UNIVERSITY OF WARWICK

**Professor Dame Frances Kirwan, Hon DSc**

Monday 20th July 2026

Orator: Professor Diane Maclagan, Professor of Mathematics

Vice-Chancellor,

Our Honorary Graduand this morning is the distinguished mathematician, PROFESSOR DAME FRANCES KIRWAN. I am delighted to introduce Frances to this Congregation. Professor Kirwan's main research interests are in algebraic and symplectic geometry. She is particularly known for her work on moduli spaces, and quotients of symplectic manifolds and varieties by group actions.

Let me try to unpack that. Many of the spaces we study in geometry come with extra symmetries. As a real-life example, a football has many ways it can be rotated and still occupy the same part of space. If you spin a football, or rotate the earth about its axis, points on the surface trace out circles. For the earth, we call these the lines of latitude. In mathematics we call the rotation an action of the circle group on the surface of the earth. A quotient replaces each circle with its label (we are 52 degrees north) and takes the surface of the earth to the line of possible latitudes, from 90S to 90N.

The quotients of spaces by group actions appear surprisingly often in mathematics and its applications, and Frances has devoted much of her career to expanding our understanding of them. There are many different types of geometry, and an early highlight was her work explaining the connection between quotients in symplectic geometry and algebraic geometry, and on cohomology of symplectic quotients. A more recent highlight is her work on non-reductive GIT, which greatly expands the types of quotients we can understand in algebraic geometry.

From 2017 until her retirement in 2024, Frances was Savilian Professor of Geometry at Oxford, one of the oldest chairs at the university. She is the holder of many prestigious awards, including both the Whitehead and Senior Whitehead Prizes, and the Polya prize of the London Mathematical Society, the Suffrage Science Award, the Royal Society's Sylvester Medal and the L'Oreal-UNESCO for Women in Science Award. She is a Fellow of the Royal Society. In 2014 she was made a Dame Commander of the Order of the British Empire for services to Mathematics.

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She has also worked as a leader in the mathematics community. She served as the President of the London Mathematical Society, one of the main professional societies for mathematics in the UK. She has also worked to encourage and support girls and women in mathematics, serving on the LMS Women in Mathematics Committee, as Convenor of European Women in Mathematics, and on the board that set up the first European Girls' Mathematical Olympiad, an annual competition for secondary school girls that continues to run every year. Much more of her work here is behind the scenes, supporting and promoting others.

On a personal note, I am grateful for this opportunity to publicly say thank you to Frances, representing both algebraic geometers, and women in mathematics across Europe - thank you for the beautiful mathematics, thank you for the wonderful example you have set, and thank you for your leadership in the community.

Vice-Chancellor: in the name of the Senate, I present to you for admission to the degree of Doctor of Science honoris causa PROFESSOR DAME FRANCES KIRWAN.