

**Theoretical Statistics and Mathematics Unit, Kolkata**  
**INDIAN STATISTICAL INSTITUTE**



**PCM LECTURE 2025-26**

**PUBLIC LECTURE**

By

**Prof. Gareth Roberts**

University of Warwick, England

**DATE:** 19 February 2026

**TIME:** 4:30 PM

**VENUE:**

NAB-1 (Ground Floor, A.N. Kolmogorov Bhavan), ISI Kolkata

**TITLE:**

**Biases in draws for major football competitions, and  
how to fix them**

**ABSTRACT:**

Draws for major sporting events are often televised and carried out in a sequential fashion to maximise excitement and to increase anticipation for the sporting event itself. In this regard, organisations such as FIFA and UEFA in football have been highly successful. However these draw procedures are also often subject to constraints which make the problem of simulating a fair draw (ie uniform over all feasible draws which satisfy the constraints) difficult to achieve using a sequential procedure. For example the recent FIFA World Cup draw imposed geographical constraints to avoid countries from the same continental confederation (apart from Europe) playing each other in the group stages. Recent draws by FIFA and UEFA have all (to a greater or lesser extent) been biased. This talk will investigate these biases and suggest practical solutions which respect the desire to unveil such a draw in a sequential fashion. The algorithms developed will be examples of a class of algorithms known as Retrospective Simulation. The main focus will be on the FIFA 2022 World Cup draw. This is joint work with Jeffrey Rosenthal.

**ALL ARE CORDIALLY INVITED**