THE FIELDS INSTITUTE

ABSTRACTS 1.2

FOR RESEARCH IN MATHEMATICAL SCIENCES

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A primer to extended affine Lie algebras

Extended affine Lie algebras are a generalization of finite dimensional simple(being nullity zero) and affine Kac-Moody (being nullity one) Lie algebras. Toroidal Lie algebras are examples of such algebras. Those Lie algebras are also closely related to extended affine root systems, generalized intersection matrix algebras and root graded Lie algebras. I will survey some developments on extended affine Lie algebras. This will be divided into two talks as follows: Talk 1: Extended affine Lie algebras: classification and Talk 2: Extended affine Lie algebras: representation.