Jacobi Elliptic Function Solutions of Three Coupled Nonlinear Physical Equations

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The Jacobi elliptic function solutions of coupled nonlinear partial differential equations, including the coupled modified KdV (mKdV) equations, long-short-wave interaction system and the Davey-Stewartson (DS) equations, are obtained by using the mixed dn-sn method. The solutions obtained in this paper include the single and the combined Jacobi elliptic function solutions. In the limiting case, the solitary wave solutions of the systems are also given. — PACS: 02.30.Jr; 03.40.Kf; 03.65.Fd

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