A momentum-space representation of Feynman propagator in Riemann-Cartan spacetime

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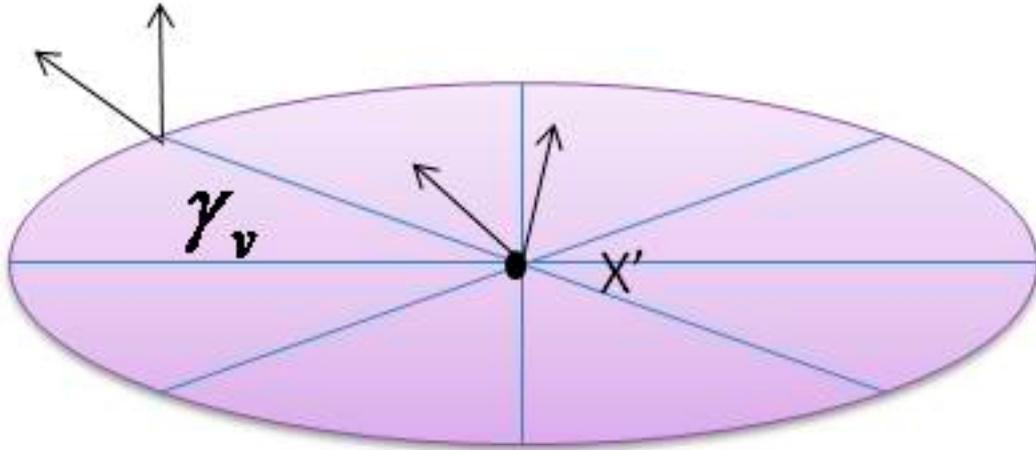
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1. Introduction and Conclusion

- ● Construct a generalized normal coordinates in a n-dimensional Riemann-Cartan spacetime

- Solve the Feynman Green's function of a free scalar field in general curved spacetime with torsion by using generalized normal coordinates with large wave-number approximation (short-distance approximation).

- The ultraviolet divergences of an one-loop effective action for a scalar field has been found and its renormalization is studied by using dimensional regularization.

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