
I will report on some recent results that establish global stability of totally geodesic maps which factor as $\mathbb{R}^{1+d} \overset{\varphi_S}{\to} \mathbb{R} \overset{\varphi}{\to} M$ under small compactly supported perturbations when $M$ is a space-form and $d \geq 3$. As our background we consider $\varphi_S$ to be a semi-Riemannian submersion, which implies that our background has infinite energy. After introducing the necessary geometric constructions which reduce the equations of motion of the perturbation to a coupled wave–Klein-Gordon system, we prove global existence for this system using new techniques developed by the L. Abbrescia and W. Wong. (Received July 12, 2019)