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Approximate kinematic synthesis of the four-bar mechanism by two given positions of the links

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Abstract: Most of the algebraic methods for approximate kinematic synthesis of four-bar mechanisms are based on the well-known Freudenstein's equation. The distinctions in the big variety of these methods are due to the computational procedures that are used to find a proper solution. The Freudentein's equation provides very powerful possibilities for solving any approximate tasks because of its simplicity. The combination of Freudenstein's equation and function theory enlarges the possibilities of the dimensional synthesis of the four-bar mechanism and reduces the number of required initial data under a given accuracy of the numerical solution.

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