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Séminaire commun LPTENS/LPTHE

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Domaines : hep-th

Titre : *Three block solvable lattice models and Birman-Murakami-Wenzl algebra*

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Résumé : *We treat in this talk interaction round the face (IRF) solvable lattice models. We study the algebraic structures underlining such models. For the three block case, we show that the Yang Baxter equation is obeyed, if and only if, the Birman-Murakami-Wenzl (BMW) algebra is obeyed. We prove this by an algebraic expansion of the Yang Baxter equation (YBE). For four blocks IRF models, we show that the BMW algebra is also obeyed, apart from the Skein relation, which is different. This indicates that the BMW algebra is a sub-algebra for all models with three or more blocks. We find additional relations for the four block algebra using the expansion of the YBE, but we still do not know all the relations of this algebra. The four blocks result, that is the BMW algebra and the four blocks Skein relation, is enough to define new knot polynomials, important in knot theory.*
