Nonlinear Sciences > Exactly Solvable and Integrable Systems

Kernel Formula Approach to the Universal Whitham Hierarchy

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We derive the dispersionless Hirota equations of the universal Whitham hierarchy from the kernel formula approach proposed by Carroll and Kodama. Besides, we also verify the associativity equations in this hierarchy from the dispersionless Hirota equations and give a realization of the associative algebra with structure constants expressed in terms of the residue formulas.

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