

**ZMATH 2016f.01324**

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**Computing geographical distances; derivation and application.**

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Summary: We explain two existing methods for computing distances on Earth, one using great circles (orthodromes) and the other using great spirals (loxodromes). We derive formulas for these approaches, and use each of them to calculate the shoreline distances around each of the Great Lakes. The resulting calculations compare favourably with established statistics of the Great Lakes.

*Classification:* M50 G70 G40

*Keywords:* geographical distances; orthodromes; loxodromes