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Time transformation for **D**elay **D**ifferential Equations

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Abstract

In this talk we show how particular changes of variable, called time transformations, can reduce a Delay Differential Equation with variable delay (possibly state dependent) to another DDE with a simpler delay, e.g. a constant delay. By using this reduction, we can easily obtain superconvergent integrations, study the type of decay to zero of solutions of asymptotically stable linear equations and compute the breaking points in the state-dependent case.