# "Group Theory International" Online Seminar

## Martin Bridson

### (University of Oxford, UK)

### *"On the nilpotent genus of groups"*

### Thursday, Oct 25, noon (New York Time)

**Abstract:**

In this talk I'll describe recent joint work with Alan Reid (UT Austin) in which we answer several questions of Gilbert Baumslag concerning residually nilpotent groups that have the same pro-nilpotent completion. In particular, we exhibit a pair of residually torsion-free nilpotent groups, both finitely generated, that have the same nilpotent quotients, but one is finitely presented while $H_2(G,Z)$ of the other is not finitely generated. We also prove that every non-trivial, finitely generated normal subgroup of a parafree group is of finite index. The proofs involve recent advances in the understanding of hyperbolic CAT(0) groups, and $L^2$ cohomology.

Next presentation:  **Nov 8**, Laura Ciobanu *(Université de Neuchâtel, Switzerland)*

Algebraic Cryptography Center