

# Blow-up profile for the complex-valued semilinear wave equation

Asma Azaiez

Université Paris 13, France  
e-mail: [azaiez@math.univ-paris13.fr](mailto:azaiez@math.univ-paris13.fr)

We consider a blow-up solution for the complex-valued semilinear wave equation with power nonlinearity in one space dimension. We first characterize all the solutions of the associated stationary problem as a two-parameter family. Then, we use a dynamical system formulation to show that the solution in self-similar variables approaches some particular stationary one in the energy norm, in the non-characteristic case. This gives the blow-up profile for the original equation in the non-characteristic case.