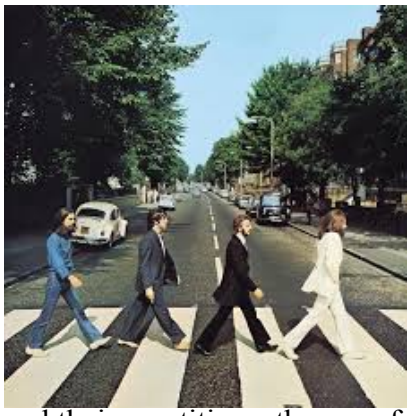
Master 1: INTERNSHIP PROPOSAL

Laboratory name: Physique et Mécanique des Milieux Hétérogènes

CNRS identification code: UMR 7636
Internship director'surname: Benjamin Thiria, Frédéric Lechenault
e-mail: Benjamin.thiria@espci.fr Phone number: 0140794521
Internship location: PMMH

Funding: NO

Quantitative evolution of successful musical content over the last decades and their selection mechanisms



Since the end of Second World War, musical content has become widely used as a means of mass distraction, and a whole economy has grown around its creation and distribution. Musical successes, i.e. so-called "hits", can indeed earn large amounts of money. However, the archetype of a "hit" has drastically evolved across times, from Elvis Presley early work to late electronic music like Daft Punk.
Interestingly, music is a physical phenomenon, and many tools can be invoked to qualify a given piece. The Fourier spectrum of course, but also the average beat-per-minute, the existence of specific rhythmic features, like syncope, patterns and their repetitions, the use of specific tonalities, or even colored notes.
The internship aims at investigating whether the evolution of the public's taste in terms of musical content can be characterized using physical analysis: what does success correlate with? One simple question here is how "pleasing beat-per-minute" has evolved in the past thirty years and why.

The work will consists in first scraping a large corpus of musical content from the Internet, and an associated measure of individual success (Number of sales, views, reviews…). The intern will then extract music-driven physical markers from the corpus, and correlate them with this measure. Finally, the temporal evolution of the successful markers will be analyzed and discussed in light of endogenous (physiology…) and exogenous (social media driven acceleration of content sharing, …)

Please, indicate which speciality(ies) seem(s) to be more adapted to the subject:

Condensed Matter Physics: NO Macroscopic Physics and complexity: YES
Quantum Physics: NO Theoretical Physics: YES