

Workshop on Physical Sound Synthesis: Ness/STMS/LAM-IJLRA

Day 1 (Thursday, 13 October 2016)

Presentations of the NESS team (Next Generation Sound Synthesis, ERC project)

Studio 5, STMS - IRCAM/CNRS/UPMC, 1 place Igor Stravinsky, 75004 Paris, France

Day 2 Morning (Friday, 14 October 2016)

Presentations of the LAM team (Equipe Lutherie-Acoustique-Musique)

Library, Floor 4, Corridor 55-65, Institut Jean Le Rond d'Alembert, UPMC, 6 place Jussieu, Paris

Day 2 Afternoon (Friday, 14 October 2016)

Presentations of the EAC and S3 teams (Equipes EAC & S3: Espaces Acoustiques et Cognitifs & Systèmes et Signaux Sonores)

Studio 5, STMS - IRCAM/CNRS/UPMC, 1 place Igor Stravinsky, 75004 Paris

DAY 1 : Presentations of the NESS team (Studio 5, IRCAM, 1 pl. I Stravinsky, 75004 Paris)

Welcome / Coffee (9:30-10:00, Hall, floor -2)

Session I (10:00-12:00, Studio 5): Models and Algorithms

1. Introduction: S. Bilbao
2. Brass Instruments: R. Harrison
3. Bowed String Instruments: C. Desvages
4. Guitar Modeling: S. Bilbao
5. Nonlinear Plate and String Vibration: M. Ducceschi
6. Real time Plate Reverberation: C. Webb

Session II (14:00-16:00, Studio 5): Large Scale Synthesis, 3D Rendering and Parallelisation

1. Approaches to Parallelisation: A. Gray
2. Large-scale Modular Physical Modeling Synthesis Environments: S. Bilbao
3. 3D Percussion Modeling: A. Torin, presented by M. Ducceschi
4. Acceleration of Synthesis Algorithms: J. Perry
5. Real-time Modular Physical Modeling Synthesis: C. Webb
6. Large-scale Wave-Based Room Acoustics Modeling: B. Hamilton and S. Bilbao
7. Noisy Sound: P. Graham

Coffee break (16:00-16:30, Hall, floor -2)

Session III (16:30-18:00, Studio 5): Musical Use and Experimentation

1. *Black Dog* (2016) and *Ashes to Ashes* (2013): G. Delap
2. *Dithyramb* (2014): T. Wishart
3. *Collision Suite* (2016): G. Sassoon

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DAY 2 - Morning : *Presentations of the LAM team* (Library, Floor 4, Corridor 55-65, 6 pl. Jussieu, 75005 Paris)

Welcome / Coffee (9:30-9:45, Library/Bibliothèque)

Session IV (9 :45-11:15, Library/Bibliothèque)

1. Model based approach for the nonlinear vibration of strings against a unilateral obstacle: Clara Issanchou
2. Attack transients in flute-like instruments: Augustin Ernout
3. Investigating the playability of the cello: Timothy Wofford
4. Gestural control of Voice Synthesis - Cantor Digitalis : Boris Doval

Visit of the laboratory (11:15-12:00)

DAY 2 - Afternoon: *Presentations of the EAC and S3 teams* (Studio 5, IRCAM, 1 pl. I Stravinsky, 75004 Paris)

Session V (14:00-16:00, Studio 5): Room acoustics / nonlinear modelling

1. 3D Acoustic Simulation: M. Noisternig
2. Interaction and Volterra series: D. Roze
3. Identification problems and Volterra series: D. Bouvier
4. Port-Hamiltonian Systems for sound synthesis - open avenues: T. Hélie
5. Simulation and correction of an electrodynamic loudspeaker based on Port-Hamiltonian Systems: T. Lebrun
6. High Performance Computing & Geometry: J. Bensoam

Open discussion / Free time