**classical musicians and physics students: one passion, two worlds**

Afonso Lopo1, Melissa Serra1

1 Department of Physics, Faculty of Science, University of Lisbon, Portugal

fc47095@alunos.fc.ul.pt

***Aim***: Poster.

Can music be described as a packet of waves with different frequencies created by different instruments? Can we fully reproduce a song with one computer? Being two classical musicians and physics bachelor students, we are proposing to compose an original song using our own instruments, a transverse flute and a cello, play it and recreate it using digital instruments. Our main goal is to show why machines cannot replace a musician, but can really help to better understand and improve our skills and living. In this work, we will analyse the results given by the digital methodologies in term of its spectral analysis and will provide a scientific and artistic interpretation of the results.