

# Understanding coronavirus through musical transformations

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Dr. Enzo De Sena and Dr. Milton Mermikides at the University of Surrey have set up the COVID-19 Listening Project, which is dedicated to the sonic and musical representation of COVID-19 data. A [42-minute](#)

[choral piece](#) and a genomic-spatial realization have already been produced and it is hoped this will help experts learn more about the virus.

In [consultation](#) with a network of geneticists including Gemma Bruno (Telethon Institute of Genetics and Medicine, Italy), programming and music technology resources have been employed in the communication of relevant genetic patterns in the disease. Data including the structure of the COVID-19 genome, the points of mutation within it, protein coding, the comparative genetics in the phylogenetic tree of COVID-19 samples and their [geographical distribution](#), were translated into pitch, rhythms and harmonies, to create rich and compelling communicative works.

Multi-modal representations of data like the ones produced through this project are increasingly popular in assisting scientific researchers to filter the conceptual and [scientific knowledge](#) required to make breakthroughs in their work.

Dr. Mermikides, Reader in Music and Music MMus Masters course Programme Director, said: "While visual graphs are an entirely normalized form of conceptual and scientific communication, our listening and musical faculties are highly sophisticated and underused tools which can, in fact, provide a more nuanced and impactful data representation.

"Throughout this project, our aim has been to respect the data and provide the most sensible and well-informed translation methods to communicate, rather than obscure this nuanced data. I have been working on translating data into music since 2004 in a wide range of disciplines, but it is really coming of age now with leading [research institutions](#) such as MIT and Stanford adopting similar approaches."

Dr. De Sena, Lecturer in Audio, said: "At this time, clear

communication is vital, and our aim is to communicate COVID-19 though the medium of sound and [music](#) making it easier to interpret for both researchers and the general public. We hope that by interpreting the virus, experts will move one step closer to beating it."

**More information:** Covid 19 Listening Project: [www.covidlp.org/](http://www.covidlp.org/)

Provided by University of Surrey

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