A SKEIN RELATION FOR THE HOMFLYPT POLYNOMIALS OF TWO-CABLE LINKS

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ABSTRACT. We give a skein relation for the HOMFLYPT polynomials of 2-cable links. In [A. Ishii and T. Kanenobu, *Different links with the same Links-Gould invariant*, Osaka J. Math. **42** (2005) 273–290], we construct examples of arbitrarily many 2-bridge knots sharing the same HOMFLYPT, Kauffman, and Links-Gould polynomials, and arbitrarily many 2-bridge links sharing the same HOMFLYPT, Kauffman, Links-Gould, and 2-variable Alexander polynomials. Using the skein relation, we show their 2-cables also share the same HOMFLYPT polynomials.

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