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**Dan Rutherford\*** ([rutherd@math.duke.edu](mailto:rutherd@math.duke.edu)), Mathematics Department, Duke University, Box 90320, Durham, NC 27708-0320. *HOMFLY-PT polynomial and Legendrian links in the solid torus.*

A smooth knot in a contact 3-manifold is called Legendrian if it is always tangent to the contact planes. In this talk, I will discuss Legendrian knots in  $\mathbb{R}^3$  and the solid torus where knots can be conveniently viewed using their ‘front projections’. In particular, I will describe how certain decompositions of front projections known as ‘normal rulings’ (introduced by Fuchs and Chekanov-Pushkar) can be used to give combinatorial descriptions for parts of the HOMFLY-PT and Kauffman polynomials. I will conclude by discussing recent generalizations to Legendrian solid torus links. It is usual to identify the ‘HOMFLY-PT skein module’ of the solid torus with the ring of symmetric functions. In this context, normal rulings can be used to give a knot theory description of the standard scalar product determined by taking the Schur functions to form an orthonormal basis. (Received September 22, 2010)