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Introduction to the Quantum EXpressions (QEX) framework

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We present a new lattice field theory software framework designed with ease of use, flexibility, efficiency and portability in mind. The framework is written using the Nim programming language which offers many of the features one would find in a high-level scripting language, while in fact being a strongly-typed language with full control over low-level optimizations. This allows us to present a simple expression-based language to the end user that can be transformed into highly optimized code for a particular architecture. We will discuss the features of the QEX framework, performance results and development plans.

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