

POVZETEK

V diplomskem delu je opisan problem analize neodvisnih komponent ter izpeljava njegovega algoritma. Navedena je tudi vsa teorija potrebna za izpeljavo, ki sega v glavnem v verjetnostni račun in statistiko. Na koncu je opisanih še nekaj primerov uporabe algoritma. Priložena je zgoščanka s tremi različnimi algoritmi analize neodvisnih komponent ter zvočni in slikovni podatki na katerih se lahko testira njihova učinkovitost.

Math. Subj. Class. (2000): 62H25, 62H35, 62P10, 62P20

Ključne besede: analiza neodvisnih komponent, analiza osnovnih komponent, kumulante, Darmois-Skitovichev izrek, Cramerjev izrek, Marcinkiewiczev izrek, Edgeworthov razvoj, metoda maksimalnega verjetja

Keywords: Independent Component Analysis (ICA), Principal Component Analysis (PCA), cumulants, Darmois-Skitovich theorem, Cramer theorem, Marcinkiewicz theorem, Edgeworth expansion, Maximum Likelihood Estimation

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