

Professor Deryk Osthus

Professor in Graph Theory

[School of Mathematics \(/schools/mathematics/index.aspx\)](/schools/mathematics/index.aspx)

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About

The main research area of Deryk Osthus is Combinatorics. He currently works on random graphs, randomized algorithms, Ramsey theory and extremal graph theory.

He has obtained several significant grants, including several from the EPSRC. In particular, he currently holds an ERC starting grant 'Asymptotic properties of graphs' (2012-2017).

He was awarded the European Prize in Combinatorics in 2003 and the London Mathematical Society Whitehead prize in 2014. Further recognition for his research includes an invited lecture at the International Congress of Mathematicians in Seoul in 2014.

School web page: **web.mat.bham.ac.uk/D.Osthus/** (<http://web.mat.bham.ac.uk/D.Osthus/>)

Qualifications

- Habilitation (Computer Science, 2004)
- PhD (Computer Science, 2000)

Biography

Deryk Osthus obtained a BA in Mathematics from Cambridge in 1996 and was awarded the Certificate of Advanced Studies in Mathematics (Part III) from the University of Cambridge in 1997.

In 2000, he obtained a PhD in Theoretical Computer Science at the Humboldt-University Berlin, where he also obtained his Habilitation in 2004. In 2003, he was awarded the European Prize in Combinatorics (jointly with Daniela Kühn).

In 2004, he moved to Birmingham to take up a position as a lecturer. He was promoted to Senior lecturer in 2010.

He was promoted to Professor in 2012.

Postgraduate supervision

Deryk Osthus is happy to supervise PhD students in Combinatorics. If you are interested, please email him.

Research

RESEARCH THEMES

Combinatorics, especially Extremal and Probabilistic Graph Theory

RESEARCH ACTIVITY

The main research area of Deryk Osthus is Combinatorics. He has worked on random graphs, randomized algorithms and extremal graph theory. For example, he studied a general version of the perfect matching problem. (A perfect matching is a covering of the vertices of a graph by disjoint edges.) The problem of finding a perfect matching in a graph is well understood.

However, the situation becomes much more complicated if instead of covering the vertices by disjoint edges one aims to cover them by disjoint copies of a given graph H . Together with D. Kühn, he determined (for every graph H) the minimum degree which guarantees such a perfect 'H-matching'. The solution involves a parameter which is closely related to the chromatic number of H .

Publications

A complete list of my preprints and publications is available here: **web.mat.bham.ac.uk/D.Osthus/pubdo.html** (<http://web.mat.bham.ac.uk/D.Osthus/pubdo.html>)

