Signals and Systems

M. Ortigueira

July 13, 2016

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- Wiener (1894 1964) – Stochastic Processes, Linear and Nonlinear Systems, Control, Cybernetics, ...
  Wiener filter; WienerKhinchin-Einstein theorem,Paley-Winer theorem, Harmonic Analysis

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- Carson (1915) – Frequency analysis of modulations. Use of LT and FT.

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- Discrete-time Signals and Systems – Oppenheim, Kailath, Rabiner, Markel, Gray, ...

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More recent mathematical themes

- Entropy

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- Quaternions and other geometric methods

More recent application themes

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- Irregular sampling

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- Mobile phone systems

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- ECG processing and other biomedical applications

After discussion – Forecasting

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- Tidal analysis and modeling

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- Multiple sensor systems

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The Signals and Systems theory should be included in the basic courses in all scientific graduations.
In fact it is ubiquitous.

The End

Thanks!