KU LEUVEN

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DREAMS

The **DREAMS** Initial Training Network:
Dereverberation and Reverberation of Audio, Music, and Speech

www.dreams-itn.eu

Marie Curie ITN

EU funding of research & training

- **research:** 12 Early-Stage (PhD) and 4 Experienced (postdoc) Researchers
- **training:** intensive courses, seasonal schools, workshops, …

MARIE CURIE ACTIONS

Objectives

- prepare young researchers for future research career in industry
- support interdisciplinary, international, and intersectoral research collaborations

Consortium

BELGIUM

KU Leuven
Toon van Waterschoot
Marc Moonen

NXP Software
Wouter Tirry
Ann Spriet

Televic Group
Michael Catrysse

DENMARK

Aalborg University
Søren Holdt Jensen
Jan Østergaard

Bang & Olufsen
Søren Bech
Jan Abildgaard Pedersen

Oticon
Jesper Jensen

Imperial College
Patrick Naylor
Mike Brookes

Nuance Spinvox
Dushyant Sharma

CEDAR Audio
Dave Betts
Christopher Hicks

UK

University of Oldenburg
Simon Doclo
Timo Gerkmann

Fraunhofer IDMT
Stefan Goetze

Nuance Germany
Tobias Wolff

GERMANY

Research Program

Room Acoustics
- Unifying framework for different room model types
- Efficient and scalable room modeling and identification
- Perceptual attributes of small room acoustics
- Reverberation models for speech recognition

Psychoacoustics
- Perceptual framework to evaluate (de)reverberation
- Dereverberation for speech intelligibility improvement
- Perceptual models and objectives measures for speech dereverberation
- Perception of combined artifacts incl. reverberation

Speech & Audio
- Interaction of different artifacts and algorithms
- Joint dereverberation and acoustic echo cancellation
- Joint dereverberation and noise suppression
- Coding of reverberant speech & audio

Signal Processing
- Algorithmic/computational issues of (de)reverberation
- Inverse numerical solution of acoustic wave equation
- Environment-aware multi-channel dereverberation
- Adaptive beamforming in reverberant conditions



Events

Seasonal Schools & Workshops

- **September 2013:** Workshop in Oldenburg, Germany
  "The Impact of Reverberation and Noise on Speech Intelligibility and Speech Recognition" — Invited Speaker: *Gaston Hilkhuysen*
- **January 2014:** Winter School in Aalborg, Denmark
  "Critical Thinking of Acoustic Reverberation"
  Invited Speaker: *Barry Blesser*
- **September 2014:** Summer School in Leuven, Belgium
  "Electroacoustics and Room Acoustics"
  Invited Speakers: *Peter A. Swarte & Diemer de Vries*
- **November 2014:** Intensive Course in Aalborg, Denmark
  "Psychoacoustics" — Invited Speakers: to be confirmed
- **February 2015:** Winter School in Oldenburg, Germany
  Topic & Invited Speaker(s) to be decided
- **Summer 2015:** Summer School in London, UK
  Topic & Invited Speaker(s) to be decided

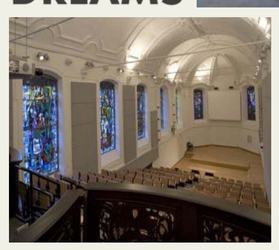
International Conference

- AES Conference on "DREAMS": Dereverberation and Reverberation of Audio, Music, and Speech
- **February 3 – 5, 2016**
- Leuven, Belgium



DREAMS





AUDIO ES

