

# İTÜ Elektronik ve Haberleşme Mühendisliği Bölümü Semineri

## Recovering Missing Samples in Audio Signals by Sparse Regression

**Dr. Pavel Rajmic**

Signal Processing Laboratory,  
Brno University of Technology, Czech Republic

### Abstract

Audio recordings are sometimes affected by defects or even loss of information caused either by obsolete carriers (LP, magnetic tapes) or signal transmission drop-outs. The problem referred to as "audio inpainting" aims at recovering the information in such signal segments. Historically, these problems were solved by interpolation approaches based mostly on autoregressive modelling of partial harmonics. Since most natural signals are sparse with respect to some time-frequency transform, sparse signal priors were utilized in developing related optimization programs. We will compare the old methods with the sparsity-based approach and discuss promising results based on structured sparsity.

### Short Biography

Pavel Rajmic has been employed as researcher and lecturer at the Faculty of Electrical Engineering and Communication, Brno University of Technology since 2004. He is a member of the team SPLab dealing with digital multimedia signal processing at the Department of Telecommunications. In 2001, he worked as a statistician in analyzing large-scale data coming from the longitudinal psychological research project ELSPAC at the Masaryk university in Brno. His scientific interests include: time-frequency transforms, frames, segmented wavelet transform (SegDWT), sparse signal processing, compressed sensing

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