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The evolving surface finite element method as a tool for solving PDEs on continuously evolving domains

In this talk we will demonstrate the capability, flexibility, versatility and generality of the evolving surface finite element method for solving partial differential systems on continuously evolving domains and surfaces with numerous applications in developmental biology, tumour growth and cell movement and deformation. Some applications will be presented, including on the numerical results of reaction-diffusion systems, with and without cross-diffusion, both on static and on evolving domains.