

## IMMERSIVE AUDIO OVER HEADPHONES FOR RADIO & TV BROADCASTERS AND THEIR AUDIENCES

### WEDNESDAY 15 MAY

10.30 **Registration**

#### INTRODUCTION

11.00-11.15 **Welcome and a few words about SP-FAR**

#### SESSION 1: PAST – A BIT OF HISTORY

11.15-11.40 **History of Binaural Broadcasting**  
Experiences of dummy head recording Paul Newis

11.40-12.05 **A historical review of binaural research**  
From Lord Rayleigh to state of the art Olivier Warusfel IRCAM  
Markus Noisternig

#### SESSION 2: PRESENT - BROADCASTING BINAURAL TODAY – PART 1

12.05-12.30 **Immersive audio: who's listening?**  
Results of a survey of surround sound listening habits Werner Bleisteiner Bayerischer Rundfunk

12.30-13:30 *Buffet Lunch*

#### SESSION 2: PRESENT - BROADCASTING BINAURAL TODAY – PART 2

13.30-14.00 **Binaural in the real world: nouvOson**  
Concept, design, production approach, audience response. Hervé Dejardin Radio France

14.00-14.25 **Headphone surround: a listening test**  
Results of an assessment of many state-of-the-art commercial systems Chris Pike BBC

14.25-14.50 **Exchange of HRTF files**  
Work towards a standardized open format Markus Noisternig IRCAM

#### SESSION 3: PANEL DISCUSSION

14.50-15.50 **Binaural broadcasting strategies**  
Methods for distributing binaural audio **Moderator:**  
Matthieu Parmentier francetélévisions

15.50-16.10 *Coffee break*

#### DEMONSTRATIONS

16.10-17.00 **Introductions**  
Short overviews of some of the demos

17.00-19.00 **A chance to listen to demonstrations of cutting-edge binaural technology**

19.00-20.00 *Drinks, snacks and networking*

## IMMERSIVE AUDIO OVER HEADPHONES FOR RADIO AND TV BROADCASTERS AND THEIR AUDIENCES

### THURSDAY 16 MAY

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09.00-09.10 **Welcome**

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#### SESSION 4: FUTURE – NEW RESEARCH DIRECTIONS

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| 09.10-09.40 | <b>Qualifying the binaural experience</b><br>Quality assessment and validation in spatial audio research. | Alex Raake | TU Berlin |
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| 09.40-10.05 | <b>Techniques for personalized binaural sound</b><br>Methods to achieve individual HRTF data | Rozenn Nicol | Orange Labs |
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| 10.05-10.30 | <b>Head tracking techniques for binaural sound</b><br>Advantages of head tracking and a review of technology. | Wolfgang Hess | Fraunhofer IIS |
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| 10.30-10.50 | <i>Coffee break</i> |  |  |
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| 10.50-11.10 | <b>New binaural recording techniques</b><br>The MARVIN spherical microphone array. | Michael Weitnauer | IRT |
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| 11.10-11.30 | <b>Binaural reproduction using loudspeakers</b><br>State of the art and current innovations | Michael Meier | IRT |
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#### SESSION 5: PANEL DISCUSSION

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| 11.30-12.30 | <b>Binaural in the real world: present and future</b><br>Discussing the challenges of producing and broadcasting binaural | <b>Moderator:</b><br>Frank Melchior | BBC |
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| 12.30-13.30 | <i>Buffet Lunch</i> |  |  |
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#### DEMONSTRATIONS

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| 13.30-14.30 | <b>Introductions</b><br>Short overviews of some of the demos |  |  |
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| 14.30-16.30 | <b>A chance to listen to demonstrations of cutting-edge binaural technology</b> |  |  |
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| 16.30 | End of workshop |  |  |
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