

Engineering Tripos Part IIB

Project Planning Form 2022/23

Students should submit this form to Group Administrators by **Friday 10 June 2022**. If plans evolve over the summer, please update and resubmit.

Name of student: Max Fryer

Email: mf699@cam.ac.uk

College: Robinson

Director of Studies: Jossy Sayir (js851)

Project is: Type (a) / ~~type (b)~~ (delete as appropriate)

Name of supervisor: Simon Godsill

Short title of project: Musical score to performance alignment using statistical inference

Project reference code (e.g. B-ANO22-1 / B-ANO22-type(b)): F-sjg30-4

Aims of project:

Design and implement program that estimates alignment of recording with score

Build a comprehensive understanding of modelling musical performances: instrument timbres, room acoustics, tempos etc

Investigate methods to extract information from score: pitch, rhythm, instrument etc

Learn how Bayesian techniques - along with priors extracted from score - can be used to improve accuracy of alignment

Preparatory work for the long vacation: Should be easy to use and accept standard format musical scores (MusicXML/MIDI) and recordings (.mp3)

Literature Review

Draft project timeline

Maintain dialogue with supervisor

Workshop/laboratory facilities needed:

None

Any special safety implications:

None

Signature of student: Max Fryer

Signature of supervisor: