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**Agnese Barbensi\***, [barbensi@maths.ox.ac.uk](mailto:barbensi@maths.ox.ac.uk). *Double branched cover of knotoids and applications to proteins.*

Knotoids are a generalisation of knots that deals with open curves. In the past few years, they've been extensively used to classify entanglement in proteins. Through a double branched cover construction, we prove a 1-1 correspondence between knotoids and strongly invertible knots. We characterise forbidden moves between knotoids in terms of equivariant band attachments between strongly invertible knots, and in terms of crossing changes between theta-curves. Finally, we present some applications to the study of the topology of proteins. This is based on joint works with D.Buck, H.A.Harrington, M.Lackenby and with D. Goundaroulis. (Received September 10, 2019)