Martha P. Dussan* (dussan@ime.usp.br) and Martin Magid. Solutions of Björling Problem for timelike surfaces and the homogeneous wave equation.

We solve the Björling Problem for timelike surfaces in the Minkowski space $\mathbb{R}^3_1$ and $\mathbb{R}^4_1$ by obtaining a split-complex representation formula for those surfaces. Our approach includes the construction of split-holomorphic extensions, in a natural way, using the point of view of solutions to the homogeneous wave equation. Then we establish Schwarz reflection to obtain split-complex Björling representations in symmetric domains of the split-complex plane. (Received September 21, 2015)