Conjuntos de explosión de dimensión menor en el semiespacio

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Resumen

Nuestro principal objetivo en este trabajo es encontrar algunos ejemplos de soluciones de problemas parabólicos en el semiespacio, $\mathbb{R}^N_+ \times \mathbb{R}^M = \{x_N > 0\} \times \mathbb{R}^M$ que explotan, cuyos conjuntos de explosión son no triviales y de dimensión estrictamente menor que la dimensión del espacio ambiente. Con este fin probamos la existencia de soluciones no triviales de soporte compacto a $\nabla(|\nabla\varphi|^{p-2}\nabla\varphi) = \varphi^m$ en el semiespacio $\mathbb{R}^N_+$ con la condición de borde no lineal $-|\nabla\varphi|^{p-2}\frac{\partial\varphi}{\partial x_N} = \varphi^{p-1}$ sobre $\partial\mathbb{R}^N_+ = \{x_N = 0\}$.

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