

|                         |  |
|-------------------------|--|
| 1. Record Nr.           | UNINA9910142025203321  |
| Autore                  | Moreau Eric  |
| Titolo                  | Blind identification and separation of complex-valued signals // Eric Moreau, Tulay Adal   |
| Pubbl/distr/stampa      | London : , : ISTE, , 2013  |
| ISBN                    | 1-118-57977-1<br>1-118-57974-7<br>1-118-57973-9  |
| Descrizione fisica      | 1 online resource (108 p.)   |
| Collana                 | Focus : digital signal and image processing series, , 2051-2481  |
| Altri autori (Persone)  | AdaliTulay   |
| Disciplina              | 108  |
| Soggetti                | Signal processing - Statistical methods  |
| Lingua di pubblicazione | Inglese  |
| Formato                 | Materiale a stampa   |
| Livello bibliografico   | Monografia   |
| Note generali           | Description based upon print version of record.  |
| Nota di bibliografia    | Includes bibliographical references and index.   |
| Nota di contenuto       | Cover; Title Page; Contents; Preface; Acknowledgments; Chapter 1. Mathematical Preliminaries; 1.1. Introduction; 1.2. Linear mixing model; 1.3. Problem definition; 1.4. Statistics; 1.4.1. Statistics of random variables and random vectors; 1.4.2. Differential entropy of complex random vectors; 1.4.3. Statistics of random processes; 1.4.4. Complex matrix decompositions; 1.5. Optimization: Wirtinger calculus; 1.5.1. Scalar case; 1.5.2. Vector case; 1.5.3. Matrix case; 1.5.4. Summary; Chapter 2. Estimation by Joint Diagonalization; 2.1. Introduction<br>3.2.1. Mutual information and mutual information rate minimization<br>3.2.2. Maximum likelihood; 3.2.3. Identifiability of the complex ICA model; 3.3. Algorithms; 3.3.1. ML ICA: unconstrained W; 3.3.2. Complex maximization of non-Gaussianity: ML ICA with unitary W; 3.3.3. Density matching; 3.3.4. A flexible complex ICA algorithm: Entropy bound minimization; 3.4. Summary; Bibliography; Index |
| Sommario/riassunto      | Blind identification consists of estimating a multi-dimensional system only through the use of its output, and source separation, the blind estimation of the inverse of the system. Estimation is generally carried out using different statistics of the output. The authors of this book consider the blind identification and source separation problem in the complex-domain, where the available statistical properties are richer and include non-circularity of the sources - underlying components.   |

They define identifiability conditions and present state-of-the-art algorithms that are based on algebra

---