



**Lunchtime Concert in The Winter Garden  
University of Southern Denmark, Odense  
12 noon – 1 p.m. Thursday, February 20, 2014.**



**Fernando Bravo**  
Guitar and Multimedia

## **MUSIC, MULTIMODALITY AND EMOTION**

My scientific work examines the integration of sound and visual stimuli when bringing the emotions to the mind. In other words, I work as an “experimental” film music composer, strictly controlling discrete musical variables with the purpose of studying how this manipulation shapes the emotional experience of the audience.

Within the Lunchtime Concert Series, I will be presenting two different types of multimedia materials: a set of animated short films accompanied by music composed for film-music research projects, and various interactive audiovisual applications developed with Max/MSP/Jitter. The artworks will merge art, science and technology to explore how music affects our emotional responses to what we see.

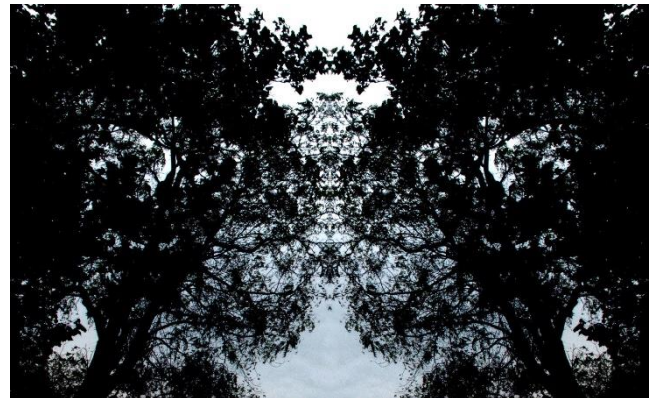
Examples (<http://soundscapesinthebrain.blogspot.co.uk/>):

Intermedia Patch: participants are asked to choose a musical sonority, and then visually to tune a certain provided image with the previously chosen sonority (this design gains insights about cross-modal links between the musical and visual structures).

Audiovisual Rorschach: Aimed at exploring how we use sound to make sense of visual information, participants are asked to describe what is seen when presented with abstracts animations accompanied by music with a specific sonority.



The images show three different visual adjustments of the same image (Original in top left corner - Kandinsky, 1913)



Example of an ambiguous image (created by Fernando Bravo) designed to be simultaneously experienced with sound, and used to explore how the characteristics of music contribute to the emotional comprehension of visual information.

## **Concert**

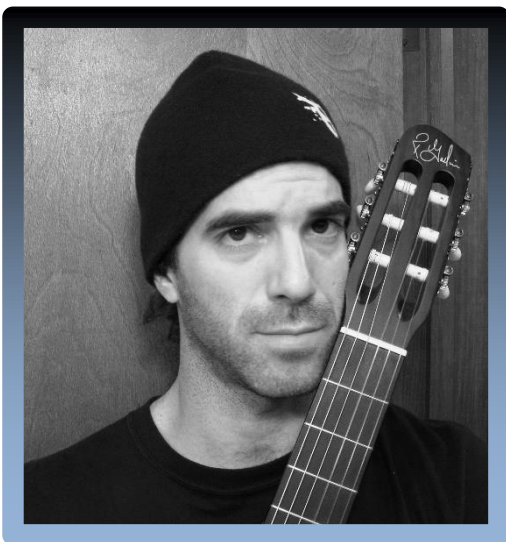
**Part 1 - Set of animated short films accompanied by music composed for film-music research projects:** 4 short films will be presented, with a total approximate duration of 25-30 minutes.

**Part 2 - Interactive audiovisual applications developed with Max/MSP/Jitter:**

- SETi (Search for extraterrestrial integrity)
- Audiovisual Rorschach
- Intermedia Patch

I created these applications as scientific experiments for children to play with during different outreach activities at Cambridge (Festival of Ideas, Taster Days, Science Festival. etc.). These are not installations but just very simple applications that I developed with Max software. My idea with these apps is to show the audience how they work, let them play with them (if they wish), and describe the artistic/scientific background that is behind their development. This section will have a duration of 15-20 minutes.

The whole program is planned to last approximately 50-55 minutes.



**Fernando Bravo** is a clinical psychologist, neuroscience researcher, classical guitar performer and composer from Argentina. He joined the Centre for Music and Science (University of Cambridge) in 2011 as a PhD student investigating the effects of music upon the emotional processing of visual information. Fernando's research work is directed at understanding the influence of music in film and other electronic multimedia from a cognitive/neuroscientific perspective. In particular, his research is focused on analyzing how alterations of specific aspects within the musical structure may influence the emotional interpretation of visual scenarios. Fernando's research work is supported by a Queens' College Walker Cambridge Studentship.

By training Fernando is a psychologist (Bachelor's degree), graduated with honors from Argentine Catholic University (UCA) in Buenos Aires. He holds a Master's degree in Clinic Psychology from La Matanza National University and advanced training in severe psychopathology at Pirovano's Hospital. In addition, he is a classical guitarist and composer, with studies in classical guitar performance and composition at Buenos Aires Conservatory of Music "Manuel de Falla", with further studies in composition, music technology and sound design applied to audio-visual media at Argentine Catholic University (UCA).

Between 2009 and 2011, he conducted research as a Fulbright Scholar in the United States, developing studies (Master of Science) at Iowa State University of Science and Technology, within the Integrated Electronic Arts Program established by Dr Christopher Hopkins. Supervised by Dr Hopkins, he conducted research in multimedia, studying the various ways in which music may shape the semantic processing of visual contexts, and analyzing how these processes might be evaluated in an empirical setting. His research specifically targeted the emotive effects of music on visuals; combining the fields of cognitive psychology, musical composition, sound design and computer graphics (3D modeling/animation).

Before he was awarded the Fulbright Grant, Fernando worked as a clinical psychologist with adults and children who suffered from severe psychopathological disorders (psychosis and autism spectrum). Fernando taught courses on Personality and Developmental Psychology and conducted research focused on the development of potential non-verbal multimedia applications for the diagnosis of severe psychopathological disorders at the research program of the Psychology Department at UCA. As a musician, Fernando is devoted to classical guitar performance and composition, having composed solo guitar pieces, chamber music, works for guitar and orchestra, short film scores and several intermedia compositions.

Fernando Bravo will also be presenting



Thursday, February 20, 2014, 3:15-5 p.m. in U73: **The Effects of Music upon the Emotional Processing of Visual Information from a Neuroscientific Perspective**, a seminar in the series *Topics in the Aesthetics of Music and Sound*

On Friday, February 21 in the venue Comenius at the Institute for the Study of Culture, Fernando Bravo will giving two presentations:

10:15 a.m. - 12 noon: **Das Unheimliche and Musical Dissonance: Mentalizing, Self-Other Distinction, Metaphor and Cross-Modal Mechanisms in the Brain**

2:15 - 4 p.m.: **Music Technology and Psychological Research: An Introduction to Max/MSP/Jitter for Artistic and Scientific Purposes**

**Audience participation via Skype is also welcome.**

It is a pleasure for the personnel in Cafeteria 4, SDU's Service Department and the research program The Performances of Everyday Living within the research initiative The Aesthetics of Music and Sound at the Institute for the Study of Culture (IKV) at SDU together with NordForsk-supported NNIMIPA: Nordic Network for the Integration of Music Informatics, Performance and Aesthetics to present this Lunchtime Concert with Fernando Bravo. Today's Lunchtime Concert is the 34th Lunchtime Concert since the series began in April 2010; please see [www.soundmusicresearch.org/](http://www.soundmusicresearch.org/).

Many thanks to **Vitus Vestergaard**, Assistant Professor of Media Studies, Institute for the Study of Culture, SDU for managing the technical aspects of today's concert.

We hope that you enjoy today's concert and that you will continue to watch for news, details and updates regarding upcoming concerts and seminars during the spring semester of 2014.

Jane Bonne and Carsten Sjødahl on behalf of the personnel in Cafeteria 4

Leif Jensen on behalf of SDU's Service Department

Cynthia M. Grund on behalf of The Performances of Everyday Living, The Aesthetics of Music and Sound [www.soundmusicresearch.org](http://www.soundmusicresearch.org) and NNIMIPA: Nordic Network for the Integration of Music Informatics, Performance and Aesthetics [www.nnimipa.org](http://www.nnimipa.org)