



Rio Workshop on  
**Extremal and Structural Combinatorics**

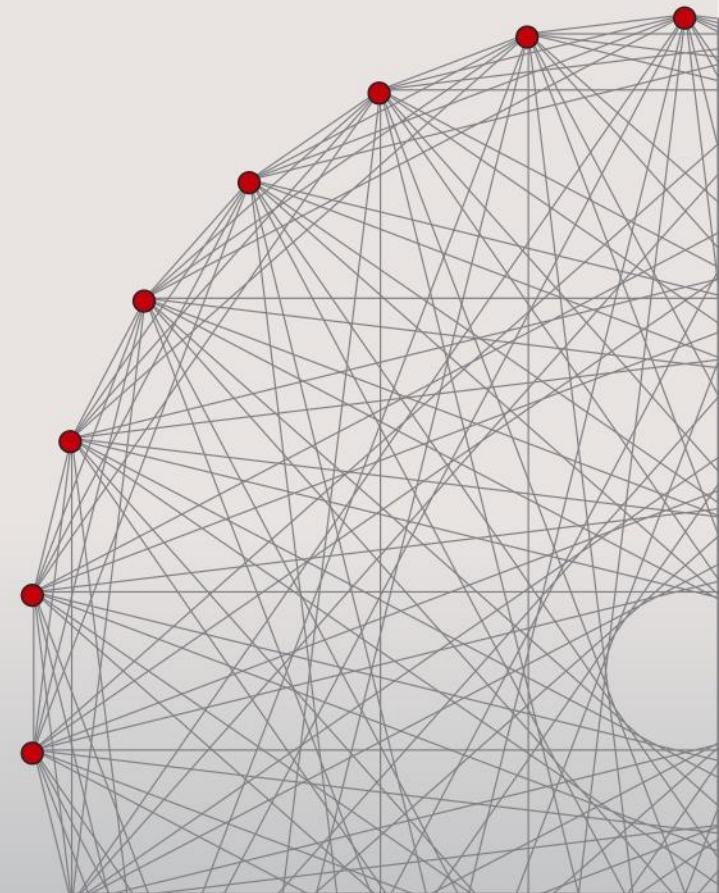
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

# CERTIFICATE

We hereby certify that, **Andrew Treglown, University of Birmingham**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

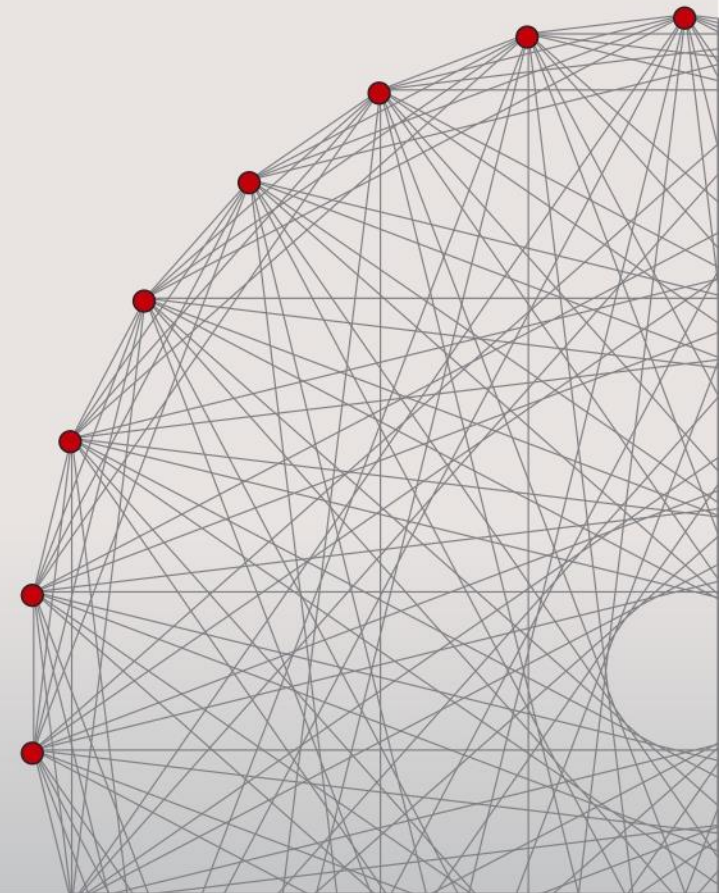
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Alexander Scott, Oxford University**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

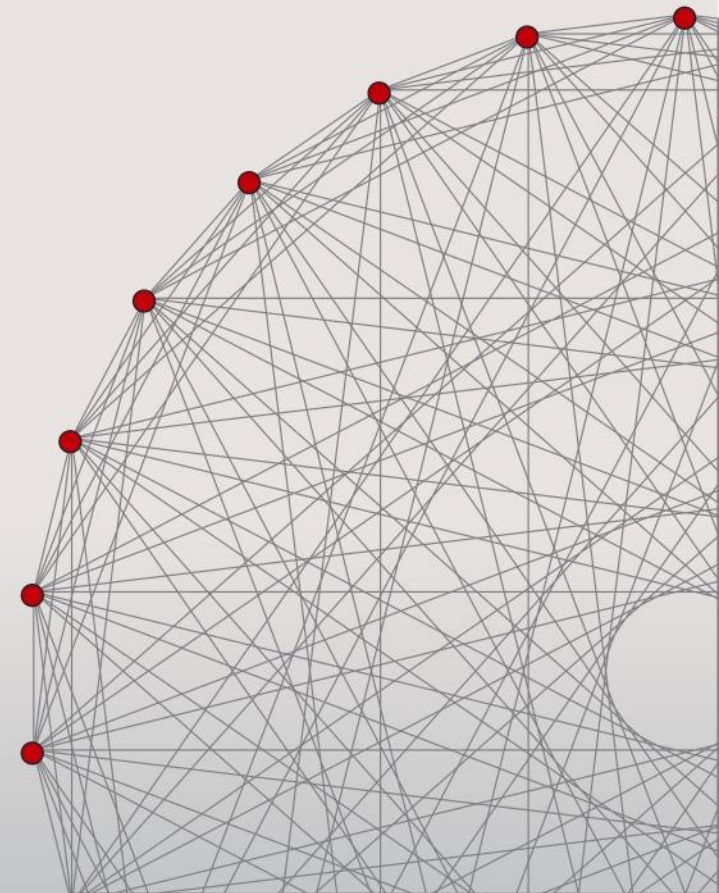
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Alexandre Santiago de Abreu**, **Universidade Federal do Rio de Janeiro**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

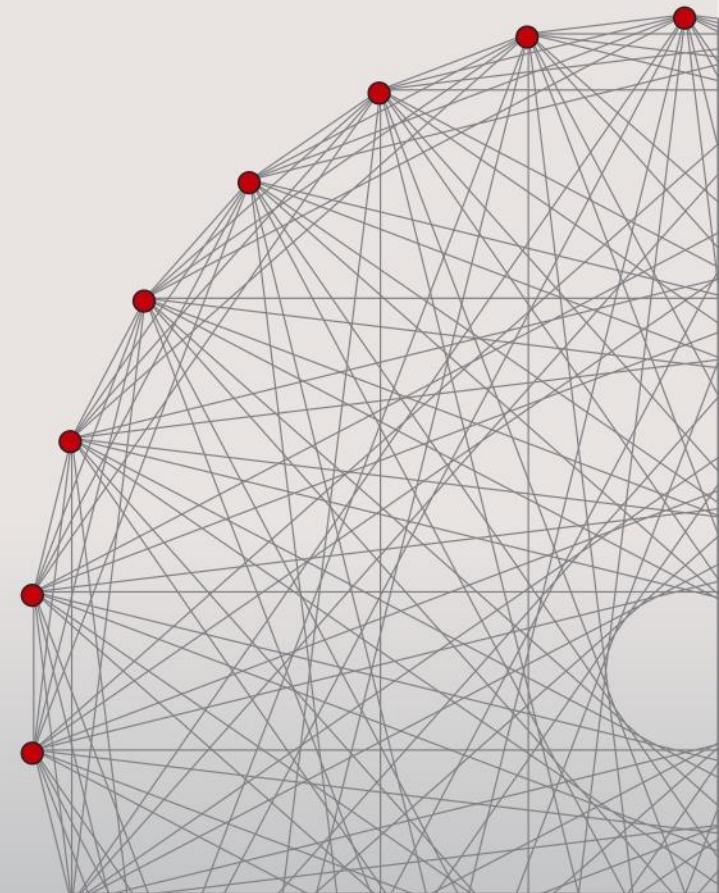
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Alexsander Andrade de Melo**, **Universidade Federal do Rio de Janeiro**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

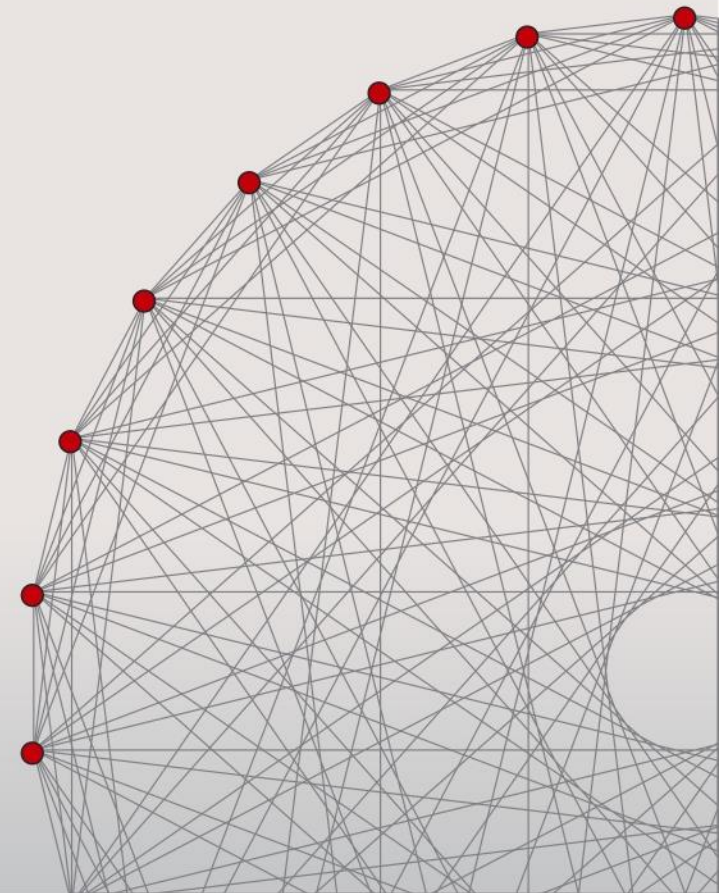
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Ander Lamaison Vidarte, Freie Universitaet Berlin**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

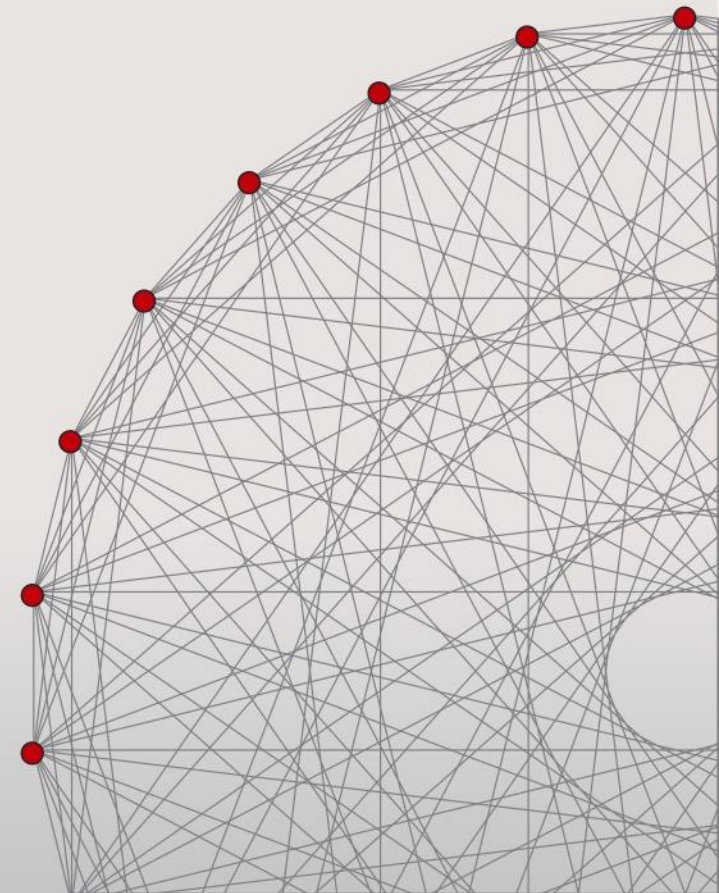
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

# CERTIFICATE

We hereby certify that, **Andrew Thomason, Clare College Cambridge**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

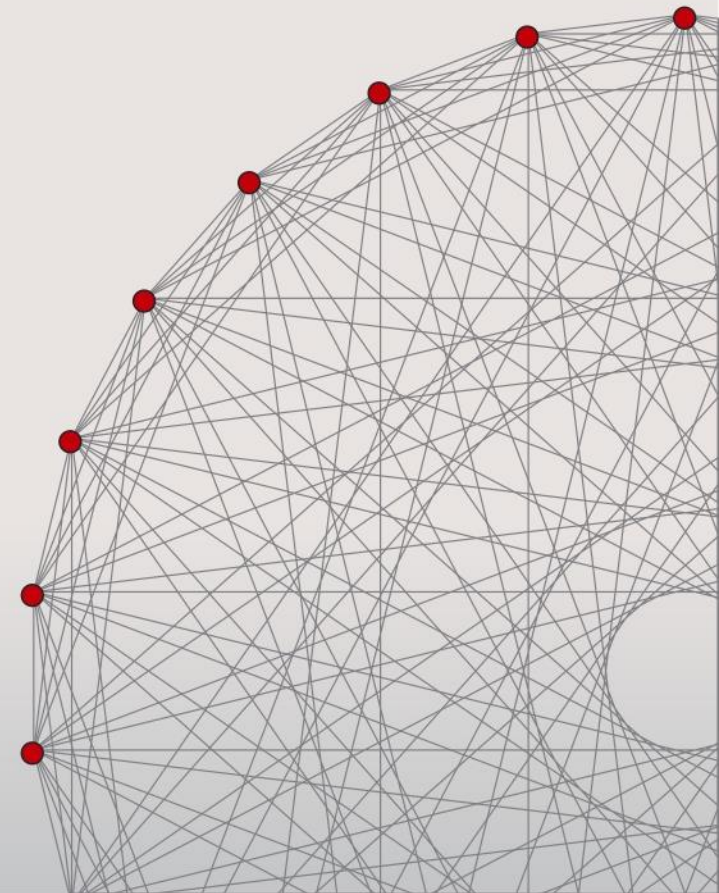
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Anita Liebenau, Monash University**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

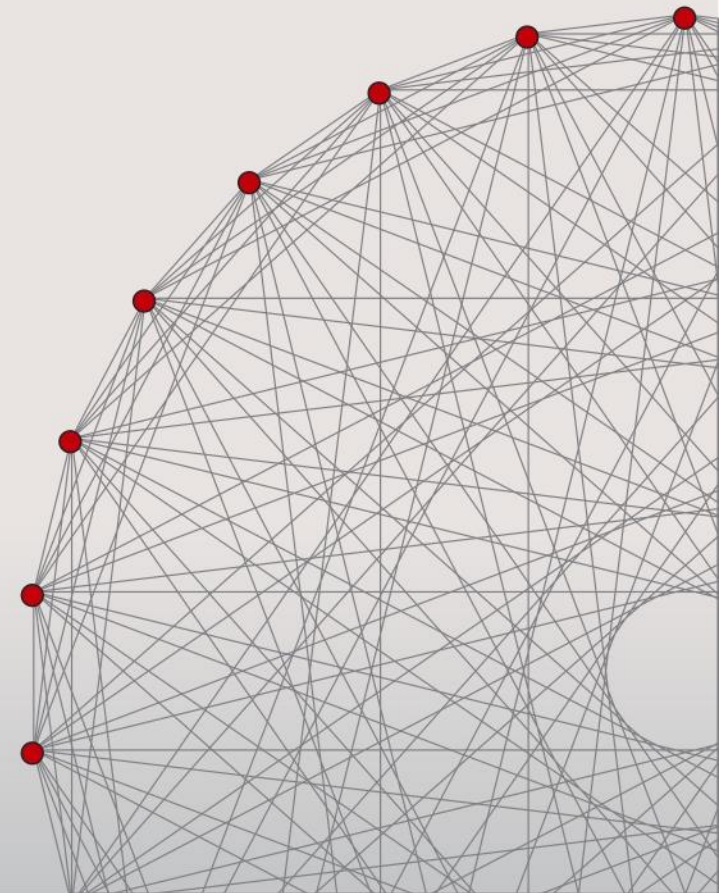
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Antonio Girao, University of Cambridge**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of







Rio Workshop on  
**Extremal and Structural Combinatorics**

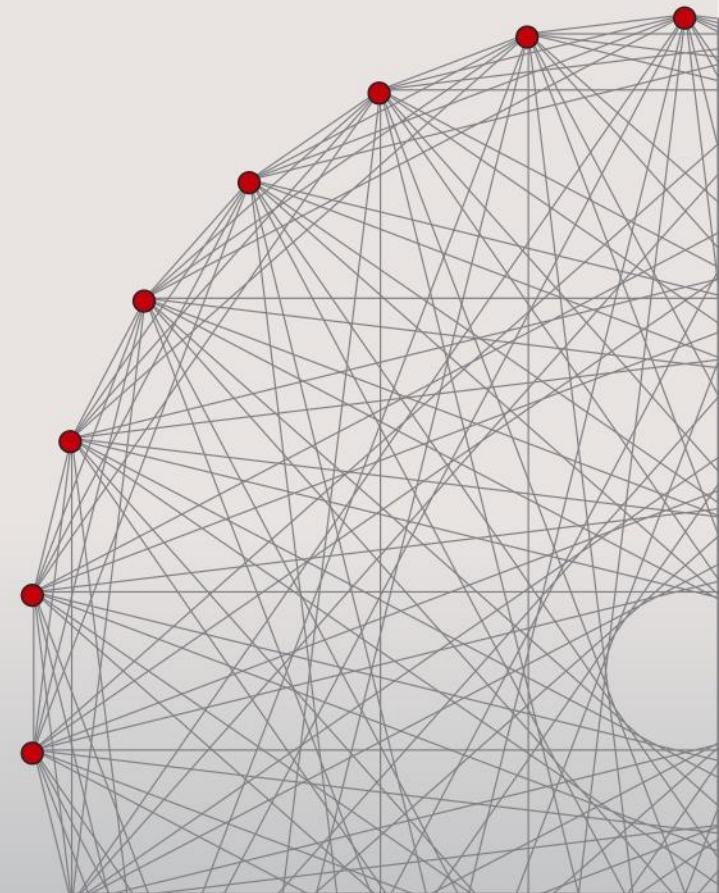
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Bruce Reed, McGill University**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

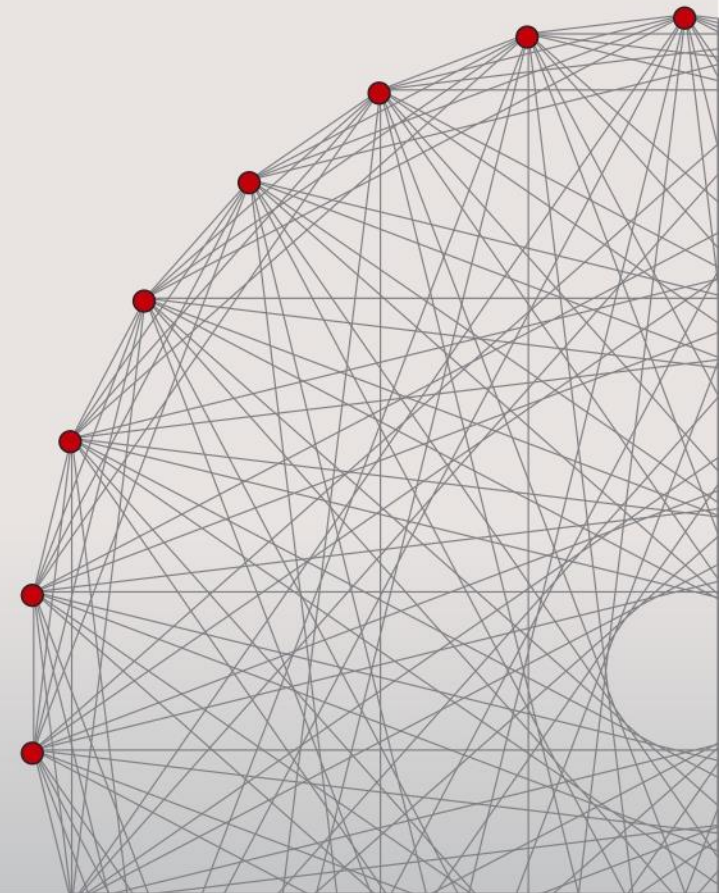
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

# CERTIFICATE

We hereby certify that, **Chinh Hoang, Wilfrid Laurier University**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

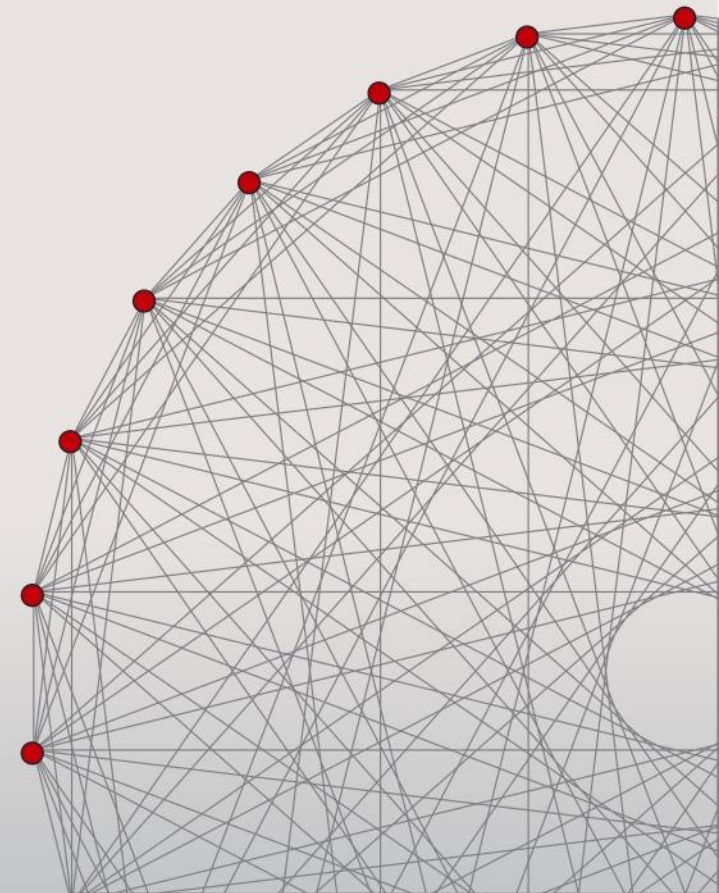
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Chun-Hung Liu, Princeton University**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

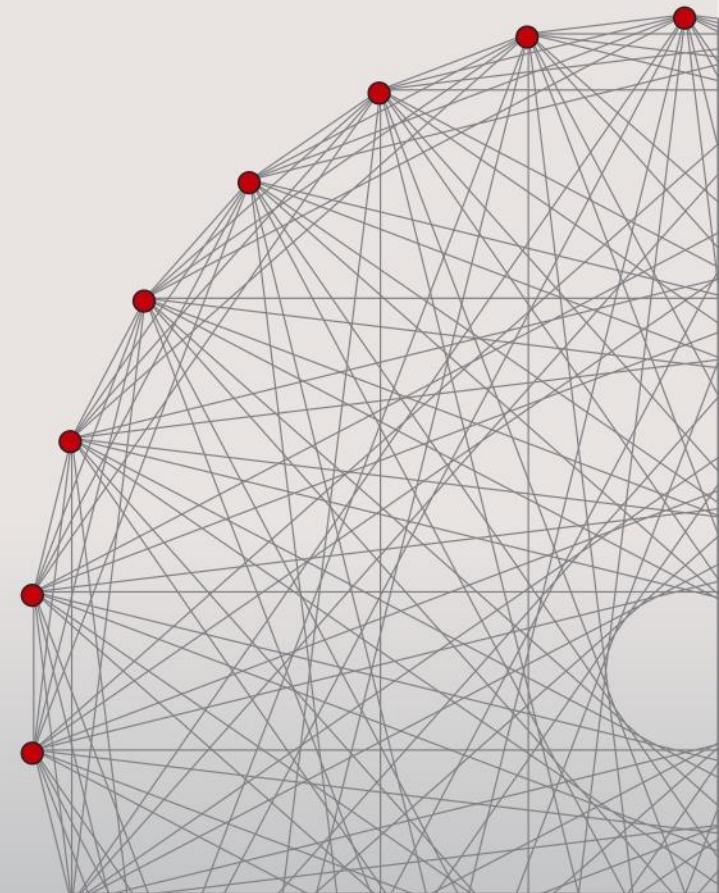
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Daniel Quiroz, Center for Mathematical Modeling - Chile**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

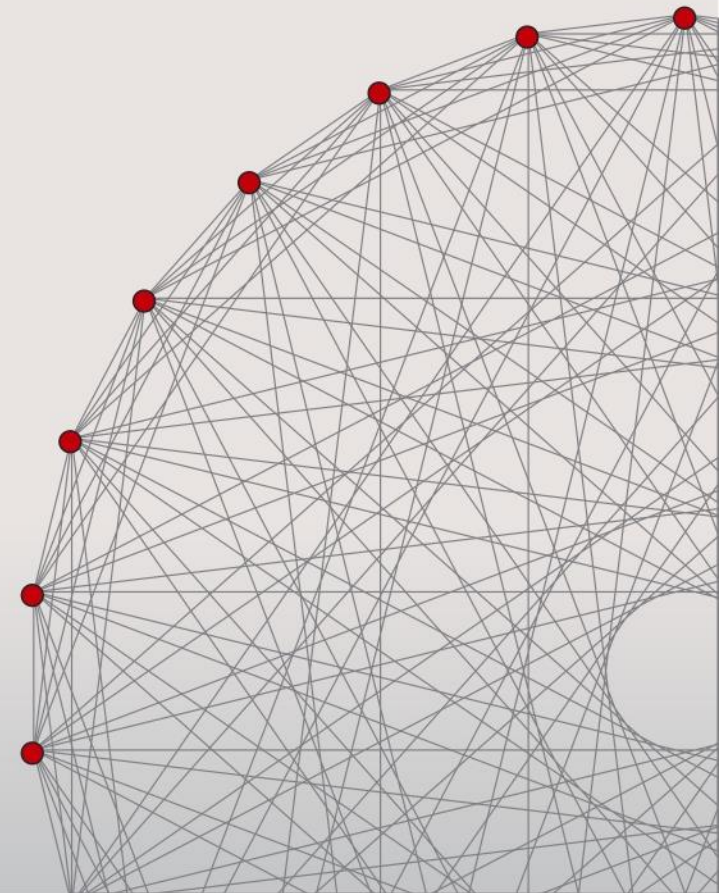
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **David Lewis, The University of Memphis**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

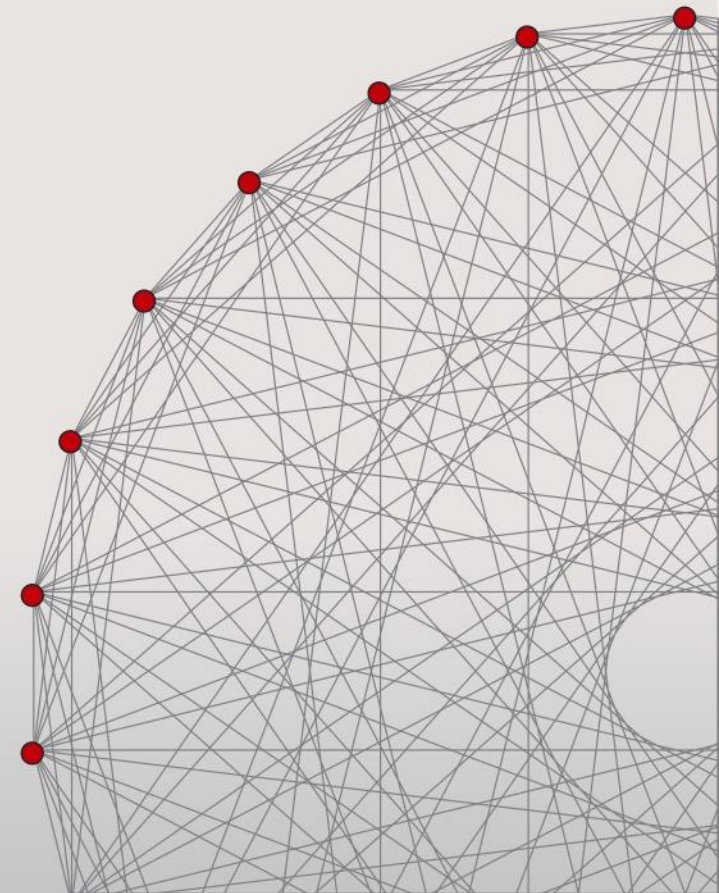
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Dhruv Mubayi, University of Illinois**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

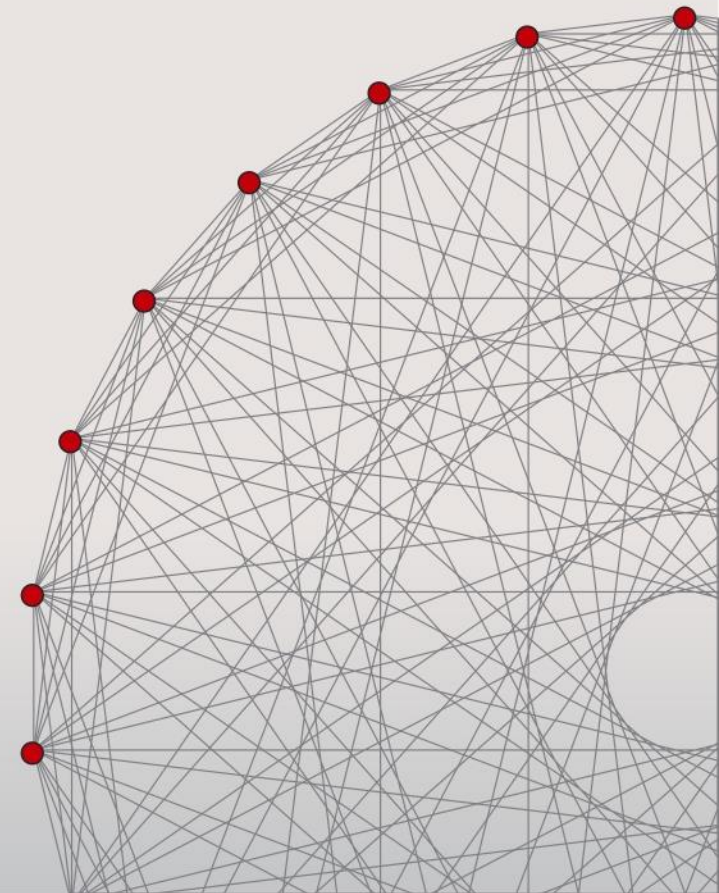
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Eoin Long, University of Oxford**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

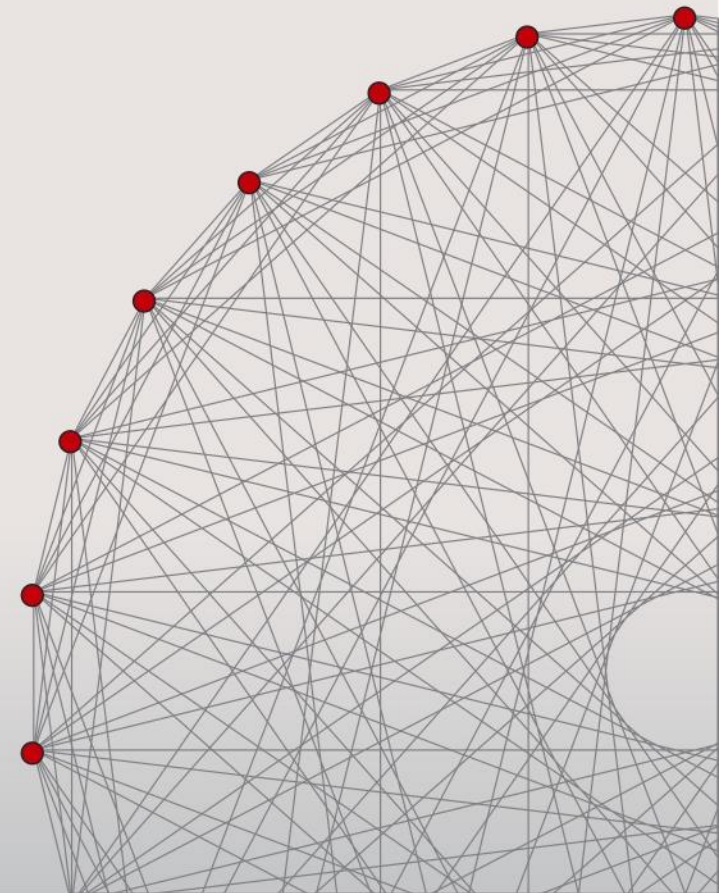
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Fabricio Siqueira Benevides**, Universidade Federal do Ceará, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of







Rio Workshop on  
**Extremal and Structural Combinatorics**

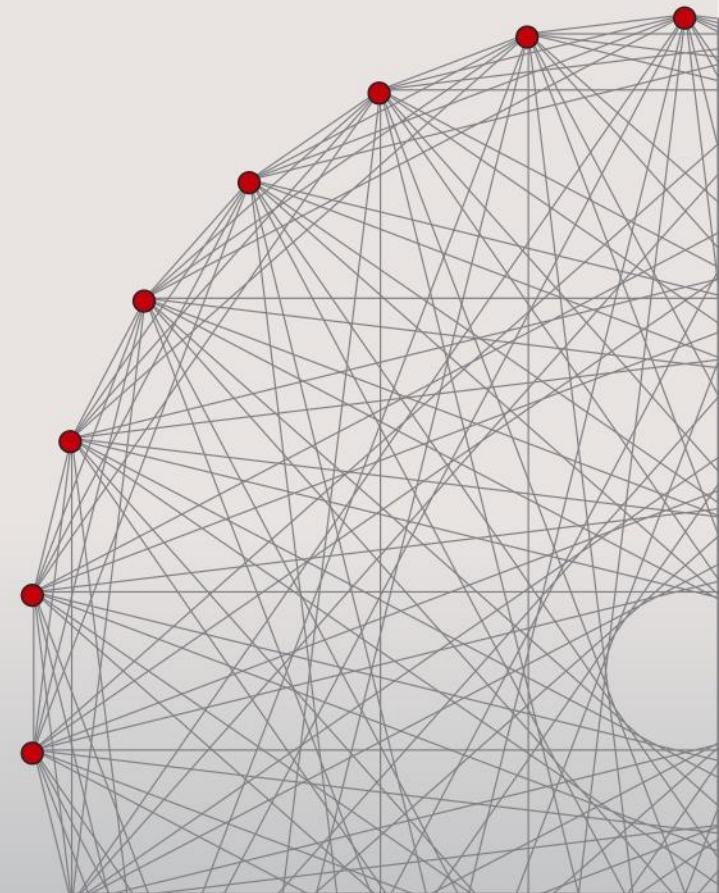
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Guilherme Oliveira Mota**, **Universidade Federal do ABC**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

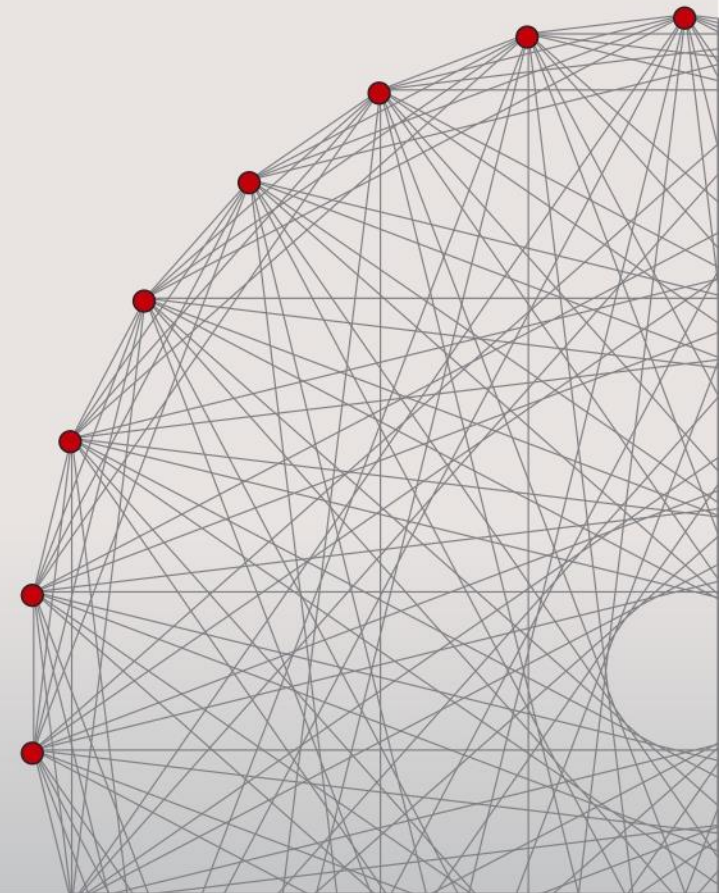
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Gweneth McKinley**, **Massachusetts Institute of Technology**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

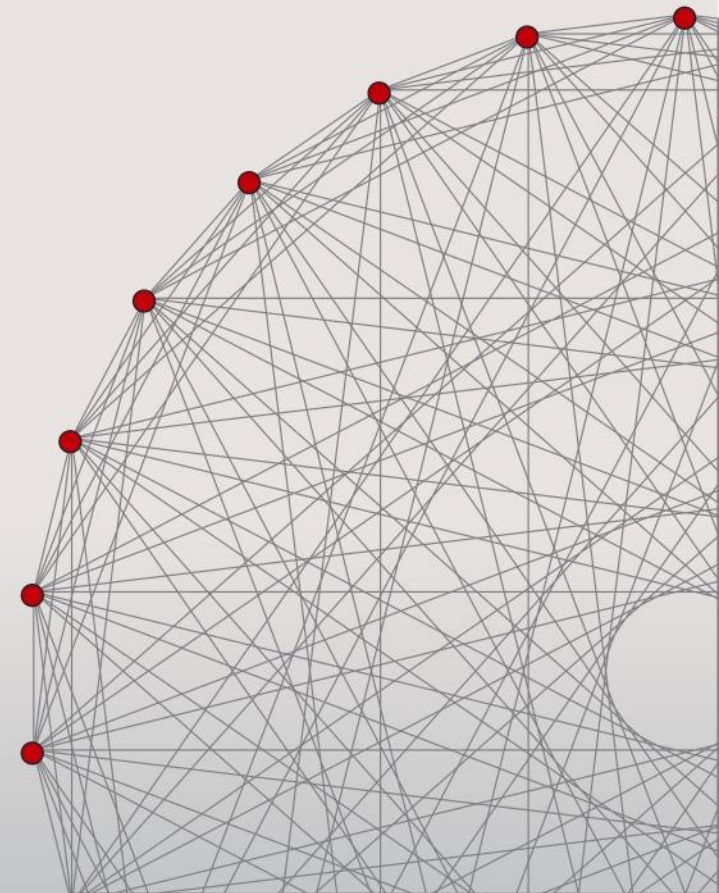
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Jacques Verstraete**, **University of California at San Diego**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

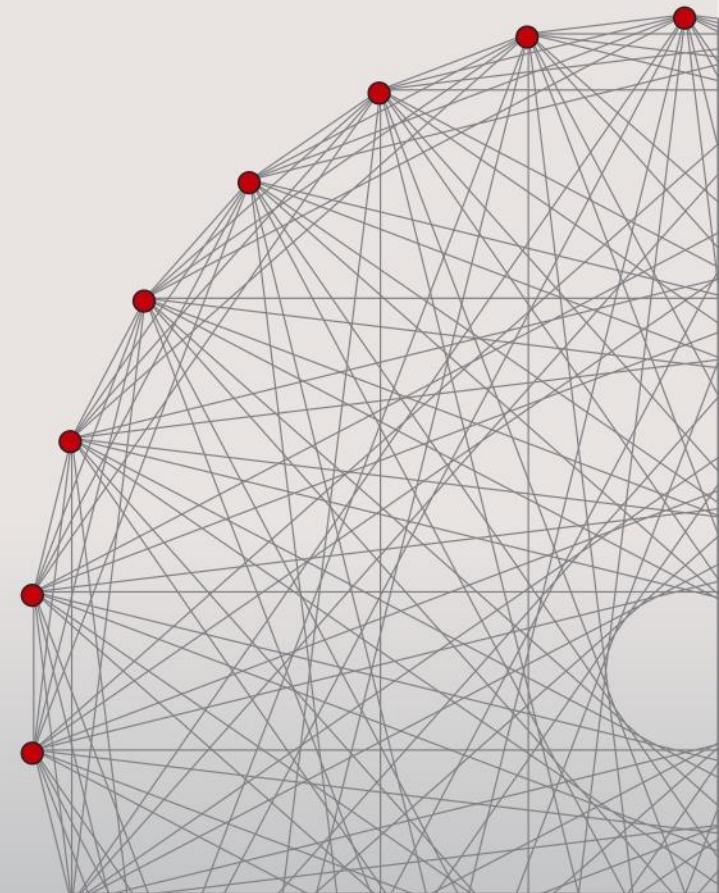
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Jan Corsten**, **London School of Economics and Political Science**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

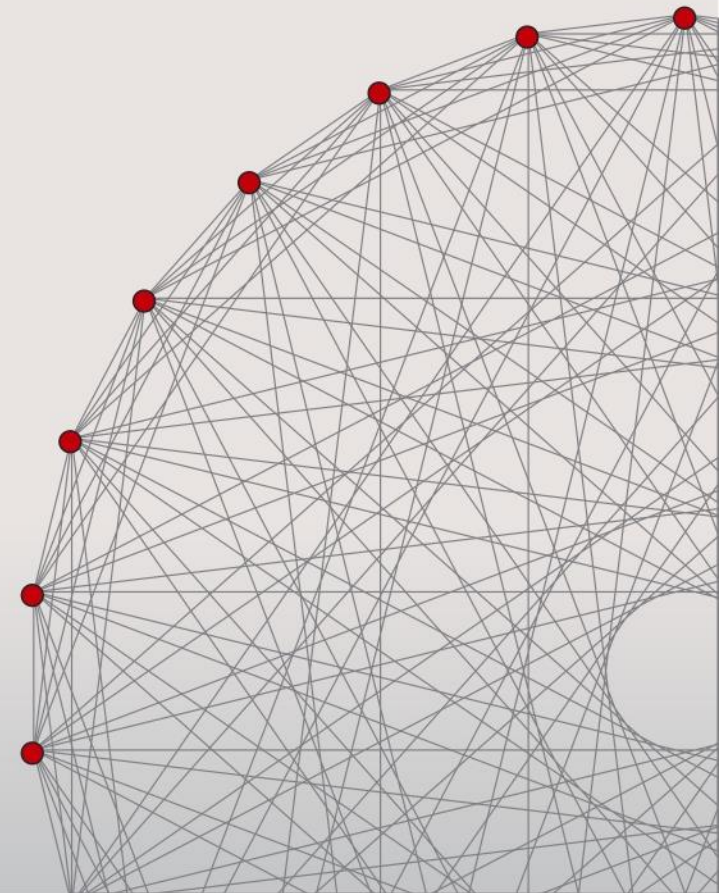
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Jie Han**, **Inst. de Matemática, Est. e Ciência da Computação**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

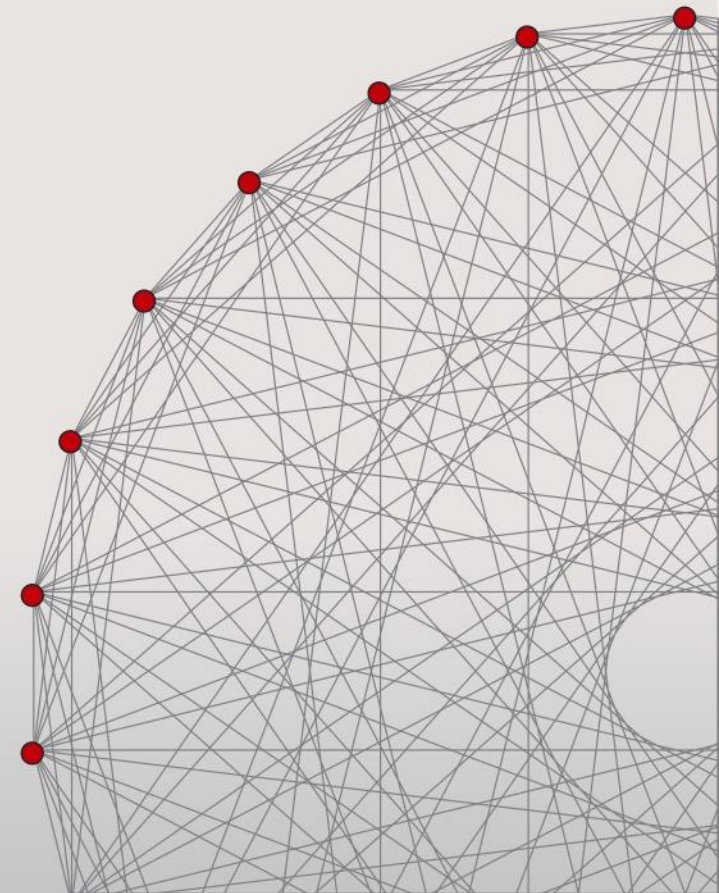
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **João Paulo Costalonga**, **Universidade Federal do Espírito Santo**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

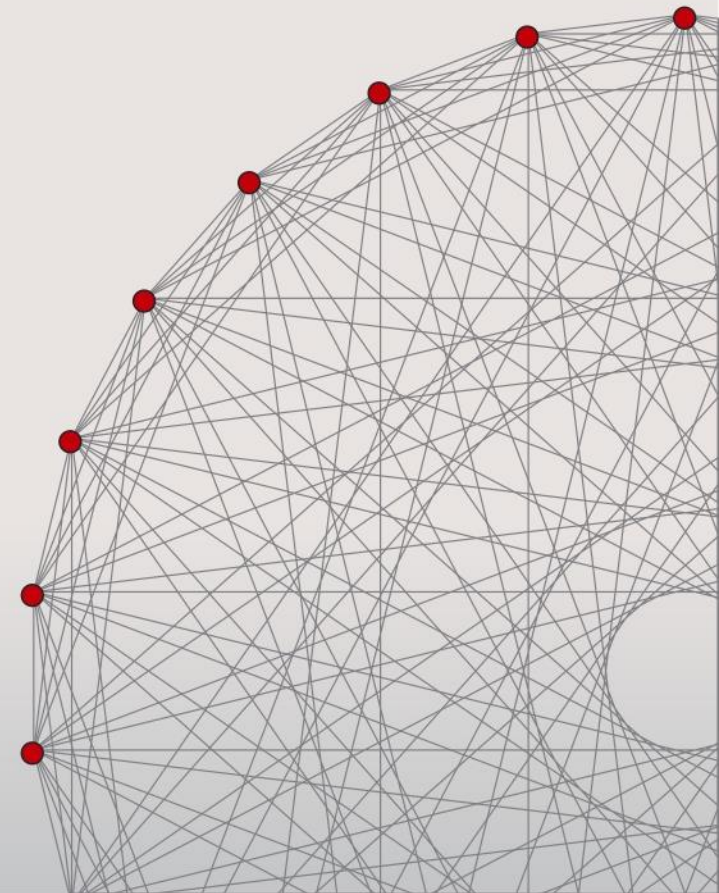
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **José Zamora, Universidad Andres Bello**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

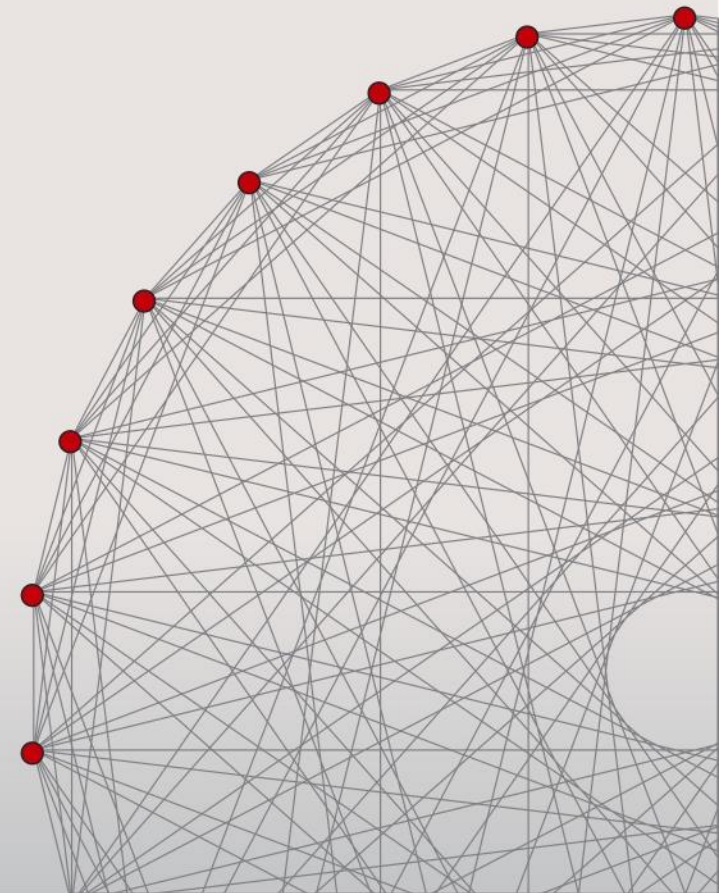
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Jozef Skokan**, **London School of Economics and Political Science**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of







Rio Workshop on  
**Extremal and Structural Combinatorics**

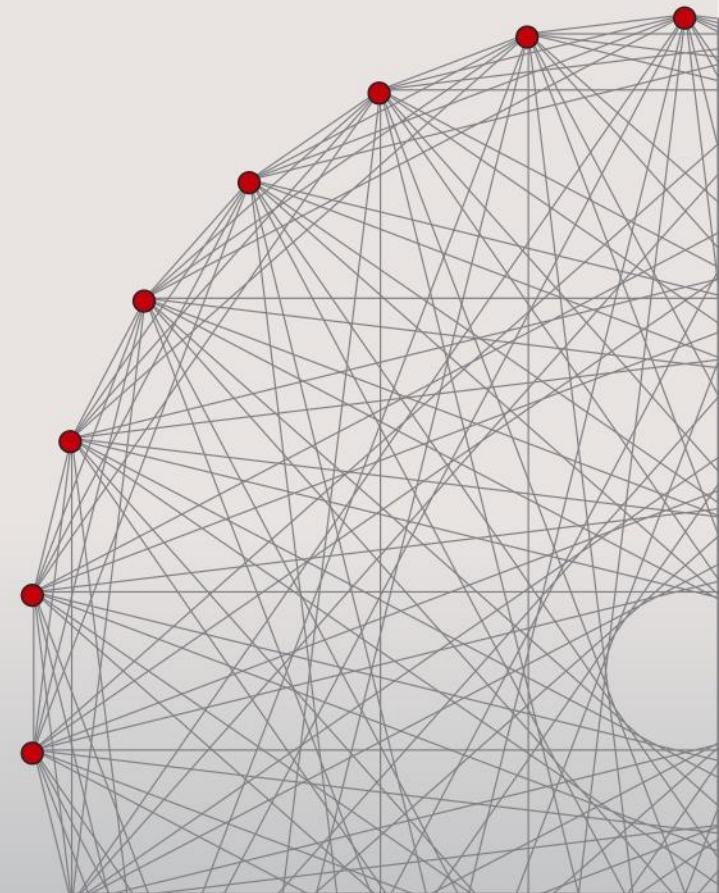
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Julian Sahasrabudhe**, **IMPA - Pós-Doutorando de Excelência**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

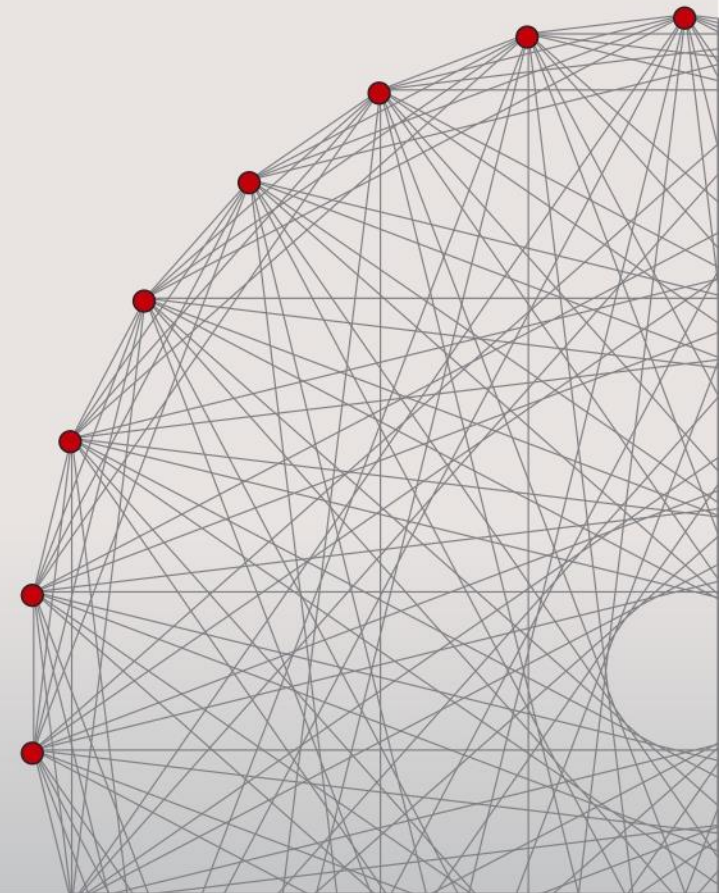
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

# CERTIFICATE

We hereby certify that, **Liana Yepremyan, Oxford University**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

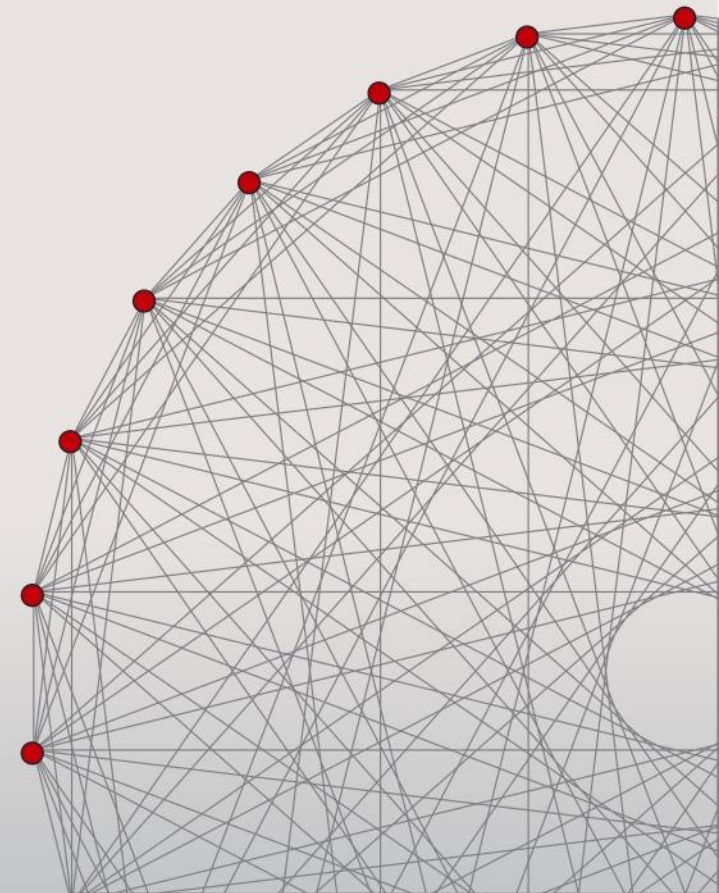
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Louis DeBiasio, Miami University**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

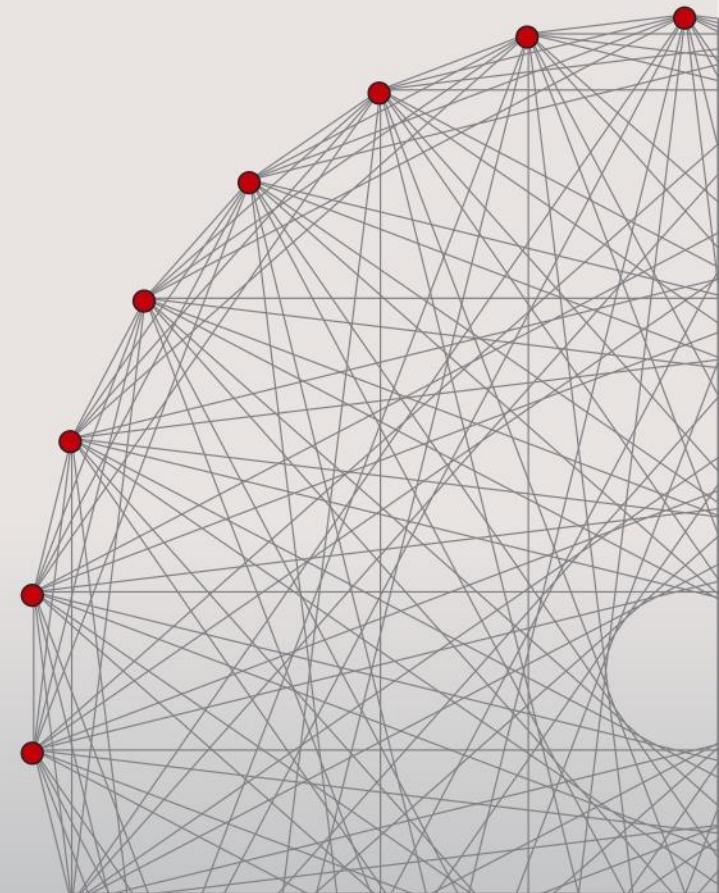
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, ***Luana Cordeiro de Almeida***, **Universidade Federal Fluminense**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

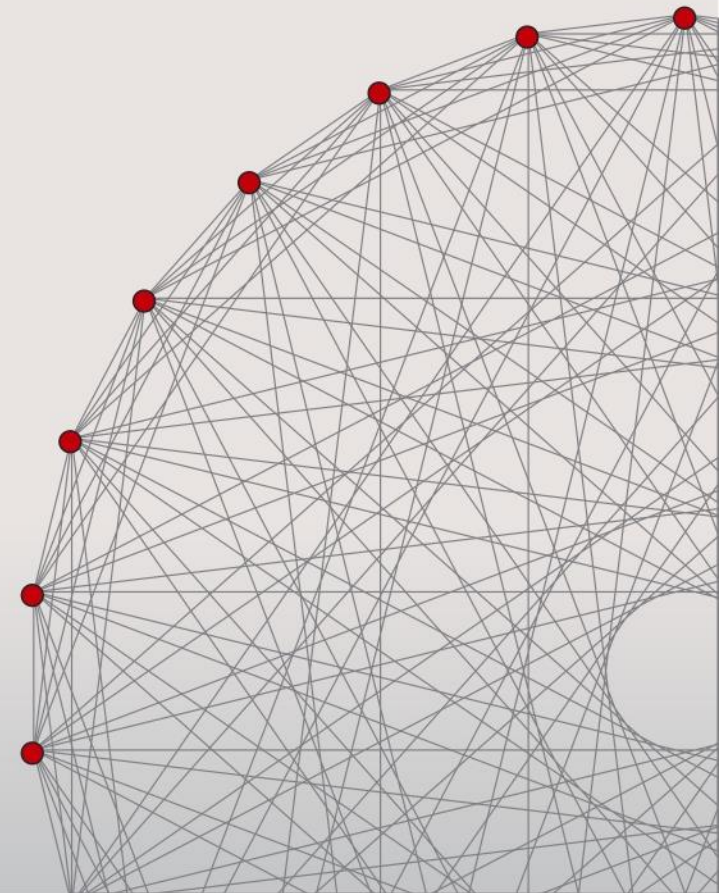
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Luis Felipe Barquero**, **Universidad de Costa Rica**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

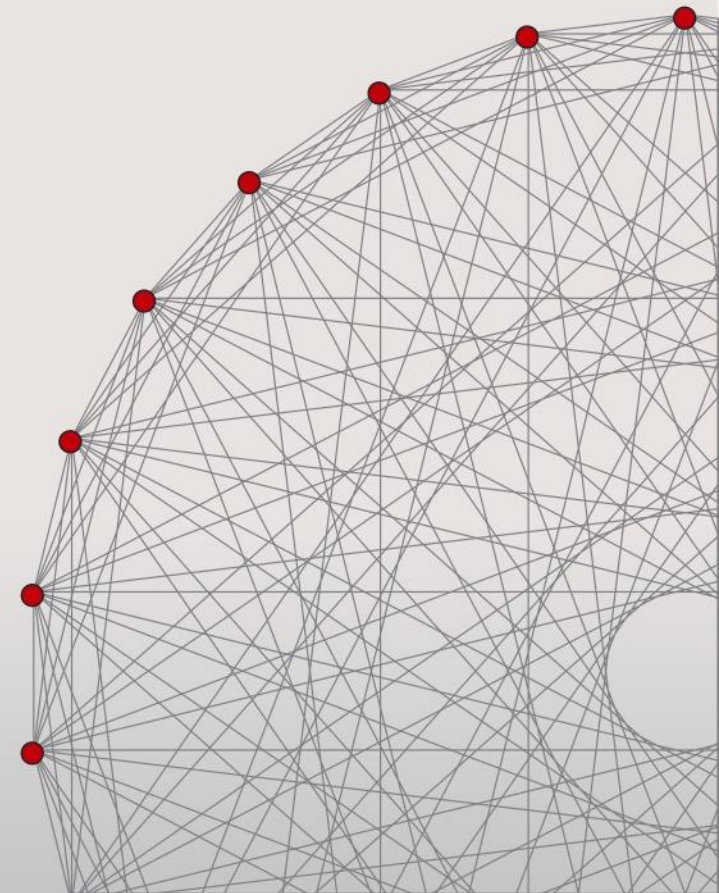
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Marcelo Campos**, **Inst. de Matemática, Est. e Ciência da Computação**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

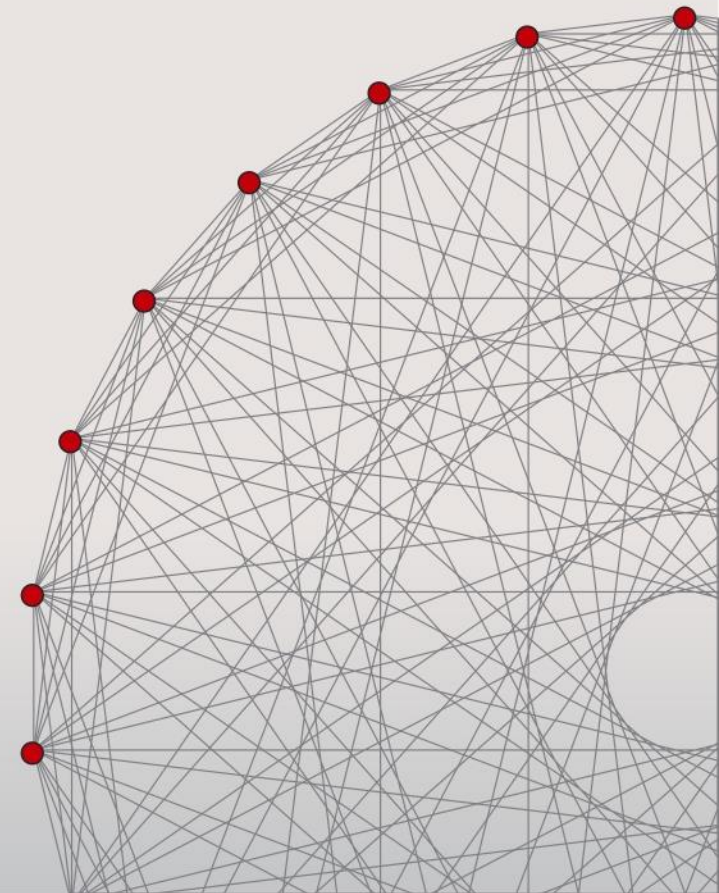
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Maria Chudnovsky, Princeton University**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

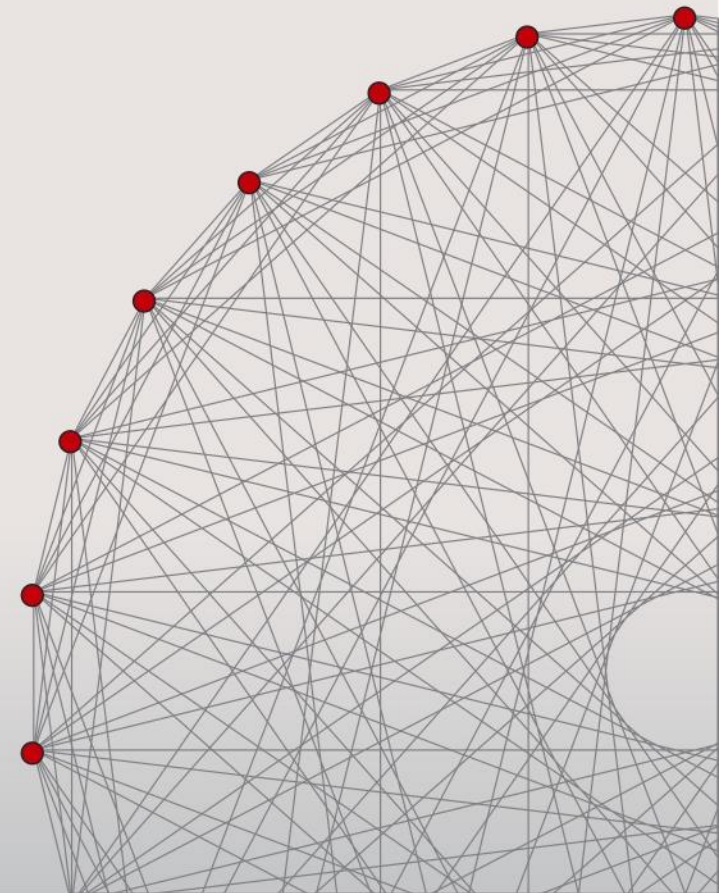
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Matias Pavez Signe**, **Universidad de Chile**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of







Rio Workshop on  
**Extremal and Structural Combinatorics**

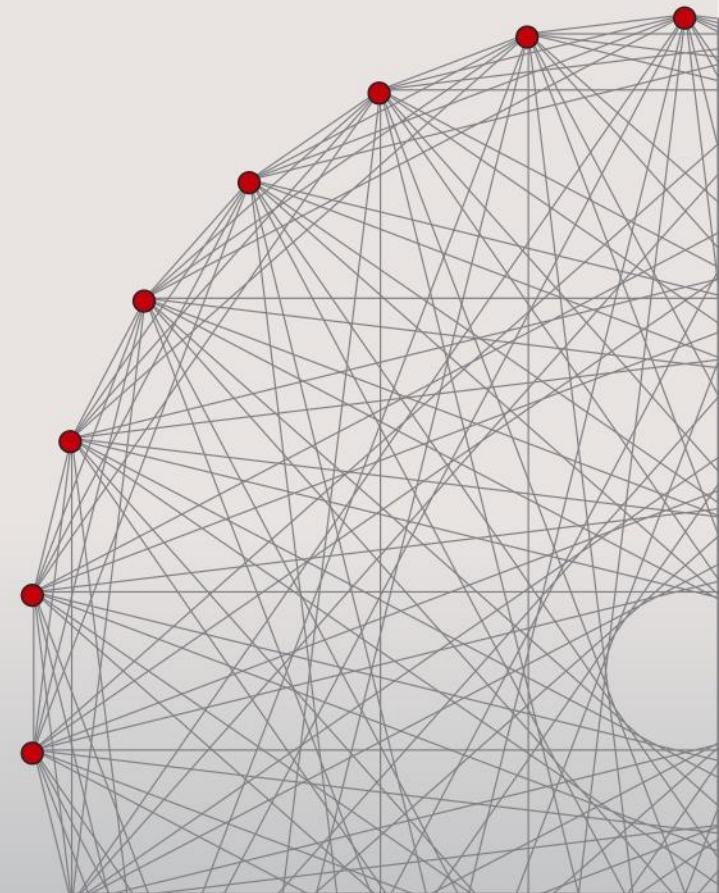
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

# CERTIFICATE

We hereby certify that, **Maurício de Lemos Rodrigues Collares Neto**, **Universidade Federal de Minas Gerais**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

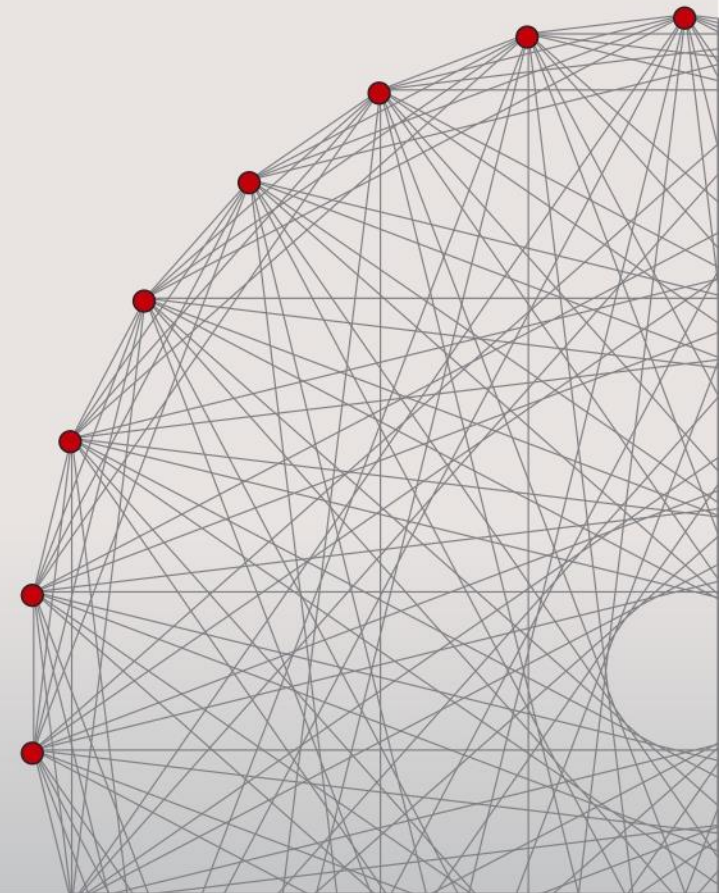
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Maya Stein, Universidad de Chile**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

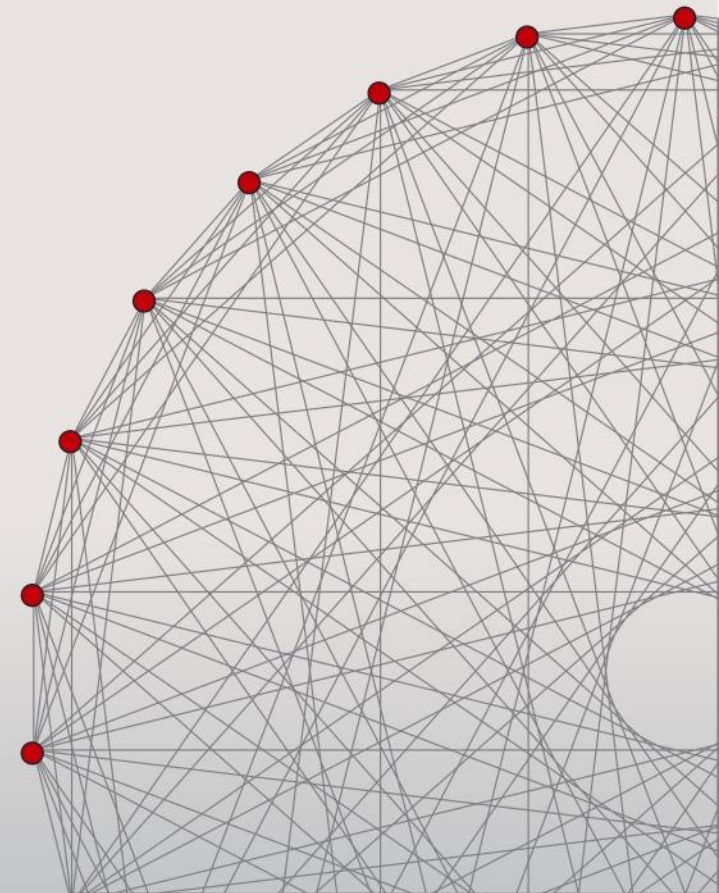
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Nicolás Sanhueza Matamala**, University of Birmingham, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

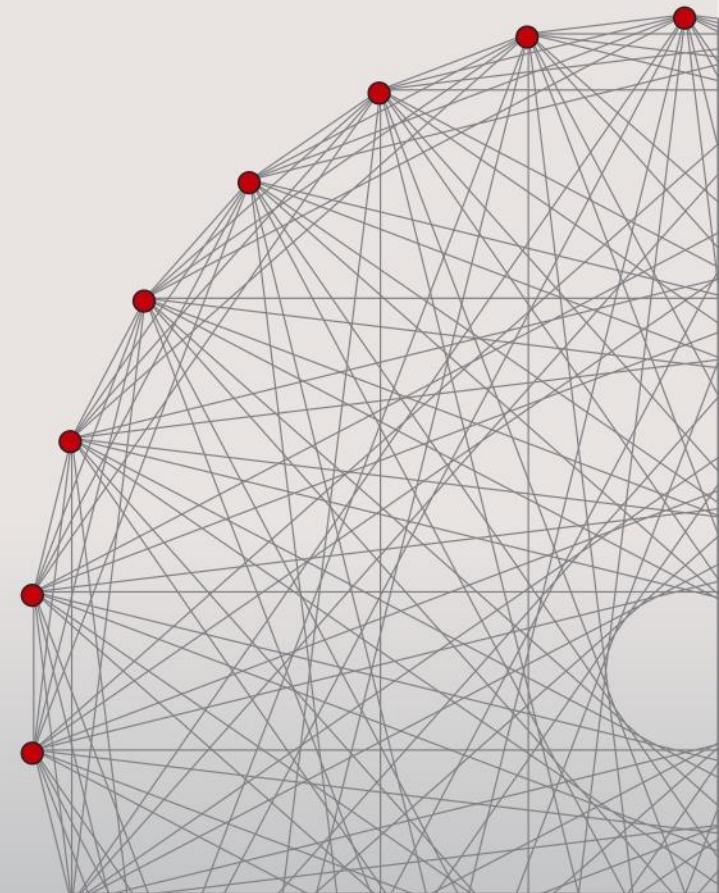
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Oscar Zamora Luna, Central European University**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

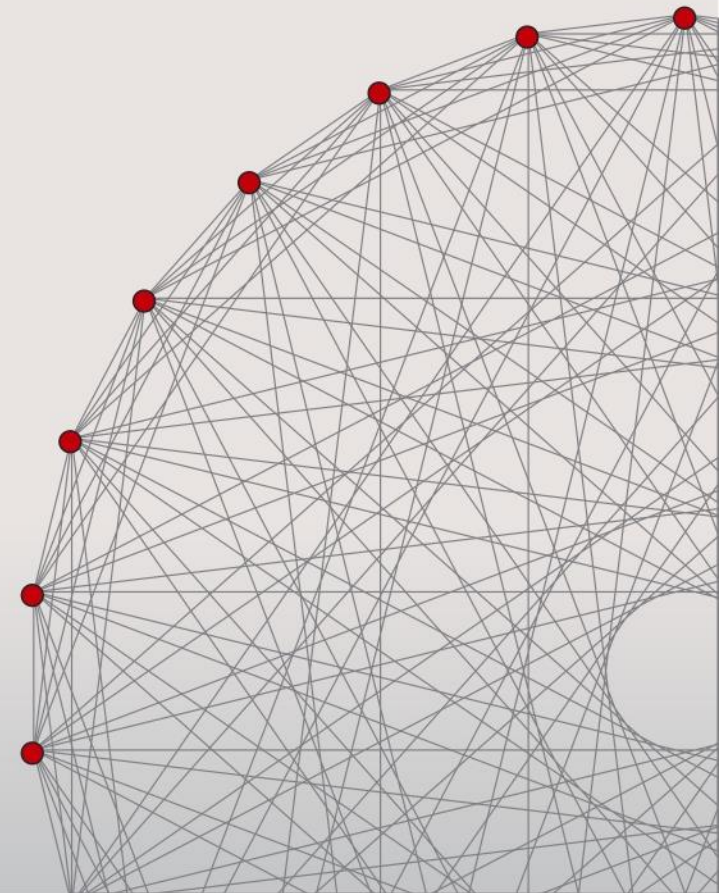
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Patrick Morris, Freie Universität Berlin**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

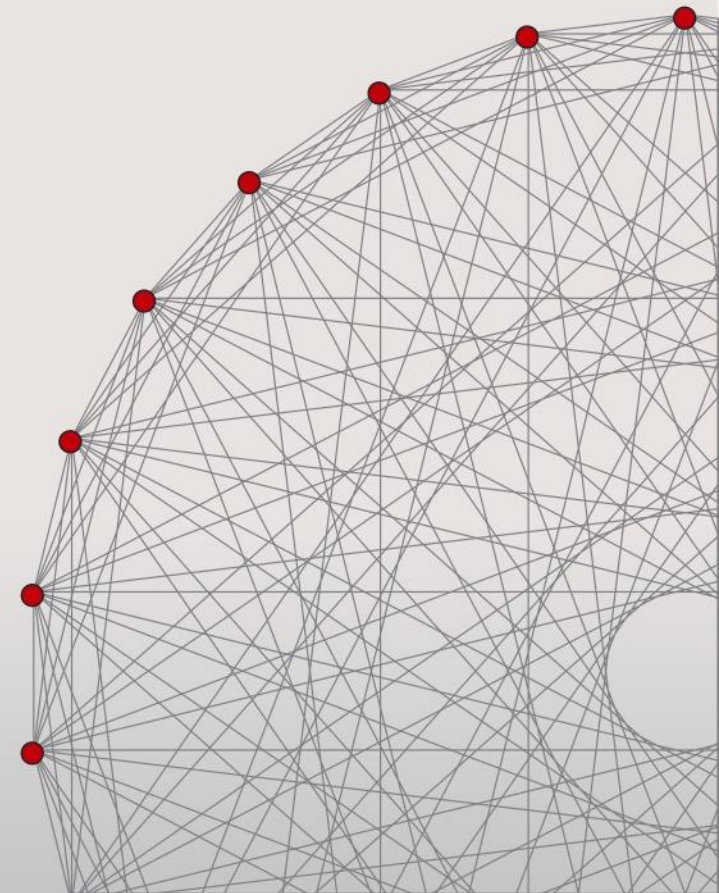
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Paul Seymour, Princeton University**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

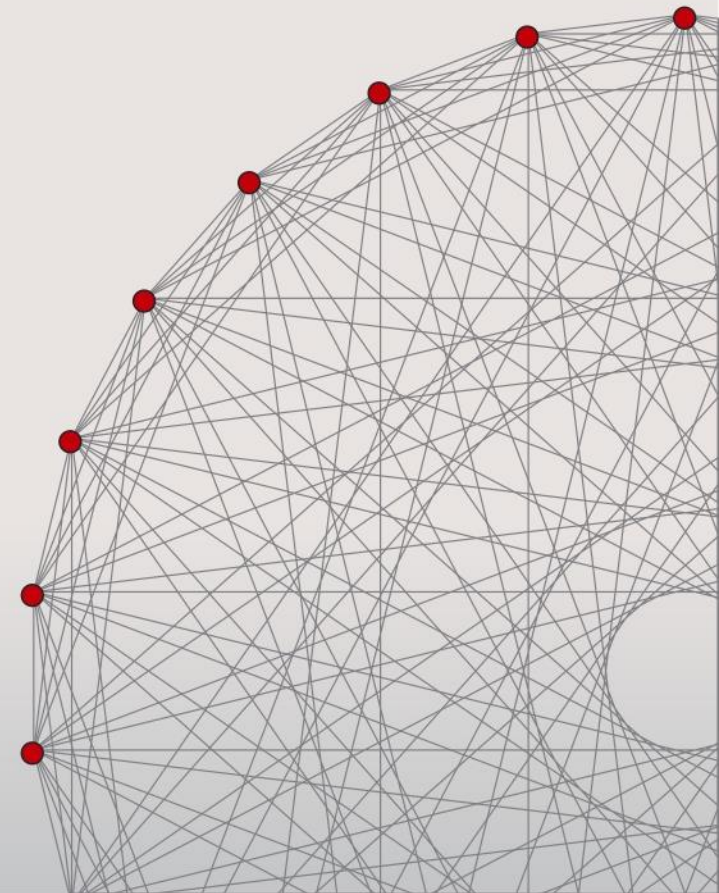
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Penny Haxell, University of Waterloo**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

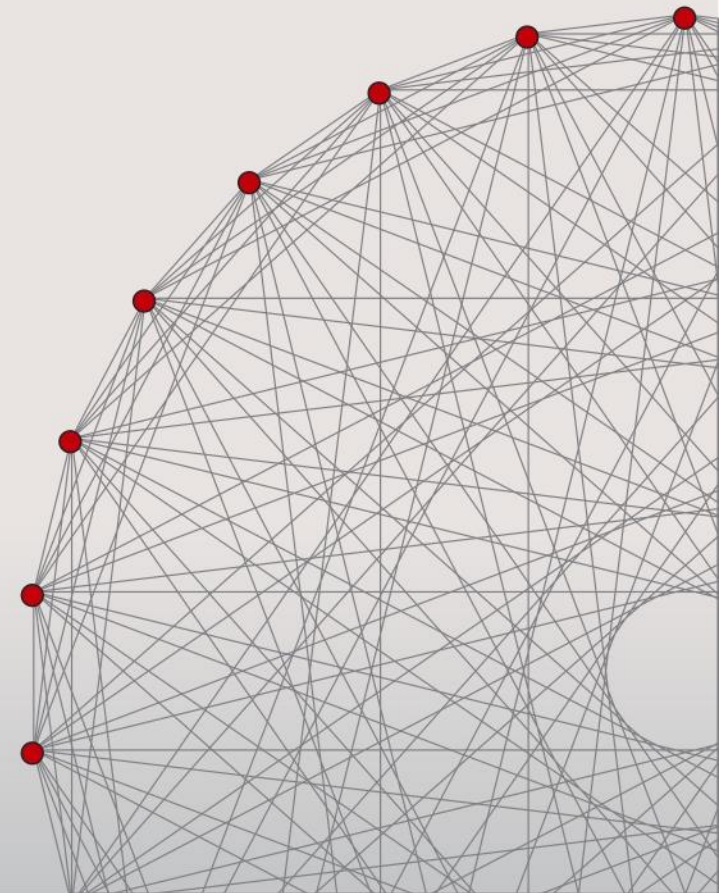
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Peter Keevash, Oxford University**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of







Rio Workshop on  
**Extremal and Structural Combinatorics**

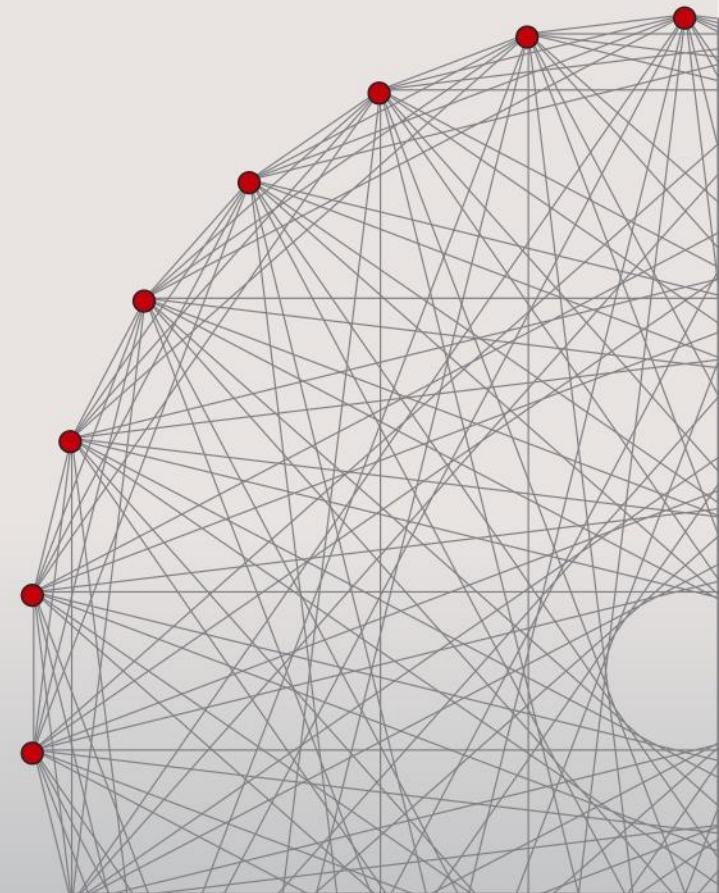
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Peter van Hintum, University of Cambridge**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

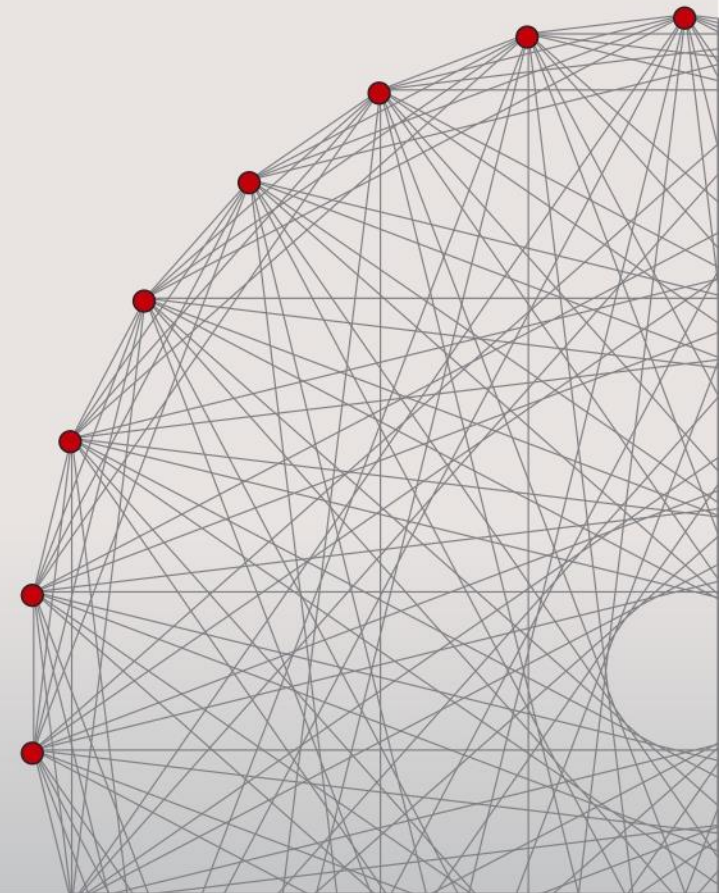
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Richard Lang, University of Birmingham**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

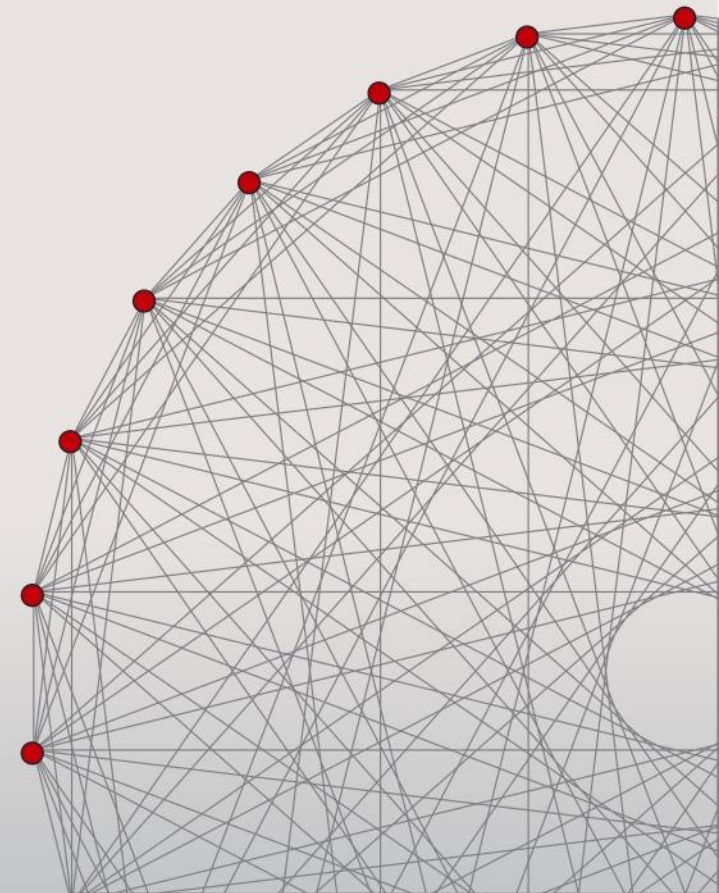
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Robert Morris**, Instituto Nacional de Matemática Pura e Aplicada, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

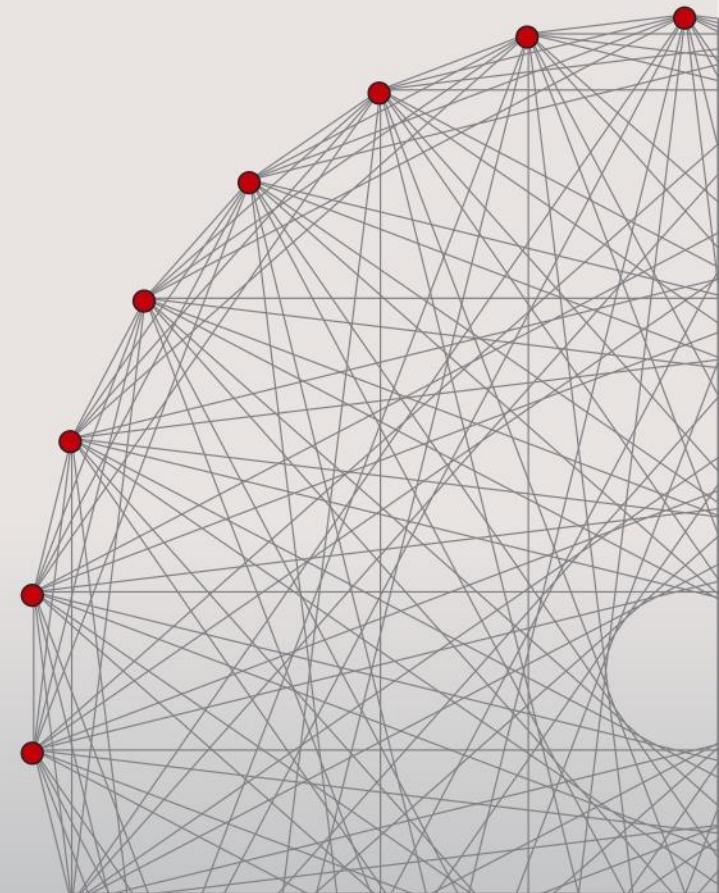
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Sancrey Rodrigues Alves, Universidade Federal do Rio de Janeiro**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

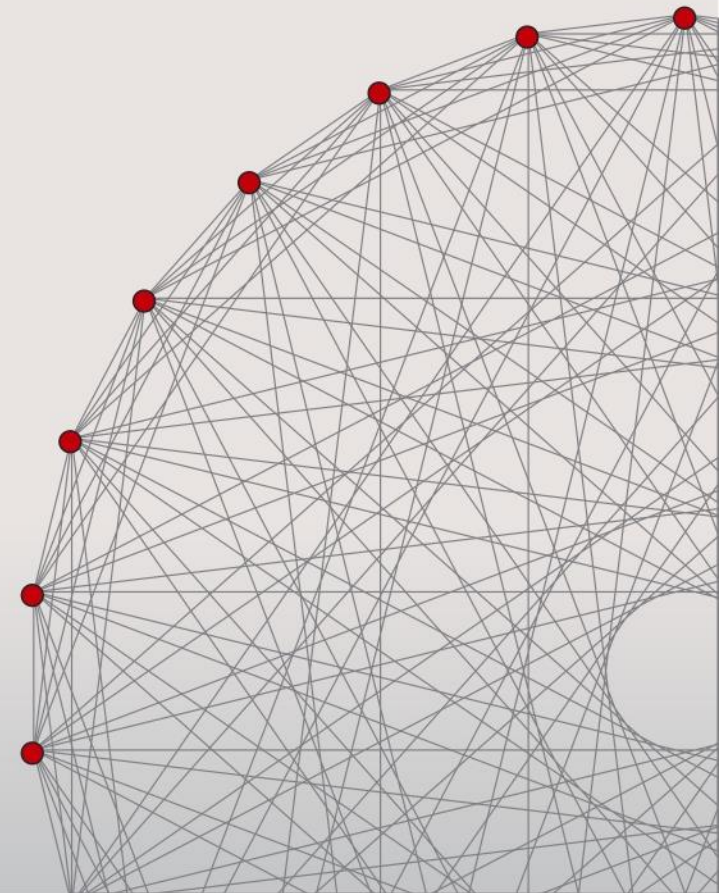
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Simon Richard Griffiths**, Pontifícia Universidade Católica do Rio de Janeiro, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

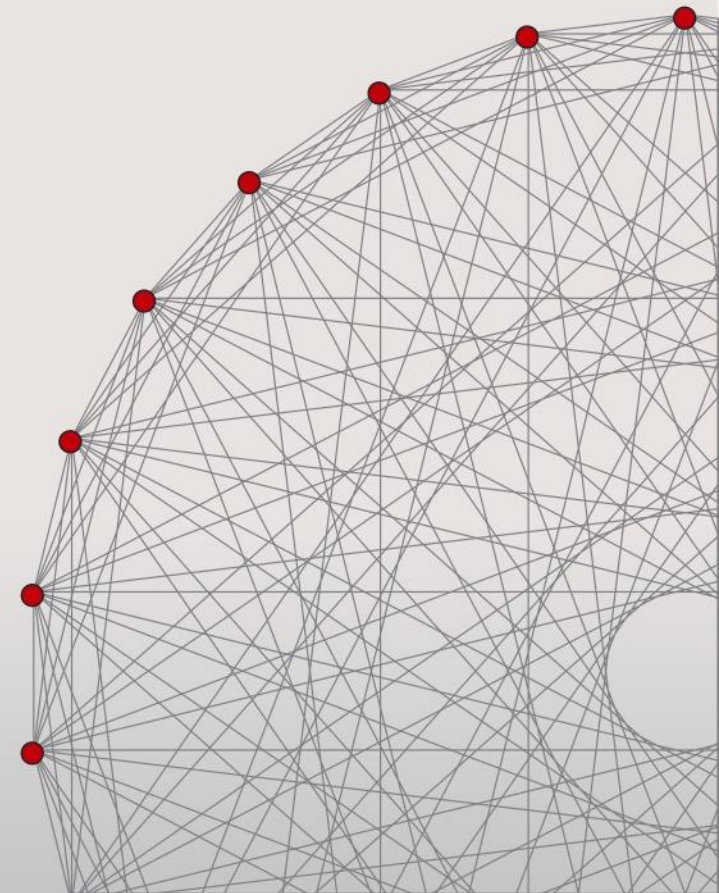
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Stijn Cambie, Radboud University Nijmegen**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

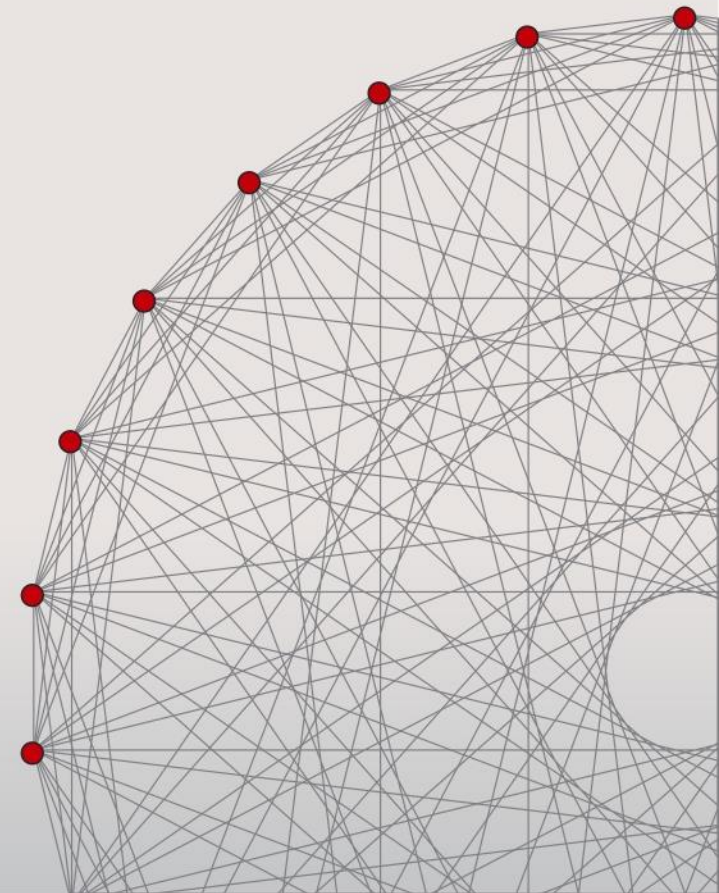
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Sulamita Klein, Universidade Federal do Rio de Janeiro**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

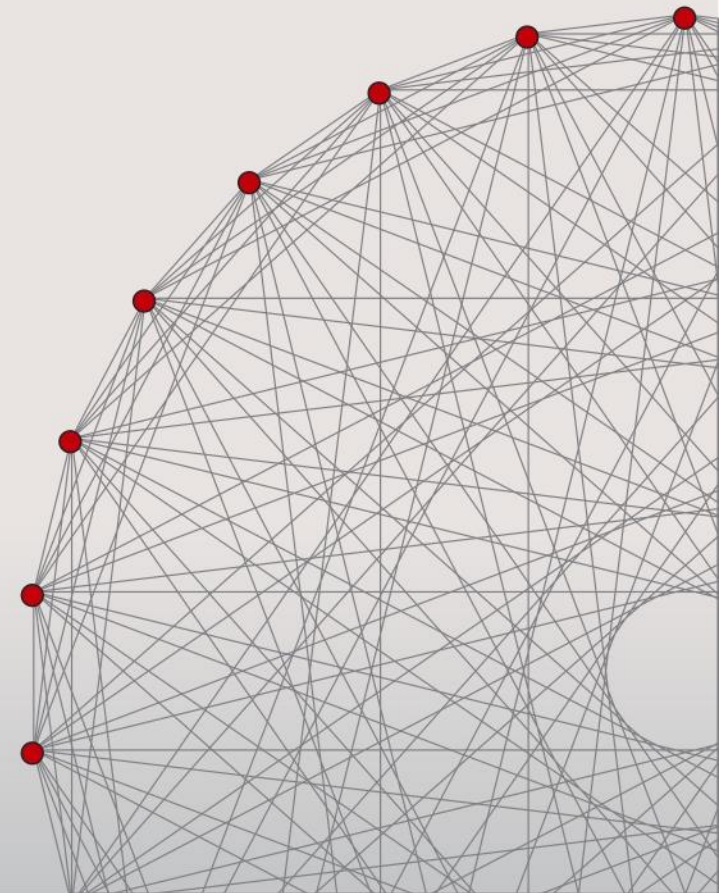
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Taisa Lopes Martins, University of Warwick**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of







Rio Workshop on  
**Extremal and Structural Combinatorics**

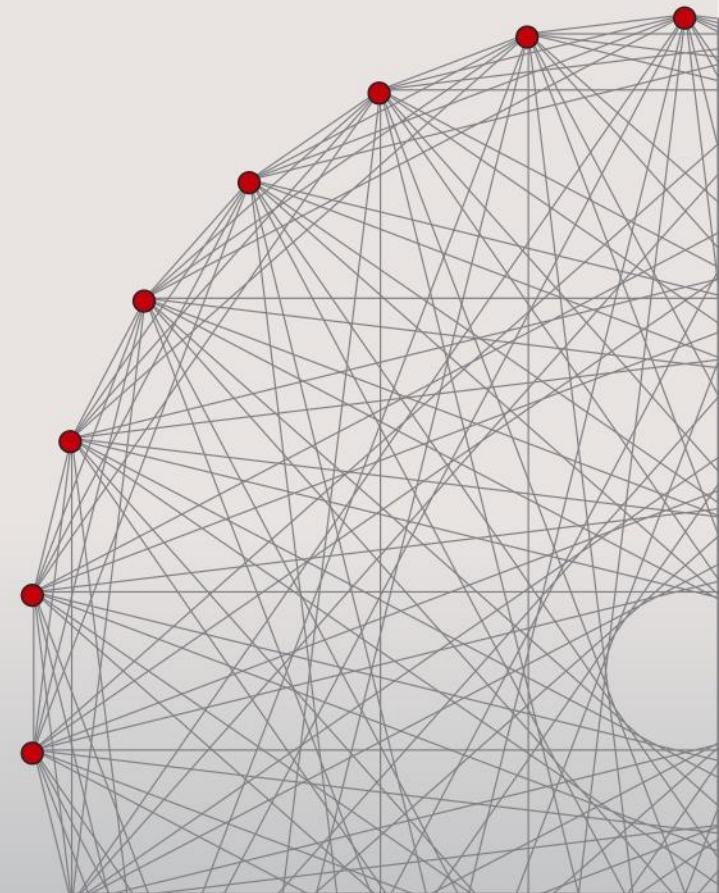
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Thorsten Pfeiffer**, Eidgenössischen Finanzmarktaufsicht, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

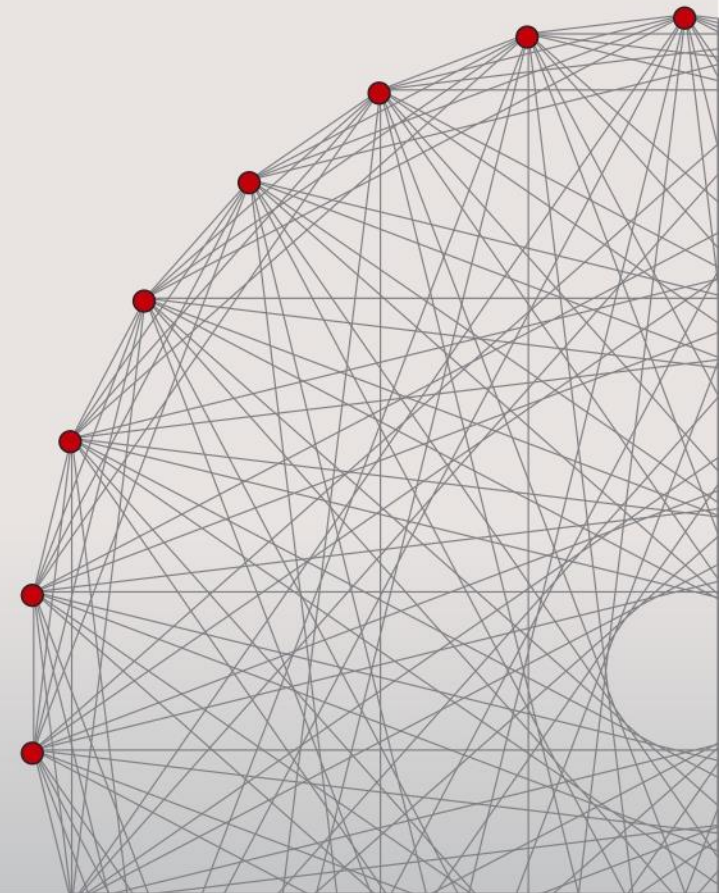
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Victor Seixas Souza**, Instituto Nacional de Matemática Pura e Aplicada, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

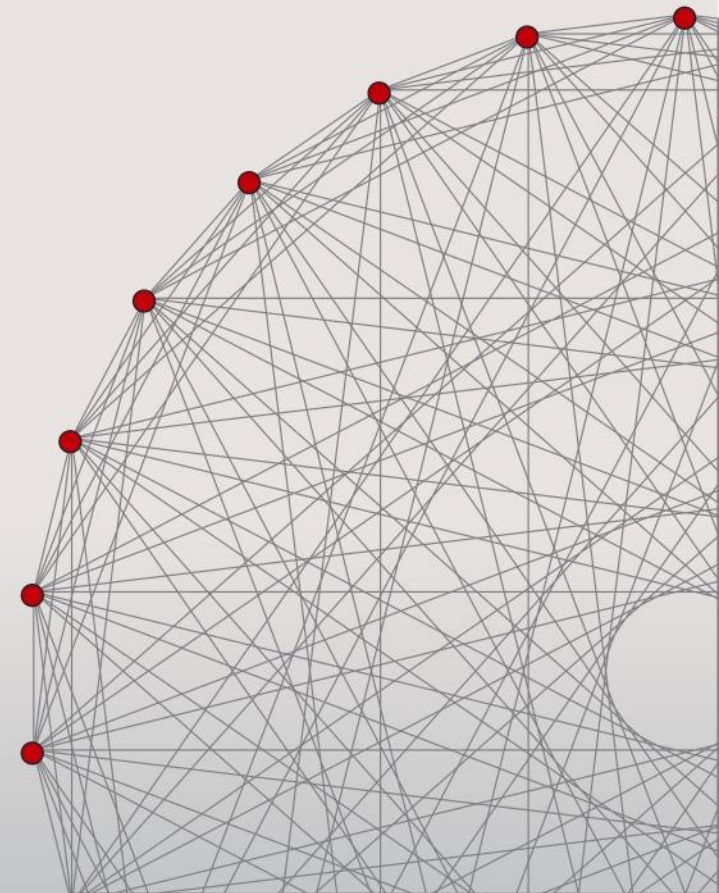
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Vinicius Fernandes dos Santos**, **Universidade Federal de Minas Gerais**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

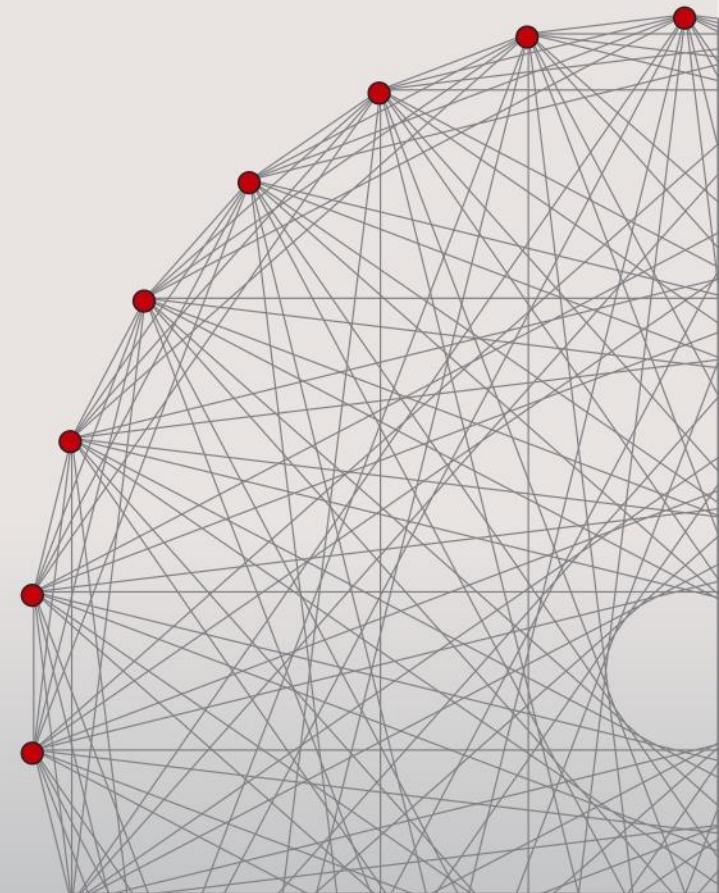
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Xianfeng Zhao**, Instituto Nacional de Matemática Pura e Aplicada, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

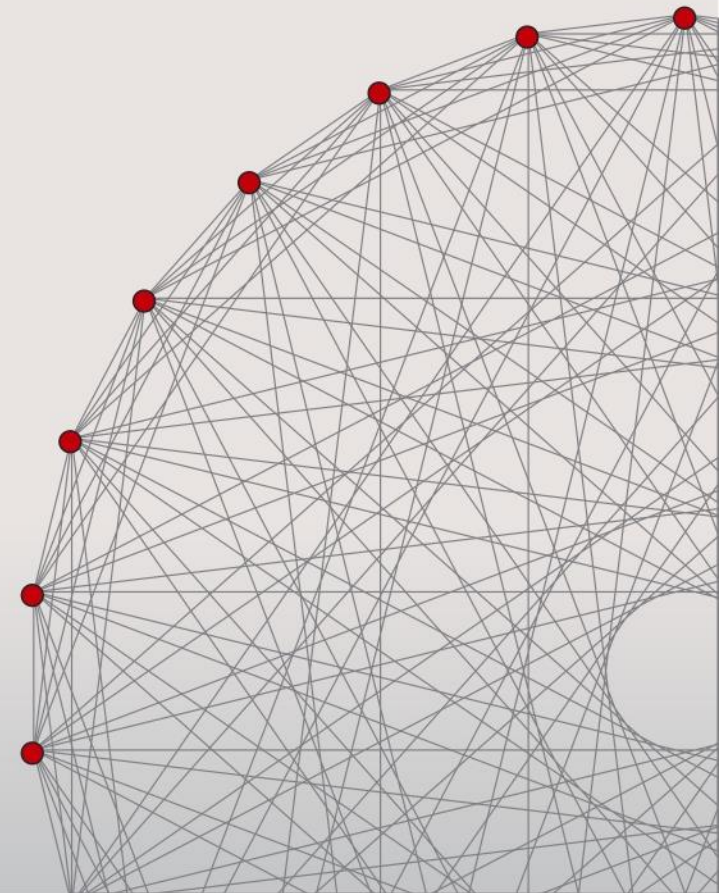
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Yelena Yuditsky, McGill University**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of





Rio Workshop on  
**Extremal and Structural Combinatorics**

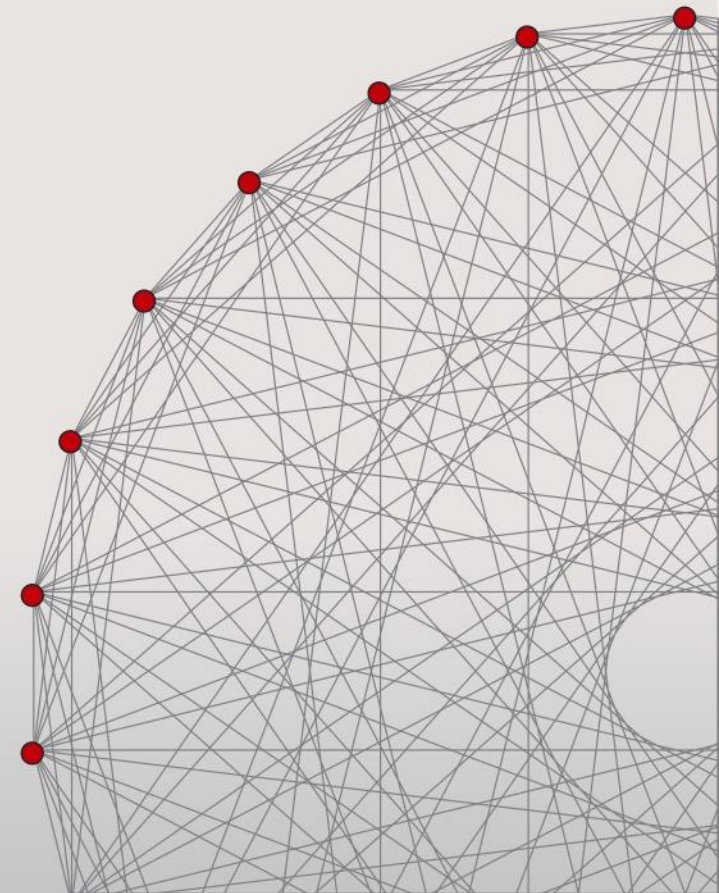
IMPA, Rio de Janeiro, Brazil  
Jan 7 - 21, 2018

**CERTIFICATE**

We hereby certify that, **Yoshiharu Kohayakawa**, Instituto de Matemática e Estatística da **USP**, participated in the Rio Workshop on Extremal and Structural Combinatorics, held at Instituto Nacional de Matemática Pura e Aplicada - IMPA - Rio de Janeiro, January 7 – 21, 2018.

Rio de Janeiro, January 22<sup>nd</sup>, 2018.

Robert Morris  
Organizing Committee



support



an activity of

