# Al@Bicocca seminar

You are all welcome to the next bite of the series "Al@Bicocca"

which is meant to give you a small taste of the Algebra at Bicocca and beyond



**16 April 2025 12.00** (UTC+1)

### Stefano Spessato

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## On the complement of a signed graph

**Abstract:** A G-gain graph is a triple  $(\Gamma, \psi, G)$  where  $\Gamma$  is a graph, G is a group, and  $\psi$  is a function from the set of oriented edges of  $\Gamma$  to G satisfying  $\psi(x,y)^{-1}=\psi(y,x)$ . When  $G=\mathbb{Z}_2$ , such graphs are called *signed graphs*. In recent years, considerable attention has been devoted to extending the rich array of classical graph constructions to the realm of G-gain graphs. During this talk, we will focus on the construction of the complement of a signed graph and it will be shown that the definition introduced in a recent work by Cavaleri, Donno, and the speaker satisfies all the expected properties. Finally, some considerations will be made regarding a possible further extension to G-gain graphs where G is an arbitrary group.

#### Online venue: WebEx

University of Milano-Bicocca Via R. Cozzi 55 Milano (IT)

#### Organizers:

Marco Barbieri Marco Fusari Nicola Grittini Ettore Marmo Francesco Matucci Matteo Tarocchi

Website **(#)**