962-20-885   **Juan M Alonso**, Stockholm, Sweden, and **Susan M Hermiller*** (`smh@math.unl.edu`),
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                    Homological finiteness conditions and finite derivation type.

In 1987 Squier defined a property called finite derivation type for finitely presented groups and monoids to capture the essence of having a rewriting system, but in a property that is independent of presentation. To do this, he associated a new complex to a presentation. A monoid then has finite derivation type if, modulo certain loops and actions by words, the fundamental group of this complex is finitely generated. Cremanns, Otto, and Pride later showed that finite derivation type implies the homological finiteness condition FP_3, and when the monoid is a group, these two properties are equivalent. In this talk I will discuss a homological version of the definition of finite derivation type, an extension of this to higher dimensions, and associated isoperimetric functions. (Received September 28, 2000)

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