

Thomas Power

Curriculum Vitae

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📄	http://www.github.com/tothepoweroftom

PROJECTS & EXPERIENCE

Summer 2016 - Cloud Chamber Music *Web Audio App*

Having completed a degree in Theoretical Physics then embarking on a Music Technology degree, a project combining them both was fitting. For my Master's thesis project a web audio application was developed to generate music from detected particles in a cloud chamber. The project combines computer vision technology, web audio & composition. Website can be found at -<https://tothepoweroftom.github.io/musicfromtheatom>

Summer 2015 - Launchbox Startup Incubator TCD *Composure - Autotab*

Following on from a research project on automatic guitar transcription, a colleague and I have received funding to continue our work and form a startup company over the summer. A Mac OS X app was developed in Swift. My work involved Front End Development and work on the transcription algorithm

2014-2015 *Formant Wave Function Synthesis - Undergraduate Thesis*

Undertook a 10 credit research project supervised by Prof. Dermot Furlong exploring Formant Wavefunction Synthesis, an audio granular synthesis method originally part of the CHANT project at IRCAM. The synthesis technique was explored in Csound and Matlab.

2014-2015 *Automatic Transcription of Stringed Instruments - Final Year Project*

Undertook a 5 credit research project exploring the field of automatic audio transcription, that is the analysis of audio to retrieve musical information. The project concentrated on the transcription of guitar audio into guitar tablature. Relevant digital signal processing techniques were explored in Python, C++ and Matlab.

Summer 2014 *The Tomography of Light Pollution*

Was funded by TCD School of Physics in the summer of 2014 to undertake a project researching the extent of light pollution in Ireland. A software technique was developed to analyse the amount of light pollution in photos taken of the night sky and in satellite images of Ireland taken by a NASA satellite.

EDUCATION

2015 - 2016 **Music & Media Technology**
Masters Degree
First Class Honours
Trinity College Dublin

2011 - 2015 **Undergraduate Degree**
THEORETICAL PHYSICS
First Class Honours
Trinity College Dublin

2011 **Leaving Certificate**
590/600 points, Top 2.5% nationally.
A1 in Music, Physics, Spanish, English and Maths
A2 in Engineering, Irish and Applied Maths
Pobalscoil Chorca Dhuibhne

2011 **Senior Certificate in Pianoforte**
Honours
Royal Irish Academy of Music

COMPUTER SKILLS

Basic Knowledge	JAVA, PYTHON, MatLab
Intermediate Knowledge	C++/C, Javascript, HTML Swift & XCode Csound, Max/MSP
Advanced Knowledge	Processing Sound Design/Engineering Ableton Live, Reaper, Logic

INTERESTS

- Audio Synthesis, Sound Design
- Composing, Songwriting
- Mathematics, Physics
- DSP and Programming
- iOS Programming
- Food & Recipes
- Writing

AWARDS

- 2015 Chosen as one of seven companies to receive funding for Launchbox 2015
- 2014 SURE Funding for research project on Light Pollution
- 2014 Dean of Students TCD: Roll of Honour
- 2011 Entrance Exhibition Award - TCD