Riesz basis of root vectors of a non-symmetric system of ordinary differential operators and application to inverse problems

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We study an eigenvalue problem for non-symmetric system of first-order ordinary differential operators. We establish an asymptotic form of the eigenvalues and prove that the set of the root vectors forms a Riesz basis. Next we apply the Riesz basis for showing the uniqueness in inverse problems for nonsymmetric systems. The key is the transformation formula.