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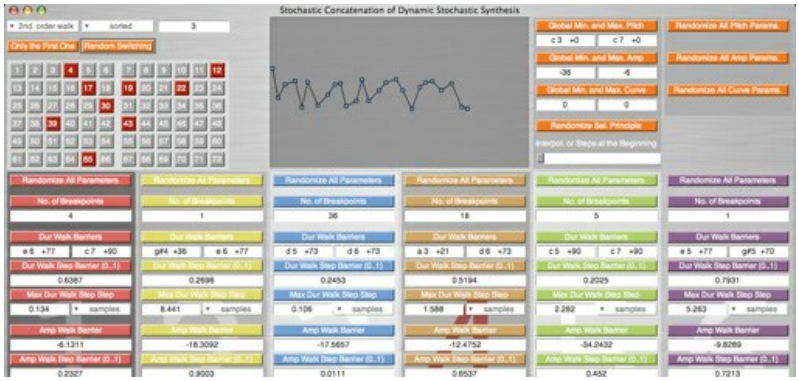
Sergio Luque - Stochastic Synthesis



My research focuses on the development of new Stochastic Synthesis techniques and their real-time implementation in the computer music programming language **SuperCollider (http://www.beast.bham.ac.uk/research/SuperCollider.shtml)** .

I started working on this subject during my Masters studies at the Institute of Sonology, at the Royal Conservatory of the Netherlands in The Hague. The goal is to efficiently produce expressive sonorities, with numerous and complicated transients, that are useful in electroacoustic compositions.

"This approach can be compared to current research on dynamic systems, deterministic chaos or fractals. Therefore, we can say it bears the seed of future exploration."

- Iannis Xenakis (Formalized Music, 1992)

Stochastic Synthesis is a largely unexplored technique in computer music that is capable of producing rich and energetic types of microsound. In the late 1960s, Iannis Xenakis started researching this technique, an approach to sound synthesis that uses probability distributions to manipulate individual digital samples. This "nonstandard synthesis" approach is not based on any acoustical model and reflects a willingness to explore the sound synthesis possibilities that are unique to computers.

- **example 1 (/Audio/college-arts-law/beast/stochastic/Luque-StochasticExample1.mp3)**
- **exampe 2 (/Audio/college-arts-law/beast/stochastic/Luque-StochasticExample2.mp3)**
- **example 3 (/Audio/college-arts-law/beast/stochastic/Luque-StochasticExample3.mp3)**

Example works

Happy Birthday (2006)

'Sex, Drugs and Rock 'n Roll' was never meant to be like this (2007)

Stochastic Synthesis: Origins and Extensions (2006) (http://www.sergioluque.com/thesis.html)

Masters Thesis

Institute of Sonology, Royal Conservatory of the Netherlands in The Hague

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Sergio Luque's personal website (http://www.sergioluque.com/)

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