e12, 40 pp.
25. *A universality law for sign correlations of eigenfunctions of differential operators* (with F. Gonçalves and S. Steinerberger). *J. Spectr. Theory* **11** (2021), no. 2, 661–676.

24. *A variational restriction estimate* (with V. Kovač). Arch. Math. (Basel) **117** (2021), 65–78.
23. *Extremizers for adjoint Fourier restriction on hyperboloids: the higher dimensional case* (with E. Carneiro, M. Sousa and B. Stovall), Indiana Univ. Math. J. **70** No. 2 (2021), 535–559.
22. *Sharp Strichartz inequalities for fractional and higher order Schrödinger equations* (with G. Brocchi and R. Quilodrán). Anal. PDE **13** (2020), no. 2, 477–526.
21. *A comparison principle for convolution measures with applications* (with R. Quilodrán). Math. Proc. Cambridge Philos. Soc. **169** (2020), no. 2, 307–322.
20. *Extremizers for Fourier restriction on hyperboloids* (with E. Carneiro and M. Sousa). Ann. Inst. H. Poincaré Anal. Non Linéaire **36** (2019), no. 2, 389–415.
19. *Sharp mixed norm spherical restriction* (with E. Carneiro and M. Sousa). Adv. Math. **341** (2019), 583–608.
18. *A sharp nonlinear Hausdorff–Young inequality for small potentials* (with V. Kovač and J. Rupčić). Proc. Amer. Math. Soc. **147** (2019), no. 1, 239–253.
17. *A variational nonlinear Hausdorff–Young inequality in the discrete setting*. Math. Res. Lett. **25** (2018), no. 6, 1993–2015.
16. *On extremizers for Strichartz estimates for higher order Schrödinger equations* (with R. Quilodrán). Trans. Amer. Math. Soc. **370** (2018), no. 10, 6871–6907.
15. *Nonexistence of extremizers for certain convex curves*. Math. Res. Lett. **25** (2018), no. 3, 973–987.
14. *A sharp trilinear inequality related to Fourier restriction on the circle* (with E. Carneiro, D. Foschi and C. Thiele). Rev. Mat. Iberoam. **33** (2017), no. 4, 1463–1486.
13. *Estimates for certain integrals of products of six Bessel functions* (with C. Thiele). Rev. Mat. Iberoam. **33** (2017), no. 4, 1423–1462.
12. *Some recent progress on sharp Fourier restriction theory* (with D. Foschi). Anal. Math. **43** (2017), no. 2, 241–265.
11. *Hermite polynomials, linear flows on the torus, and an uncertainty principle for roots* (with F. Gonçalves and S. Steinerberger). J. Math. Anal. Appl. **451** (2017), no. 2, 678–711.
10. *Some sharp restriction inequalities on the sphere* (with E. Carneiro). Int. Math. Res. Not. IMRN (2015), no. 17, 8233–8267.
9. *Extremals for Fourier restriction inequalities: Convex arcs*. J. Anal. Math. **124** (2014), 337–385.
8. *On trilinear oscillatory integrals* (with M. Christ). Rev. Mat. Iberoam. **30** (2014), no. 2, 667–684.

7. *Note on the integer geometry of bitwise XOR* (with A. Guedes de Oliveira). European J. Combin. **26** (2005), no. 5, 755–763.

Theses

6. *Sharp Fourier Restriction Theory*. Habilitation Thesis, Universität Bonn (2017), 166 pages.
5. *Oscillatory integrals and extremal problems in harmonic analysis*. PhD Thesis, University of California, Berkeley (2012), 120 pages.

Survey Articles

4. *A sharp inequality in Fourier restriction theory* (with R. Quilodrán). Bol. Soc. Port. Mat. **77** “Matemáticos Portugueses pelo Mundo” (2019), 133–150.
3. *Inequalities in nonlinear Fourier analysis*. CIM Bulletin **38-39** (2017), 31–35.
2. *Recent developments in sharp restriction theory*. Real Analysis, Harmonic Analysis, and Applications. Oberwolfach Report (2017).
1. *Some Problems in Harmonic Analysis* (with L. Grafakos, M. Pramanik, A. Seeger and B. Stovall). arXiv:1701.06637.

AWARDS AND HONORS

- Hausdorff Research Institute for Mathematics Fellowship, 2021
- Member of the London Mathematical Society, 2019–
- Fellow of the UK Higher Education Society, 2018–
- University of Birmingham EPS College Early Career Travel Fund, 2018
- UC Berkeley Small Travel Grant, 2011
- Prize Fundação Eng.º António de Almeida, 2007
- Prize Dr. Neves Real, Universidade do Porto, 2007
- Prize Augusto Martins, Universidade do Porto, 2006
- Prize Dr. Gomes Ribeiro, Universidade do Porto, 2006
- Prize Prof. Abílio Aires, Universidade do Porto, 2006
- Prize Prof. Dr. Jayme Rios de Sousa, Universidade do Porto, 2004
- Prize Mário Silva, Sociedade Portuguesa de Física, 2002
- 42nd International Mathematical Olympiad Team Member, 2001

RESEARCH FUNDING

EPSRC New Investigator Award “Sharp Fourier Restriction Theory” (EP/T001364/1)

- 2020–2022
- Ranked first in the May 2019 Engineering and Physical Sciences Research Council Mathematical Sciences Prioritisation Panel

Hausdorff Research Institute for Mathematics Travel Grant

- 2012–2017
- Offered on a competitive basis

Pinto–Fialon Graduate Fellowship

- 2007–2012
- For outstanding academic performance at UC Berkeley

Fundação para a Ciência e a Tecnologia PhD Research Scholarship

(SFRH/BD/28041/2006)

- 2007–2011
- PhD grant offered on a competitive basis to cover UC Berkeley tuition fees and living expenses

Fundação Calouste Gulbenkian Merit Fellowship

- 1999–2006
- Including participation in *Novos Talentos em Matemática* (2002/03, 2003/04), a program for top undergraduate mathematics students in Portugal

INVITED TALKS

Plenary Lectures

- (71) *Real Analysis, Harmonic Analysis, and Applications*, Oberwolfach, Germany (postponed to 2022)
- (70) *Harmonic Analysis and Partial Differential Equations*, Hausdorff Research Institute for Mathematics, Bonn, Germany (07/05/2019)
- (69) *Real Analysis, Harmonic Analysis, and Applications*, Oberwolfach, Germany (28/07/2017)
- (68) *Global Portuguese Mathematicians*, Instituto Superior Técnico, Lisbon, Portugal (14/07/2017)
- (67) *Atelier d'Analyse Harmonique 2017*, Laboratoire de Mathématiques Jean Leray, Nantes, France (09/03/2017)
- (66) *Function spaces and high-dimensional approximation*, Centre de Recerca Matemàtica, Barcelona, Spain (04/05/2016)
- (65) *Funções Especiais e Polinômios Ortogonais*, Universidade Estadual Paulista, São José do Rio Preto, Brazil (11/02/2015)
- (64) *Hausdorff Trimester Program in Harmonic Analysis and Partial Differential Equations*, Closing Workshop, Hausdorff Research Institute for Mathematics, Bonn, Germany (08/08/2014)

International Conferences

- (63) *PDEs in Quantum Mechanics*, Padova, Italy (postponed)

- (62) *American Institute of Mathematical Sciences Conference*, Atlanta, US (postponed to 2022)
- (61) *3rd Bilbao meeting on Analysis and PDEs*, Bilbao, Spain (02/06/2022)
- (60) *Heilbronn Focused Research Workshop on Restriction theory and the Kakeya conjecture*, Heilbronn Institute, Bristol, UK (25/01/2021)
- (59) *Deutsche Mathematiker-Vereinigung Jahrestagung 2019*, Karlsruhe, Germany (24/09/2019)
- (58) *7th Iberian Mathematical Meeting*, Évora, Portugal (13/10/2018)
- (57) *British Mathematical Colloquium 2018*, St Andrews, UK (13/06/2018)
- (56) *Congreso Bienal de la Real Sociedad Matemática Española*, Zaragoza, Spain (31/01/2017)
- (55) *Exciting New Faces in Analytic Number Theory*, Hausdorff Research Institute for Mathematics, Bonn, Germany (11/07/2014)
- (54) *Harmonic Analysis in honor of Cowling's 65th*, Segovia, Spain (02/07/2014)
- (53) *Probabilistic Aspects of Harmonic Analysis*, Będlewo, Poland (02/05/2014)
- (52) *Joint International Meeting of the AMS and the RMS*, Universitatea "1 Decembrie 1918" Alba Iulia, Romania (28/06/2013)
- (51) *Harmonic Analysis, PDEs and Geometry*, Instituto de Ciencias Matemáticas, Madrid, Spain (30/05/2013)
- (50) *9th International Conference on Harmonic Analysis and Partial Differential Equations*, El Escorial, Spain (12/06/2012)

Colloquia

- (49) The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy (17/12/2018)
- (48) Universität Bonn, Germany (14/12/2017)
- (47) The Chinese University of Hong Kong (30/06/2017)
- (46) University of Birmingham, UK (08/12/2016)
- (45) Universidade do Porto, Portugal (19/03/2013)

Research Seminars

- (44) International Seminar Series on Harmonic Analysis & Applications (20/02/2022)
- (43) Bilbao Analysis and PDE Webinar (06/05/2021)
- (42) Karlsruher Institut für Technologie, Germany (08/04/2021)
- (41) Universidade de Aveiro, Portugal (31/03/2021)
- (40) University of Wisconsin–Madison, US (02/03/2021)
- (39) UK Virtual Harmonic Analysis Seminar (26/05/2020)
- (38) Lisbon Webinar in Analysis and Differential Equations (12/05/2020)
- (37) University of Warwick, UK (17/10/2019)
- (36) Cardiff University, UK (07/10/2019)
- (35) Loughborough University, UK (17/07/2019)

- (34) King's College, UK (20/06/2019)
- (33) University of Cambridge, UK (11/03/2019)
- (32) Imperial College London, UK (30/11/2018)
- (31) University of Edinburgh, UK (26/11/2018)
- (30) University of Birmingham, UK (13/11/2018)
- (29) University of Zagreb, Croatia (04/07/2018)
- (28) Universiteit Utrecht, Netherlands (26/06/2018)
- (27) Caltech/UCLA Joint Analysis Seminar, US (25/05/2018)
- (26) University of Birmingham, UK (16/01/2018)
- (25) The Chinese University of Hong Kong (29/06/2017)
- (24) The Chinese University of Hong Kong (28/06/2017)
- (23) Universität Bonn, Germany (27/04/2017)
- (22) University of Zagreb, Croatia (14/02/2017)
- (21) Universität Bielefeld, Germany (07/11/2016)
- (20) Università di Ferrara, Italy (06/10/2016)
- (19) Universität Bonn, Germany (27/11/2015)
- (18) Duke University, US (16/03/2015)
- (17) Instituto de Matemática Pura e Aplicada, Brazil (10/02/2015)
- (16) University of Birmingham, UK (04/12/2014)
- (15) Instituto Superior Técnico, Portugal (23/04/2014)
- (14) Università di Ferrara, Italy (26/03/2014)
- (13) Oxford University, UK (20/02/2014)
- (12) Instituto de Matemática Pura e Aplicada, Brazil (10/12/2013)
- (11) Christian-Albrechts-Universität zu Kiel, Germany (14/11/2013)
- (10) Universität Bonn, Germany (08/11/2013)
- (9) Università degli Studi di Roma Tor Vergata, Italy (24/09/2013)
- (8) University of Edinburgh, UK (13/05/2013)
- (7) Institut Henri Poincaré, France (09/04/2013)
- (6) Instituto de Matemática Pura e Aplicada, Brazil (31/01/2013)
- (5) Universität Bonn, Germany (09/11/2012)
- (4) Institut Camille Jordan, France (18/09/2012)
- (3) Université de Nantes, France (14/09/2012)
- (2) University of California, Berkeley, US (01/05/2012)
- (1) Instituto Superior Técnico, Portugal (22/06/2011)

ACADEMIC VISITS (≥ 1 week)

- (26) University of Wisconsin–Madison, US (postponed)
- (25) New York University Abu Dhabi, UAE (postponed)
- (24) Hausdorff Research Institute for Mathematics, Germany (2021)

- (23) Abdus Salam International Center for Theoretical Physics, Italy (2019)
- (22) University of Zagreb, Croatia (2018)
- (21) Caltech, US (2018)
- (20) Universität Bonn, Germany (2018)
- (19) Abdus Salam International Center for Theoretical Physics, Italy (2017)
- (18) The Chinese University of Hong Kong (2017)
- (17) Mathematical Sciences Research Institute, US (2017)
- (16) Stanford University, US (2017)
- (15) Institut de Mathématiques de Jussieu, France (2017)
- (14) University of Zagreb, Croatia (2017)
- (13) Abdus Salam International Center for Theoretical Physics, Italy (2016)
- (12) Università di Ferrara, Italy (2016)
- (11) Institut de Mathématiques de Jussieu, France (2016)
- (10) American Institute of Mathematics, US (2015)
- (9) Duke University, US (2015)
- (8) Instituto Nacional de Matemática Pura e Aplicada, Brazil (2015)
- (7) Università di Ferrara, Italy (2015)
- (6) Oxford University (2014)
- (5) Instituto Nacional de Matemática Pura e Aplicada, Brazil (2014)
- (4) Institut de Mathématiques de Jussieu, France (2014)
- (3) Instituto Nacional de Matemática Pura e Aplicada, Brazil (2013)
- (2) Université de Nantes, France (2012)
- (1) International Centre for Mathematical Sciences, UK (2011)

RESEARCH SUPERVISION

Postdoctoral Researchers

- Giuseppe Negro, funded through EPSRC New Investigator Award EP/T001364/1 (2020–2022)

PhD Students

- Constantin Bilz, University of Birmingham (2018–)
- Michele Ferrante, University of Birmingham (2020–2021)
- Mateus Sousa,¹ Universität Bonn (2016–2017)

Master Students

- Sanjeev Sehra, University of Birmingham (2020/21)
Thesis: *Fourier meets Gauss*

¹Visiting PhD student of E. Carneiro from IMPA.

- Thomas Haynes, University of Birmingham (2019/20)
Thesis: *Space Filling Curves*
- Gianmarco Brocchi, Universität Bonn (2016/17)
Thesis: *Sharp Fourier restriction theory and Strichartz estimates*
- Alberto Solà Vilalta, Universität Bonn (2016/17)
Thesis: *The ℓ^2 Decoupling Theorem for the parabola*

Undergraduate Students

- 21 Research Skills Projects, University of Birmingham
 - 2019/20: Sophie Coss, Alexander Halstead, Michael Hannaford, Shiv Mehta, Benjamin Northall, Xu Pang, Kamil Prynda, Evander Ribton-Turner, Jessica Ridsdale-Smith, Zayd Saleh, Thomas Smith, Tianfang Sun, Junyu Wang, Wenxuang Yang
 - 2018/19: Jake Davis, Nicholas Evans, Erica Galea, Thomas Haynes, Ciara Moore, Hannah Smithson, Khadija Tahir

TEACHING ACTIVITY

- *Real and Complex Analysis*, University of Birmingham (2020/21)
- *Multivariable and Vector Analysis*, University of Birmingham (2020/21)
- *Multivariable and Vector Analysis*, University of Birmingham (2019/20)
- *Multivariable and Vector Analysis*, University of Birmingham (2018/19)
- *Advanced Topics in PDE*, Universität Bonn (2017/18)
- *Geometric Aspects of Harmonic Analysis*, Universität Bonn (2016/17)
- *Advanced Topics in PDE*, Universität Bonn (2016/17)
- *Real and Harmonic Analysis*, Universität Bonn (2015/16)
- *Analysis III* (in German), Universität Bonn (2015/16)
- *Nonlinear Fourier Analysis*, Universität Bonn (2015/16)
- *Analysis II* (in German), Universität Bonn (2014/15)
- *Analysis I* (in German), Universität Bonn (2014/15)
- *Nonlinear Fourier Analysis*, Universität Bonn (2012/13)
- *Introduction to Topology and Analysis B*, UC Berkeley (2011/12)
- *Introduction to Topology and Analysis A*, UC Berkeley (2011/12)
- *Calculus 2*, UC Berkeley (2006/07)
- *Calculus 1*, UC Berkeley (2006/07)

PEDAGOGICAL MATERIAL

Lecture Notes

- *Multivariable and Vector Analysis*, 59 pages, available upon request

Problem Sheets

- *Multivariable and Vector Analysis*, available upon request
- *Analysis I*, available at <http://web.mat.bham.ac.uk/~oliveird/>
- *Analysis II*, available at <http://web.mat.bham.ac.uk/~oliveird/>
- *Analysis III*, available at <http://web.mat.bham.ac.uk/~oliveird/>

Video Recordings

- *Multivariable and Vector Analysis*, 20 lectures, available upon request

TUTORING & MENTORSHIP

- SPM Volunteer Professor, Teach for Portugal, Fundação Calouste Gulbenkian and Sociedade Portuguesa de Matemática (2021–)
- EPS PERCAT Pilot Mentor, University of Birmingham (2020/21)
- Personal Tutor for 50+ students, University of Birmingham (2018–2020)
- *Mentor Lecture Series* Organizer, University of California, Berkeley (2007/08)

GRANT AND FELLOWSHIP PANELS

- UKRI Funding Service (2021)
- UK Research & Innovation Early Career Researcher Forum (2021)
- The Leverhulme Trust (2020–)
- Engineering and Physical Sciences Research Council (2020–)

EDITORIAL BOARDS

Guest Editor

- Boletim da Sociedade Portuguesa de Matemática (2019–2020)

REFEREEING

- zbMATH Open (2021–)
- Springer (2019–)
- MathSciNet Reviews (2018–)
- 18 Peer-reviewed Journals:
 - *Advances in Mathematics*
 - *Annales Scientifiques de l'École Normale Supérieure*
 - *Communications in Pure and Applied Analysis*
 - *Experimental Mathematics*
 - *Forum Mathematicum*
 - *Geometric and Functional Analysis*
 - *Journal d'Analyse Mathématique*

- Journal of the European Mathematical Society
- Journal of Fourier Analysis and Applications
- Journal of Geometric Analysis
- Journal of Mathematical Analysis and Applications
- Mathematika
- Proceedings of the American Mathematical Society
- Proceedings of the Edinburgh Mathematical Society
- Proceedings of the Royal Society of Edinburgh
- Quarterly Journal of Mathematics
- SIAM Journal on Mathematical Analysis
- Revista Matemática Iberoamericana

OUTREACH: SPEAKING

- *ENEMath'19*, Universidade do Porto, Portugal (16/04/2019)
- *Offer-holder Visit Day*, University of Birmingham, UK (28/11/2018)
- *5th MIGSAA Annual Student Colloquium*, Maxwell Institute, Edinburgh, UK (21/09/2018)
- *Inaugural Lecture*, Dies Academicus, Universität Bonn, Germany (16/05/2018)
- *Basic Notions Seminar*, Universität Bonn, Germany (10/01/2014)
- *Portuguese American Postgraduate Society Meeting*, University of California, Berkeley, US (20/11/2010)

OUTREACH: WRITING

- *O que é um círculo?* Números, cirurgias e nós de gravata: 10 anos de Seminário Diagonal no IST. IST Press, 2012, 217–229.
- *Volta ao Mundo em 45 Minutos*. Seminário Diagonal, Proceedings IST III. IST Press, 2006, 85–99.
- *Cordas, Cabos e Outros Objectos Dependurados*. *Gazeta de Física* **26** (2003), 26–31.

EVENT ORGANIZATION

- International Conferences
 - *Global Portuguese Mathematicians 2.0*, Porto, Portugal (2019)
 - *Harmonic Analysis in Honor of Michael Christ*, Madison, US (2016)
- Special Sessions
 - *Harmonic and Complex Analysis*, 7th Iberian Mathematical Meeting, Évora, Portugal (2018)
 - *LMS Harmonic Analysis and PDEs Workshop*, Birmingham, UK (2018)

- *Geometric Aspects of Harmonic Analysis*, Joint International Meeting of the AMS, EMS and SPM, Porto, Portugal (2015)
- Research Seminars
 - UK Virtual Harmonic Analysis Seminar (2020–)
 - Analysis Seminar, University of Birmingham, UK (2018–2019)
 - Analysis Seminar, Universität Bonn, Germany (2016–2017)
 - Harmonic Analysis and Differential Equations Seminar, University of California, Berkeley (2010–2011)
- Bonn Hausdorff Summer Schools
 - *Decoupling and Polynomial Methods in Analysis*, Kopp, Germany (2017)
 - *Sharp Inequalities in Harmonic Analysis*, Kopp, Germany (2015)
 - *$T(1)$ and $T(b)$ Theorems and Applications*, Kopp, Germany (2013)

COMMITTEE SERVICE

- Committee Lead
 - *Global Portuguese Mathematicians* Scientific Committee (2019)
 - Research Fellowship Hiring Committee, University of Birmingham (2019)
- Committee Member
 - International Recruitment Team, University of Birmingham (2020–)
 - PhD Studentship Hiring Committee, University of Birmingham (2018, 2020)
 - Habilitation Thesis of Mariusz Mirek, Universität Bonn (2016)
 - Bachelor Theses of Annika Dehren (2015), Gregor Maier (2017), Lauritz Streck (2017), Universität Bonn
- External Examiner
 - PhD Thesis of Finlay McIntyre, University of Edinburgh (2021)
- Internal Examiner
 - PhD Thesis of Gianmarco Brocchi, University of Birmingham (2021)
- Chairperson
 - PhD Thesis of Alberto Espuny Díaz, University of Birmingham (2020)