

VIENNATALK2015: VIENNA TALK 2015

PROGRAM INDEXES

PROGRAM

Days: [Tuesday, September 15th](#) [Wednesday, September 16th](#) [Thursday, September 17th](#)
[Friday, September 18th](#) [Saturday, September 19th](#)

Tuesday, September 15th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

11:00-13:00 Session 1: BATWOMAN Public Tutorial Course (Soft Skills)

LOCATION: Seminarraum M0107

15:00-16:30 Session 2: BATWOMAN Public Tutorial Course (Soft Skills)

LOCATION: Seminarraum M0107

17:00-18:30 Session 3: BATWOMAN Public Tutorial Course (Soft Skills)

LOCATION: Seminarraum M0107

Wednesday, September 16th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

09:00-10:30 Session 4: BATWOMAN Public Tutorial Course: Optical Measurement Techniques

CHAIR: [Thomas Moore](#)

LOCATION: Hoersaal K0101

10:45-12:15 Session 5: BATWOMAN Public Tutorial Course: Acoustical Measurement Techniques

CHAIR: [Wilfried Kausel](#)

LOCATION: Hoersaal K0101

12:30-14:00 Session 6: BATWOMAN Public Tutorial Course: Music Signal Processing

CHAIR: [Antoine Chaigne](#)

LOCATION: Hoersaal K0101

15:00-18:00 Session : Registration

LOCATION: MDW Aula

15:30-17:30 Session 7: BATWOMAN Public Tutorial Course: Laboratory Workshops

CHAIRS: [Antoine Chaigne](#), [Wilfried Kausel](#), [Thomas Moore](#) and [Gregor Widholm](#)

LOCATION: Laboratory

18:00-18:30 Session : Opening Ceremony

LOCATION: Fanny Hensel Saal

18:30-19:00 Session 8: Keynote

CHAIR: [Antoine Chaigne](#)

LOCATION: Fanny Hensel Saal

18:30 [Michèle Castellengo](#)

Keynote speech (abstract)

19:00-19:30 Session 9: Poster craze

CHAIR: [Werner Goebel](#)

LOCATION: Fanny Hensel Saal

19:30-23:00 Session : Welcome Party

Thursday, September 17th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

09:00-10:45 Session 10: Brass wind instruments and their transient behaviour

CHAIRS: [Murray Campbell](#) and [Gregor Widholm](#)

LOCATION: Fanny Hensel Saal

09:00 [Murray Campbell](#)

Keynote speech: Bridging the gaps in the harmonic series: valves, slides and finger

holes in brass instruments. (abstract)

- 09:30 *Lionel Velut, Christophe Vergez, Joel Gilbert and Patrick Sanchez*
Simultaneous and in vivo measurements of control parameters used in trumpet performance (abstract)
- 09:45 *Viktor Hruška, Martin Švejda and Milan Guštar*
Transients of the trumpet tone: Basic links between perception and measurements of lips opening area and pressure in player's mouth (abstract)
- 10:00 *Henri Boutin, John Smith and Joe Wolfe*
Playing above and below the resonance: the changing relative phases of pressure, flow and trombonists' lip motion (abstract)
- 10:15 *Jonathan Kemp, Amaya Lopez-Carronero, Alan Woolley and Murray Campbell*
Experimental investigation of Doppler shift during wave propagation within the bore of the Trombone during slide movement (abstract)
- 10:30 *Saranya Balasubramanian and Wilfried Kausel*
Pitch Shifts in Wind Instruments due to Changes in Air Composition (abstract)

10:30-12:00 Session 11: Poster session I

LOCATION: MDW Aula

- 10:30 *Robin Tournemene, Jean-François Petiot and Joël Gilbert*
Inharmonicity of a trumpet with a variable depth mouthpiece (abstract)
- 10:30 *Viktor Hruška and Tereza Berdychová*
Šedifon (Schediphon): A case study on a rare brass instrument (abstract)

10:45-11:15 Session 12: Nonlinear wave propagation

CHAIR: *Joel Gilbert*

LOCATION: Fanny Hensel Saal

- 10:45 *Murray Campbell, Joël Gilbert and Arnold Myers*
Non-linear sound propagation and spectral enrichment as a key to characterising brass instrument types (abstract)
- 11:00 *Sylvain Maugeais and Joël Gilbert*
A simulation tool in time domain for brassiness studies (abstract)

11:15-11:30 Coffee Break

11:30-12:00 Session 13: Wall vibrations and air columns

CHAIR: *Francois Gautier*

LOCATION: Fanny Hensel Saal

- 11:30 *Mathieu Secail-Geraud, Francois Gautier, Joel Gilbert and Peter Hoekje*
Analysis of the acoustic input impedance of a vibrating trombone bell (abstract)
- 11:45 *Thomas Moore, Britta Gorman, Michelle Rokni, Wilfried Kausel and Vasileios Chatziioannou*
Coupling between wall vibrations and the air column in brass wind instruments: a comparison between theoretical predictions and experimental results (abstract)

12:00-12:45 Session 14: Woodwinds I

CHAIR: *Helmut Kuehnelt*

LOCATION: Fanny Hensel Saal

- 12:00 *Augustin Ernoult and Benoit Fabre*
Does an experienced recorder player start notes differently than a novice player? (abstract)
- 12:15 *Michael Lind and Alexander Mayer*
An Acoustical Analysis Of Waveline Flute Tube Joints (abstract)
- 12:30 *Yong Shi, Andrey Da Silva and Gary Scavone*
LBM Simulation of the Quasi-static Flow in a Clarinet (abstract)

13:00-14:00 Lunch

14:00-15:30 Session 15: Early brass music and instruments

CHAIRS: *Stewart Carter and Arnold Myers*

LOCATION: Fanny Hensel Saal

- 14:00 *Stewart Carter*
Keynote speech: From Mersenne to Robartes: The Trumpet, the Trumpet Marine, and the Discovery of the Harmonic Series (abstract)
- 14:30 *Sabine Klaus and Robert Pyle*
The On-going Quest for Trumpet Mute Pitch-Alteration: An Acoustical Analysis of three Historic Trumpet Mutes at the National Music Museum (abstract)
- 14:45 *Gerhard Stradner*
Transposing Mutes for Trumpets (abstract)
- 15:00 *Bryan Proksch*
Refining the Narrative of Anton Weidinger's Prototype Keyed Trumpet (abstract)
- 15:15 *Adrian V. Steiger*
The Late Keyed Trumpet (abstract)

15:30-16:00 Session 16: Preservation of historic instrumentsCHAIR: [Heike Fricke](#)

LOCATION: Fanny Hensel Saal

15:30 [Ignace De Keyser](#)**Victor Mahillon's acoustical experiments: An Essay in the Archaeology of Science (abstract)**15:45 [Martin Ledergerber](#), [Marion Alter](#), [Emilie Cornet](#) and [Erwin Hildbrand](#)**Humidity in brass instruments and the prevention of corrosion (abstract)****16:00-16:15** Coffee Break**16:15-18:15** Session 17: Characterisation and documentation of instrumentsCHAIR: [Arnold Myers](#)

LOCATION: Fanny Hensel Saal

16:15 [Albert Rice](#)**The Basset Clarinet: instruments, makers and music (abstract)**16:30 [Patricia Lopes Bastos](#)**To know, to remember, to preserve: documenting objects and sites related to sound production (abstract)**16:45 [Thierry Maniguet](#)**In search of the remaining elements of Sébastien Érard and Gabriel Joseph Grenié's organs, first expressive organs built in France. (abstract)**17:00 [Géry Dumoulin](#)**Victor-Charles Mahillon and his anti-cornet strategy (abstract)**17:15 [Anne Houssay](#) and [Eric Fouilhé](#)**Modal analysis of 17th and 18th century models of bass violin and cello tailpieces (abstract)**17:30 [Claudia Fritz](#) and [Danièle Dubois](#)**Violin projection: perceptual and semantic analyses (abstract)**17:45 [Antoine Chaigne](#) and [Gert Hecher](#)**Measurements on historic pianos (abstract)**18:00 [Juliette Chabassier](#), [Philippe Guillaume](#) and [Julien Pommier](#)**Period instruments revival with Pianoteq KIViR project (abstract)**

Friday, September 18th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)**09:00-10:00** Session 18: Single note instrumentsCHAIRS: [Noam Amir](#) and [Wilfried Kausel](#)

LOCATION: Fanny Hensel Saal

09:00 [Noam Amir](#)**Keynote speech: Single note instruments – from spectra to performance (abstract)**09:30 [Lior Arbel](#), [Yoav Schechner](#) and [Noam Amir](#)**Methods for exciting wine glasses by coupling to plucked strings - theory and experiment (abstract)**09:45 [Samantha Collin](#), [Chloe Keefer](#) and [Thomas Moore](#)**The Etiology of Chatter in the Himalayan Singing Bowl (abstract)****10:00-11:00** Session 19: Woodwinds IICHAIR: [Vasileios Chatziioannou](#)

LOCATION: Fanny Hensel Saal

10:00 [Jean Kergomard](#), [Antoine Lefebvre](#) and [Gary Scavone](#)**Analytical model of the transition between cylinder and conical tubes (abstract)**10:15 [Jean-Baptiste Doc](#) and [Christophe Vergez](#)**Periodic and Quasi-Periodic regimes of an alto saxophone according to the control parameters and the bore inharmonicity (abstract)**10:30 [Manuel Gangl](#) and [Alex Hofmann](#)**Comparison between the measured and played intonation on e-flat clarinets in the altissimo register (abstract)**10:45 [Fritz Schueller](#) and [Carl Poldy](#)**IMPROVING A G-HIGH CLARINET USING MEASUREMENT DATA AND AN ELECTRONIC CIRCUIT ANALYSIS PROGRAM (abstract)****10:30-12:00** Session 20: Poster session II

LOCATION: MDW Aula

10:30 [Alexander Mayer](#) and [Martin Lamer](#)**An Automatic Acquisition System for Measuring the Directional Characteristic of Musical Instruments (abstract)**10:30 [Timo Grothe](#)**Parameter ranges for artificial bassoon playing (abstract)**

- 10:30 [Vasileios Chatziioannou](#) and [Maarten Van Walstijn](#)
Discrete-time conserved quantities for damped oscillators ([abstract](#))
- 10:30 [Sandra Carral](#) and [Vasileios Chatziioannou](#)
Influence of the truncation length of the oboe cone on the reed closing time
([abstract](#))
- 10:30 [Manuel Gangl](#)
Questionnaire: Satisfaction on the E-flat clarinet ([abstract](#))
- 10:30 [Fritz Schueller](#) and [Carl Poldy](#)
**SOFTWARE SIMULATION OF THE TONE-HOLE LATTICE IN CLARINET-LIKE
SYSTEMS** ([abstract](#))

11:00-11:30 Coffee Break

11:30-12:15 Session 21A: Physiology

CHAIR: [Matthias Bertsch](#)

LOCATION: Clara Schumann Saal

- 11:30 [Tobias Großhauser](#)
**Use and integration of further technologies into performance analysis and
musicians' daily routine** ([abstract](#))
- 11:45 [Esther Rois-Merz](#)
Hearing protection for musicians ([abstract](#))
- 12:00 [Leigh Anne Hunsaker](#) and [Robert Friberg](#)
**The Role of Biomechanics and Neuromechanics in Dynamic Performance: a
Practical Integration for Musicians** ([abstract](#))

11:30-12:45 Session 21B: Numerical methods

CHAIRS: [Stefan Bilbao](#) and [Maarten van Walstijn](#)

LOCATION: Fanny Hensel Saal

- 11:30 [Florian Pfeifle](#)
Modeling string boundary conditions and string coupling in lute instruments
([abstract](#))
- 11:45 [Guilherme Paiva](#), [François Gautier](#), [Frédéric Ablitzer](#) and [José Maria C. Santos](#)
TIME-DOMAIN SIMULATIONS OF A TEN-STRING BRAZILIAN GUITAR. ([abstract](#))
- 12:00 [Jamie Bridges](#) and [Maarten Van Walstijn](#)
**Investigation of tanpura string vibrations using a two-dimensional time-domain
model incorporating coupling and bridge friction** ([abstract](#))
- 12:15 [Thomas Hélie](#) and [Denis Matignon](#)
Physically-Based Dynamic Morphing of Beam Sounds ([abstract](#))
- 12:30 [Michele Ducceschi](#) and [Cyril Touzé](#)
**ROLE OF MODAL APPROACH FOR SOUND SYNTHESIS OF NONLINEAR SYSTEMS:
THE CASE OF PLATES** ([abstract](#))

13:00-14:00 Lunch

14:00-15:30 Session 22: Experimental methods

CHAIR: [Thomas Moore](#)

LOCATION: Fanny Hensel Saal

- 14:00 [Randy Worland](#) and [Benjamin Boe](#)
**Using a dual electronic speckle-pattern interferometer to study coupled vibrations
in drumheads** ([abstract](#))
- 14:15 [Tatiana Statsenko](#), [Vasileios Chatziioannou](#) and [Wilfried Kausel](#)
Interferometric studies of the Brazilian Cuica ([abstract](#))
- 14:30 [Rolf Bader](#)
Microphone Array Methods for Musical Acoustics ([abstract](#))
- 14:45 [Vincent Fréour](#), [François Gautier](#), [Bertrand David](#) and [Marthe Curtit](#)
Emergence of inharmonic components in classical guitar sounds ([abstract](#))
- 15:00 [Robert Mores](#)
Cello Bowing Pendulum ([abstract](#))
- 15:15 [Niko Plath](#), [Florian Pfeifle](#), [Christian Koehn](#) and [Rolf Bader](#)
Microphone array measurements of the grand piano ([abstract](#))

15:30-15:45 Coffee Break

15:45-17:45 Session 23A: Biomechanics workshop

CHAIR: [Matthias Bertsch](#)

LOCATION: Clara Schumann Saal

- 15:45 [Robert Friberg](#) and [Leigh Anne Hunsaker](#)
Part I. Interactive session: Improving Dynamic Posture for Musical Performance
([abstract](#))
- 16:45 [Robert Friberg](#) and [Leigh Anne Hunsaker](#)
Part II. Individualized Programs for Continuing Improvement ([abstract](#))

15:45-17:00 Session 23B: Free reed instrumentsCHAIRS: [James Cottingham](#) and [Thomas Moore](#)

LOCATION: Fanny Hensel Saal

15:45 [James Cottingham](#)**Reed chamber resonances in free reed instruments: Problems and possibilities (abstract)**16:00 [John Granzow](#), [Thomas Rossing](#) and [Peter Egbert](#)**Bionic pitch benders for free reed instruments (abstract)**16:15 [Maria Jesus Elejalde Garcia](#), [Erica Macho Stadler](#), [Ricardo Llanos Vazquez](#) and [Asier Agos Esparza](#)**EXPERIMENTAL STUDY OF THE SOUND PRODUCED FROM A CONCERT ACCORDION (abstract)**16:30 [Laurent Millot](#)**Physical modeling of free reeds instruments: main principles (abstract)**16:45 [James Cottingham](#) and [Daniel Wolff](#)**Experimental study of free reed initial transients (abstract)****17:00-18:30** Session 24: Piano modellingCHAIRS: [Antoine Chaigne](#) and [Anatoli Stulov](#)

LOCATION: Fanny Hensel Saal

17:00 [Anatoli Stulov](#)**Piano hammer-string contact duration: How the bass hammer is released from the string (abstract)**17:15 [Juliette Chabassier](#) and [Marc Duruflé](#)**Energy based simulation of a Timoshenko beam in non-forced rotation. Influence of the piano hammer shank flexibility on the sound. (abstract)**17:30 [Jin Jack Tan](#), [Cyril Touzé](#) and [Benjamin Cotte](#)**Investigating the double polarisations of vibrating piano strings (abstract)**17:45 [Benjamin Trévisan](#), [Pierre Margerit](#), [Kerem Ege](#) and [Bernard Laulagnet](#)**Comparisons between measured and predicted vibroacoustics characteristics of an upright piano soundboard (abstract)**18:00 [Antoine Chaigne](#)**Energy analysis of structural changes in pianos (abstract)**18:15 [Federico Fontana](#), [Stefano Zambon](#) and [Yuri De Pra](#)**DESIGNING ON SUBJECTIVE TOLERANCE TO APPROXIMATED PIANO REPRODUCTIONS (abstract)****20:00-23:30** Session : Conference Banquet

LOCATION: Vienna City Hall

Saturday, September 19th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)**09:00-09:30** Session 25: KeynoteCHAIR: [Werner Goebel](#)

LOCATION: Fanny Hensel Saal

09:00 [Aaron Williamon](#)**Keynote Speech: Performance space: The spotlight and its implications for performance psychology (abstract)****09:30-10:30** Session 26: Gesture and communication in music performance ICHAIRS: [Laura Bishop](#) and [Werner Goebel](#)

LOCATION: Fanny Hensel Saal

09:30 [Yi-Huang Su](#)**Rhythm perception in the context of music and dance (abstract)**09:45 [Laura Bishop](#) and [Werner Goebel](#)**Enabling Synchronization: Auditory and Visual Modes of Communication during Ensemble Performance (abstract)**10:00 [Henna Tahvanainen](#), [Aki Haapaniemi](#), [Jukka Pätynen](#) and [Tapio Lokki](#)**Perceptual relevance of asynchrony between orchestral instrument groups in two concert halls (abstract)**10:15 [Zora Schärer Kalkandjiev](#) and [Stefan Weinzierl](#)**Playing slow in reverberant rooms – Examination of a common concept based on empirical data (abstract)****10:30-12:00** Session 27: Poster session III

LOCATION: MDW Aula

10:30 [Bertrand David](#), [François Gautier](#) and [Marthe Curtit](#)**Exploring the decay properties of guitar sounds from mobility measurements (abstract)**

- 10:30 [Alex Hofmann](#) and [Christoph Reuter](#)
Comparison of mouthpiece pressure signal and reed bending signal on clarinet and saxophone (abstract)
- 10:30 [Hellmut Schmuecker](#)
Steady State Sound Production and Investigations on Classic Guitars (abstract)
- 10:30 [Timo Grothe](#) and [Rainer Barth](#)
Investigating chime bar vibrations using high-speed stereophotogrammetry (abstract)
- 10:30 [Robert Mores](#)
Pre-assembly violin auralization—listening to plate-tuning trends and to fine model-adjustments (abstract)
- 10:30 [Sandra Carral](#) and [Valerio Lorenzoni](#)
Influence of mouthpiece geometry on saxophone playing (abstract)
- 10:30 [Zdeněk Otčenášek](#), [Viktor Hruška](#), [Ondřej Moravec](#) and [Martin Švejda](#)
The influence of nicks on the sound properties and the airflow in front of flue organ pipe (abstract)
- 10:30 [Werner Goebel](#) and [Dominikus Guggenberger](#)
Stay In Sync -- an interactive science exhibit for experiencing synchronicity with real and artificial partners (abstract)
- 10:30 [Milan Guštar](#) and [Zdeněk Otčenášek](#)
Inton – a system for in-situ measurement of the pipe organ (abstract)

10:30-10:45 Coffee Break

10:45-12:00 Session 28: Gesture and communication in music performance II

CHAIRS: [Laura Bishop](#) and [Werner Goebel](#)

LOCATION: Fanny Hensel Saal

- 10:45 [Alfonso Perez-Carrillo](#) and [Marcelo Wanderley](#)
Real-time estimation of instrument controls with marker based IR cameras. (abstract)
- 11:00 [Erwin Schoonderwaldt](#), [Matthias Demoucron](#) and [Eckart Altenmüller](#)
Auditory-motor integration in complex violin-bowing patterns (abstract)
- 11:15 [Gunnar Gidion](#) and [Reimund Gerhard](#)
Piezoelectric film sensors facilitate simultaneous measurement of bowing parameters and bridge vibrations during violin playing (abstract)
- 11:30 [Oliver Hödl](#), [Fares Kayali](#), [Geraldine Fitzpatrick](#) and [Simon Holland](#)
Towards Bridging the Gap in a Musical Live Performance (abstract)
- 11:45 [Andreas Arzt](#), [Werner Goebel](#) and [Gerhard Widmer](#)
Flexible Score Following: The Piano Music Companion and Beyond (abstract)

12:00-13:00 Session 29: Timbre perception

CHAIR: [Christoph Reuter](#)

LOCATION: Fanny Hensel Saal

- 12:00 [Zdenek Otcenasek](#) and [Jan Otcenasek](#)
ROUGHNESS OF VIOLIN TONES - PERCEPTION OF IRREGULARITIES (abstract)
- 12:15 [Saleh Siddiq](#), [Christoph Reuter](#), [Isabella Czedik-Eysenberg](#) and [Denis Knauf](#)
Towards the Comparability and Generality of Timbre Space Studies (abstract)
- 12:30 [Daniel Müllensiefen](#)
Modelling similarity perception of short music excerpts (abstract)
- 12:45 [Jack Dostal](#)
Investigating the Colloquial Description of Sound by Musicians and Non-Musicians (abstract)

13:00-14:00 Lunch

14:00-14:30 Session 30: Voice and auralization

CHAIR: [Malte Kob](#)

LOCATION: Fanny Hensel Saal

- 14:00 [Manfred Kaltenbacher](#), [Stedan Zörner](#), [Andreas Hüppe](#) and [Petr Sidlof](#)
Physical Modeling and Numerical Simulation of Human Phonation (abstract)
- 14:15 [Matthew Boucher](#), [David Pelegrin Garcia](#) and [Wim Desmet](#)
Auralization for musicians and instrument makers as a tool for evaluating a musical instrument (abstract)

14:30-15:00 Session 31: Organ acoustics

CHAIRS: [Fueleop Augusztinovicz](#) and [Malte Kob](#)

LOCATION: Fanny Hensel Saal

- 14:30 [Sebastià V. Amengual Garí](#), [Winfried Lachenmayr](#) and [Malte Kob](#)
Study on the influence of acoustics on organ playing using room enhancement (abstract)
- 14:45 [Jost Fischer](#) and [Rolf Bader](#)
Coupled Organ Pipes and Synchronization - Numerical Investigations and Methods

(abstract)

15:00-16:00 Session 32: Physical modeling tools for musical instruments

CHAIR: [Rolf Bader](#)

LOCATION: Fanny Hensel Saal

15:00 [Rolf Bader](#), [Jan Richter](#), [Malte Münster](#) and [Florian Pfeifle](#)

Digital Guitar Workshop – A physical modeling software for instrument builders
(abstract)

15:15 [Florian Pfeifle](#)

Real-time physical modeling of large instrument geometries using coupled FPGAs
(abstract)

15:30 [Math Verstraelen](#), [Florian Pfeifle](#) and [Rolf Bader](#)

Feasibility analysis of real-time physical modeling using WaveCore processor technology on FPGA (abstract)

15:45 [Carl Poldy](#) and [Fritz Schueller](#)

Software Simulation of Clarinet Reed Vibrations (abstract)

16:00-16:15 Coffee Break

16:15-17:30 Session 33: Audio signal processing

CHAIR: [Rene Causse](#)

LOCATION: Fanny Hensel Saal

16:15 [Sylvain Marchand](#)

Spatial Manipulation of Musical Sound: Informed Source Separation and Respatialization (abstract)

16:30 [Bertrand David](#), [Francois Rigaud](#) and [Laurent Daudet](#)

Modeling the spectrum structure within the NMF framework. Application to inharmonic sounds. (abstract)

16:45 [Alfonso Perez](#)

Towards Realistic and Natural Synthesis of Musical Performances: Performer, Instrument and Sound modeling (abstract)

17:00 [Kuriijn Buys](#), [David Sharp](#) and [Robin Laney](#)

A comparison of single-reed and bowed-string excitations of a hybrid wind instrument (abstract)

17:15 [Emmanouil Benetos](#)

Automatic music transcription using spectrogram factorization methods (abstract)

17:30-18:00 Session : Closing event

LOCATION: Fanny Hensel Saal

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