

1. Uvod

Povzetek

V delu obravnavamo problem reševanja inverzne kinematike redundantnega robotskega manipulatorja z upoštevanjem prioritete nalog, ki ga matematično opisuje sistem nelinearnih enačb. Ta sistem rešujemo z Newtonovo metodo. Navedena sta izreka, ki zagotavljata konvergenco te metode v primeru, ko je Jacobijeva matrika dimenzije $m \times n$, $m < n$. Pozornost je posvečena numeričnemu reševanju nedoločenih sistemov linearnih enačb, ki jih pri tem dobimo, razložene pa so tudi s tem povezane osnove teorije o posplošenih inverzih. Podana je tudi numerična obravnava nekaj značilnih primerov.

Math. Subj. Class. : 65H10, 15A09

Key words : underdetermined systems of linear and nonlinear equations,
Newton's method, generalized inverses

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