

## 2022 Kirkman Medal awarded to Melissa Huggan

**Melissa Huggan** is an intelligent, broadly talented, internationally well-connected, young mathematician. She is a leading light in combinatorial game theory and has forged and strengthened connections between it and economic game theory and other branches of combinatorics including graph theory and design theory. She has published her research since her undergraduate degree in mathematics and has twenty published articles in refereed journals. In her PhD research she began developing a theory of combinatorial games that include economic properties: simultaneous play and scoring. At the same time, she made significant contributions to standard CGT including tests for determining when a game is a number, complexity analyses and reduced canonical form. In her post-doctoral research, Dr. Huggan included Pursuit-Evasion games in her research program. Throughout her research she has developed a particular expertise of the mathematics of games and combinatorial designs, solving tic-tac-toe on triple systems, solving in special cases and determining the complexity of an independent set game on designs and graphs and extending pursuit-evasion games to designs. Additionally, she is a leader in her profession, distinguishing herself in organizing conferences, mathematical outreach, and teaching excellence.