A Talented Monoid view on Lie Bracket algebras arising from Leavitt Path algebras

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In this talk, we translate known results in simplicity, solvability, and nilpotency of Lie algebras arising from Leavitt Path algebras in the language of Talented monoids. We show that there is a direct relation between solvability and the Gelfand-Kirillov dimension. Moreover, we give a complete new classification of a balloon and shed light to the question when the derived Lie Algebra is simple.