

**Código:**

TIP8417

**Nome:**

ESTIMAÇÃO E DETECÇÃO

Créditos Aula: 4 crs. (64 h.)

**Ementa/Descrição:**

Teoria da Estimação: estimadores bayesianos, estimação MMSE, estimadores de Kalman, métodos de Monte Carlo, estimadores de máxima verossimilhança, estimadores lineares, algoritmo EM; Teoria da Detecção: detectores de Neyman-Person, testes binários simples, estatísticas suficientes, modelos multivariáveis, detecção de sinais determinísticos, detecção de sinais aleatórios, testes de hipóteses compostas, detectores de Bayes.

**Referências:**

1. Harry L. Van Trees, Kristine L Bell and Zhi Tian, Detection, Estimation and Modulation Theory, 2nd edition, Wiley, 2013
2. Steven M. Kay. Fundamentals of Statistical Signal Processing: Estimation Theory, Volume 1. Prentice Hall Signal Processing Series. Prentice-Hall, 1993.
3. Steven M. Kay. Fundamentals of Statistical Signal Processing: Detection Theory, Volume 2. Prentice Hall Signal Processing Series. Prentice-Hall, 1998.
4. Steven M. Kay, Fundamentals of Statistical Signal Processing: Practical Algorithm Development, Volume 3. Prentice Hall Signal Processing Series, Prentice Hall, 2013.
5. Dimitris Manolakis, Vinay K. Ingle, and Stephen M. Kogon. Statistical and Adaptive Signal Processing: Spectral Estimation, Signal Modeling, Adaptive Filtering and Array Processing. (Artech House Signal Processing Library). Artech House Publishers, 2005.
6. Mourad Barkat. Signal Detection and Estimation. (Artech House Radar Library). Artech House Publishers, 2nd edition, 2005.
7. Charles W. Therrien. Discrete Random Signals and Statistical Signal Processing. (Prentice-Hall Signal Processing Series). Prentice-Hall International, 1992.
8. Robert M. Gray and Lee D. Davisson. An Introduction to Statistical Signal Processing. Cambridge University Press, 2004.
9. H. Vincent Poor, An Introduction to Signal Detection and Estimation, Second Edition, Springer, 1994.
10. Boaz Porat, Digital Processing of Random Signals: Theory and Methods, Dover, 1994.
11. L. L. Scharf, Statistical Signal Processing: Detection, Estimation, and Time Series Analysis, Prentice-Hall, 1991.