

# THE KASHIWARA-VERGNE PROBLEM AND TOPOLOGY

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I will describe a general machine, a close cousin of Taylor's theorem, whose inputs are topics in topology and whose outputs are problems in algebra. There are many inputs the machine can take, and many outputs it produces, but I will concentrate on just one input/output pair. When fed with a certain class of knotted 2-dimensional objects in 4-dimensional space, it outputs the Kashiwara-Vergne Problem (1978, solved Alekseev-Meinrenken 2006, elucidated Alekseev-Torossian 2008-2011), a problem about convolutions on Lie groups and Lie algebras.

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