

Integrable flows on Legendrian curves in the 3-dimensional anti-de-Sitter space

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We briefly describe the contact structure of type $(1, 1)$ on the 3-dimensional anti-de-Sitter space $\text{AdS}^{1,2}$. We consider Legendrian curves in $\text{AdS}^{1,2}$ satisfying a transversality condition. We show the existence of a family of geometric flows on Legendrian curves related to the KdV hierarchy. At the end, we analyze the evolutions of Legendrian curves originated by the soliton solutions of the KdV equation.

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References

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