



# Partially traced categories

[Octavio Malherbe](#), [Philip J. Scott](#), [Peter Selinger](#)

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This paper deals with questions relating to Haghverdi and Scott's notion of partially traced categories. The main result is a representation theorem for such categories: we prove that every partially traced category can be faithfully embedded in a totally traced category. Also conversely, every symmetric monoidal subcategory of a totally traced category is partially traced, so this characterizes the partially traced categories completely. The main technique we use is based on Freyd's paracategories, along with a partial version of Joyal, Street, and Verity's Int-construction.

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