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Geometric intersections of loops on surfaces. (English) Zbl 07573827
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Summary: Based on Nielsen fixed point theory and Gröbner-Shirshov basis, we obtain a simple approach to compute geometric intersection numbers and self-intersection geometric numbers of loops on surfaces.

MSC:
55M20 Fixed points and coincidences in algebraic topology
16S15 Finite generation, finite presentability, normal forms (diamond lemma, term-rewriting)
13P10 Gröbner bases; other bases for ideals and modules (e.g., Janet and border bases)
57M05 Fundamental group, presentations, free differential calculus

Keywords:
loops on surfaces; geometric intersections; Gröbner-Shirshov basis

Full Text: DOI

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