Hidehiko Shimada

Splitting(Joining) of membranes and a three dimensional analog of Riemann surfaces

"I will discuss properties of a partial differential equation which governs evolution of two-dimensional surfaces (membranes) in (Euclidean) time.
This PDE plays an important role in M-theory. I will show that this PDE is equivalent to the three-dimensional
Laplace equation, locally, by change of variables.
Furthermore, it turns out that one needs to define the equation on a (three-dimensional)
space which is constructed by stiching copies of R^3, in a way analogous to the construction of Riemann surfaces.
The talk will be based on the work with Yuki Sato (Nagoya U.), Stefano Kovacs (Dubilin IAS), arxiv: 1508.03367,
published in JHEP."