

**Dorothy Buck**

Imperial College London

*Knotted DNA; Mathematical Models and Biological Consequences*

DNA, like any other long piece of string packed into a small space, would become highly knotted and tangled if there were no mechanisms to both keep it organised, and to untangle any knots that do arise. Every living organism has developed mechanisms to control DNA knotting in its cells, and many antibiotics and chemotherapeutics act by disturbing this control. This talk will give an overview of some of the topological methods that we utilise to model DNA knotting, and how the answers from these models aid experimentalists. (No prior biological knowledge needed.)