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Generic deformations of the colored $\mathfrak{sl}(N)$ -homology for links

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We generalize the works of Lee [arXiv:math/0210213v3] and Gornik [arXiv:math/0402266v2] to construct a basis for generic deformations of the colored $\mathfrak{sl}(N)$ -homology defined in [arXiv:1002.2662v1]. As applications, we construct non-degenerate pairings and co-pairings which lead to dualities of generic deformations of the colored $\mathfrak{sl}(N)$ -homology. We also define and study colored $\mathfrak{sl}(N)$ -Rasmussen invariants. Among other things, we observe that these invariants vanish on amphicheiral knots and discuss some implications of this observation.

Comments: 53 pages plus a 12-page appendix reviewing basics of the colored $\mathfrak{sl}(N)$ -homology for links. Many figures, including some colored ones which are best viewed on a computer screen

Subjects: **Geometric Topology (math.GT)**

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