# Expansions, Lie Algebras, and Invariants.

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Organizing committee and scientific committee

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One Paragraph summary

**Our workshop will bring together a number of experts working on “expansions” and a number of experts working on “invariants” in the hope that the two groups will learn from each other and influence each other.** “Expansions” are solutions of a certain type of intricate equations within graded spaces often associated with free Lie algebras; they include Drinfel’d associators, solutions of the Kashiwara-Vergne equations, solutions of various deformation quantization problems, and more. By “invariants” we refer to quantum-algebra-inspired invariants of various objects within low dimensional topology; these are often associated with various semi-simple Lie algebras. The two subjects were born together in the early days of quantum group theory, but have to a large extent evolved separately. **We believe there is much to gain by bringing the two together again.**