

# **ContinuumArrays.jl: a framework for working with orthogonal polynomials and solving differential equations**

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We discuss `ContinuumArrays.jl` and the closely related package `ClassicalOrthogonalPolynomials.jl` which give a convenient framework for working with orthogonal polynomials, their recurrences, and their usage in solving differential equations. The approach extends to multivariate orthogonal polynomials and their usage in solving partial differential equations in `MultivariateOrthogonalPolynomials.jl`. We also investigate the computation of semiclassical orthogonal polynomials using Cholesky and related factorisations, which leads to `SemiclassicalOrthogonalPolynomials.jl`. These facilitate computation of orthogonal polynomials on annuli, disk slices, spherical caps and other geometries.