Asst. Prof. Dr. Peter J.C. Dickinson

Personal Information

Webpage:	http://dickinson.website
Linkedin:	www.linkedin.com/in/PJCDickinson
E-mail:	peter.jcd@gmail.com
Date of Birth:	16th March 1985
Marital status:	Married to Renske C. Dickinson-Bosman.
Address:	Den Dolder, The Netherlands.
Citizenship:	United Kingdom and Republic of Ireland. (Thus I retain EU citizenship after Brexit.)

Skills

- I work well both independently and as part of a team, which is demonstrated by my publication record (see next page).
- I pick up new ideas quickly. When I started my PhD I was completely new to the topic that I was to study, but I ended up finishing with a cum laude distinction.
- I am highly logical and thorough, with a good mathematical knowledge. My primary research interests are currently Mathematical Optimisation and Matrix Analysis.
- I have experience in programming in C, C++, Matlab and Mathematica, along with building visualisations using GeoGebra (www.geogebra.org/peter.jcd).
- I am proficient at presenting my research, both in journals and at conferences.
- I have a good knowledge of Dutch. I use the language in practice and participated in the course Dutch Level 4, TCP Language Centre, University of Twente, 2015.

Certified Online Courses

- Machine Learning, Coursera, Stanford University, 2017.
- In 2017 & 2018, I completed the following 'badges' with IBM Cognitive Class: Big Data Foundations - Level 2; Data Science Foundations - Level 2; Deep Learning.

Ambitions

My primary ambition is that of continual improvement of my knowledge and skills. I would also like to use my knowledge and skills to help improve people's lives, and bring where I work to the top of its field.

Prizes & Awards

- Educational Prize, Advanced Technology (Teacher of the Year), 2017/2018.
- One of my papers has been recognised as one of the "Top-5 Papers Published in Journal of Global Optimization in 2015".
- 2013 OPTL Best Paper Award.
- Cum Laude distinction for my PhD Thesis (2013). This is only awarded to the top 5% of PhD theses and is the highest distinction possible at the University of Groningen.

Experience

Apr. 2014 - present: Assistant Professor at the University of Twente
Fac. of Electrical Eng., Mathematics & Computer Science, University of Twente, NL.
I am currently an Assistant Professor within the group Discrete Mathematics & Mathematical Programming. The position is a combination of research and teaching, including

giving lectures, mentoring students, writing articles, refereeing articles, applying for grants, organising the DAMUT colloquia and being in task groups. Since 2016 I have had sole responsibility for the national Mastermath course on Continuous Optimisation in Utrecht.

May 2013 - Feb. 2014: Postdoctoral Student at the University of Vienna
Institut für Statistik und Operations Research, University of Vienna, AT.
This was a postdoctoral research/teaching position at the University of Vienna, mentored by Prof. Dr. I.M. Bomze. During this I was continuing research from my PhD studies into conic and continuous optimisation. From mid-July to mid-August 2013, I was also a visiting fellow with the Polynomial Optimization Programme at the Isaac Newton Institute for Mathematical Sciences, University of Cambridge, UK.

May 2009 - Apr. 2013: PhD Student at the University of Groningen
Johann Bernoulli Institute, University of Groningen, NL.
For my PhD thesis in conic and continuous optimisation, entitled *The Copositive Cone, the Completely Positive Cone and their Generalisations*, I received a cum laude distinction. My promotor and supervisor in this was Prof. Dr. M. Dür. During this time I was also a member of the student scuba diving club G.B.D. Calamari, in which I helped students to learn scuba diving whilst they helped me to learn Dutch.

Nov. 2007 - Aug. 2008: Gap year, Backpacking around Australia
In order to support myself during this I did a number of jobs, with my main job being as a scuba diver. In this I primarily led customers around dive sites, which required skills in leadership whilst being friendly, along with knowledge of marine life and diving.

Oct. 2003 - Jun. 2007: Undergraduate at the University of Cambridge
Queens' College, University of Cambridge, UK.
I received a double first in a Natural Sciences bachelor and master's focused on physics and mathematics. In 2006 I received my BA in Natural Sciences (grade of 1st for years 1 & 2, and 2:1 for year 3), and in 2007 I received my MSc in Natural Sciences (grade of 2:2).
During this time I was also a member of the Cambridge University Office Training Corps, which presented me with enjoyable challenges, whilst also teaching me leadership skills. Included among the many activities that I participated in with them were scuba diving in Egypt, parachute jumping in Germany and completing the Leader Development and Assessment Course with the U.S. army.

Dissemination of Work

I have a total of 14 published articles in international journals, along with 1 PhD thesis and 1 article in the journal of the Royal Dutch Mathematical Society. My first article was published in 2010, and my articles already have over 250 citations. I additionally disseminate my research through presentations, and have so far given 39 presentations in 12 countries (excluding classes). Further details are provided below and at http://dickinson.website.
I have also refereed for 16 international journals, with over 30 referee reports written. A verified partial summary of this is available on my Publons profile.

Publications

1. P.J.C. Dickinson, *Erratum to: On the DJL conjecture for order 6*, *Operators and Matrices, 2017.*
2. I.M. Bomze, J. Cheng, P.J.C. Dickinson and A. Lisser, *A fresh CP look at mixed-binary QPs: New formulations and relaxations*, *Mathematical Programming, 2017.*

3. P.J.C. Dickinson and R. Hildebrand, *Considering Copositivity Locally*, *Journal of Mathematical Analysis and Applications, 2016.*
4. I.M. Bomze, P.J.C. Dickinson and G. Still, *The structure of completely positive matrices according to their CP-rank & CP-plus-rank*, *Linear Algebra and its Applications, 2015.*
5. P.J.C. Dickinson and J. Povh, *On an extension of Pólya's Positivstellensatz*, *Journal of Global Optimization, 2015.*
   * One of the "Top-5 Papers Published in Journal of Global Optimization in 2015".
6. P.J.C. Dickinson and L. Gijben, *On the Computational Complexity of Membership Problems for the Completely Positive Cone and its Dual*, *Computational Optimization and Applications, 2014.*
   * This article already has over 70 citations.
7. P.J.C. Dickinson, *On the Exhaustivity of Simplicial Partitioning*, *Journal of Global Optimization, 2014.*

- P.J.C. Dickinson, *The Copositive Cone*, *Nieuw Archief voor Wiskunde, 2014.*
  * An article in the quarterly journal of the Royal Dutch Mathematical Society introducing myself and my research.

8. P.J.C. Dickinson and J. Povh, *Moment approximations for set-semidefinite polynomials*, *Journal of Optimization Theory and Applications, 2013.*
9. P.J.C. Dickinson, M. Dür, L. Gijben and R. Hildebrand, *Scaling relationship between the copositive cone & Parrilo's 1st level approximation*, *Optimization Letters, 2013.*
   * 2013 OPTL Best Paper Award
10. P.J.C. Dickinson, Gabriele Eichfelder and J. Povh, *Erratum to: On the set-semidefinite representation of nonconvex quadratic programs over arbitrary feasible sets*, *Optimization Letters, 2013.*
11. P.J.C. Dickinson, M. Dür, L. Gijben and R. Hildebrand, *Irreducible elements of the copositive cone*, *Linear Algebra and its Applications, 2013.*

- P.J.C. Dickinson, *The Copositive Cone, the Completely Positive Cone and their Generalisations*, PhD thesis, University of Groningen, 2013.
  * Cum Laude distinction (highest distinction possible at the University of Groningen).

12. P.J.C. Dickinson and M. Dür, *Linear-time complete positivity detection & decomposition of sparse matrices*, *SIAM Journal on Matrix Analysis and Applications, 2012.*
13. P.J.C. Dickinson, *Geometry of the Copositive and Completely Positive Cones*, *Journal of Mathematical Analysis and Applications, 2011.*
14. P.J.C. Dickinson, *An Improved Characterisation of the Interior of the Completely Positive Cone*, *Electronic Journal of Linear Algebra, 2010.*

Presentations

2017: 3 presentations (2 in Canada, 1 in Germany).
2016: 2 presentations (1 in Australia, 1 in Netherlands).
2015: 6 presentations (2 in Netherlands, 1 in Austria, 1 in France, 1 in UK, 1 in USA).
2014: 1 presentation (1 in USA).
2011–2013: 27 presentations (11 in Netherlands, 3 in Austria, 3 in Germany, 3 in UK, 2 in Canada, 1 in Italy, 1 in Israel, 1 in USA, 1 in Slovenia, 1 in Portugal).