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Title: *Global Knot Theory*

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Abstract: Let K be a knot in the product of a surface F with a line \mathbb{R} . K is called GLOBAL if its projection into F is transverse to some generic vector field on F without critical points of index $+1$. Global knots generalize closed braids in the solid torus $S^1 \times D^2$. We construct specific knot invariants of finite type for global knots. These invariants can not be extracted from the Kontsevich integral for knots in a thickened surface $S^1 \times D^2$. We conjecture that our invariants separate global knots in general and we prove the conjecture in a particular case.

Moreover we use our invariants in order to prove the non-invertibility of certain links in the 3-sphere without making any use of the knot group !