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Inspiring Minds – A Digital Collection of  
Western's Graduate Research, Scholarship and  
Creative Activity

Inspiring Minds

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November 2022

## Geeks Dance

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Inspiring Minds – Showcasing Western's Graduate Research, Scholarship and Creative Activity

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Summer 2022

## Inspiring Minds Activity

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# Western University

## Inspiring Minds

Fine Arts & Technology  
Scholarship

Jiazhi Sun    Don Wright Faculty of Music  
Enzhong Jin    Faculty of Engineering  
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# Geeks Dancing

Hello Mustangs!

The first project we are currently working on is a visualization of musical choreography presented in a 3D animation setting.

The Fast Fourier Transform (FFT) algorithm can successfully collect signals from sound resources and detect their frequencies. The recorded stats can be further altered to the shape of lines and frames to depict the structure of sonic metamorphosis by converting pitches, timber with rhythmic duration into equally dispersed function values of corresponding frequencies. Accessing the morphology of music with related visual imagining is also becoming possible with the emerging Acoustic Fingerprint technology recently developed.

The collected animations might boost the expressiveness of live performances or give music videos some added flair. The attached videos are some examples for educational purposes only. We will delete the videos in the case of any copyright violations.

Thank you all for your time and help on this project.

Sincerely,

Team Geeks Dance

Chrome Music Lab. (n.d.). Retrieved June 6, 2022, from <https://musiclab.chromeexperiments.com/spectrogram>

*Home en.* FFT. (n.d.). Retrieved June 6, 2022, from <https://www.nti-audio.com/en/support/know-how/fast-fourier-transform-fft>

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