De: **SMC2019** smc2019@easychair.org
Objet: SMC2019 notification for paper 104
Date: 22 mars 2019 à 14:40
À: Jerome Villeneuve jerome.villeneuve@gipsa-lab.fr

Dear Jerome Villeneuve

Thank you for submitting your work to SMC2019.

We are pleased to inform you that your paper
104 - Mass-Interaction Physical Models for Sound and Multi-Sensory Creation : Starting Anew
has been ACCEPTED for ORAL PRESENTATION and for publication in the Proceedings of SMC2019.

This year all submissions received at least 3 independent reviews, and a metareview by a Program Committee Member. Below you can find the reviews and metareview for your contribution.

The deadline for camera-ready papers is
April 5, 2019:
http://www.easychair.org/conferences/?conf=smc2019
You will need to upload to EasyChair two pdf files:
1) the camera-read paper, and
2) a document explaining how you have taken into
account reviewers' comments in the final version.
The Program Committee will verify that you have incorporated changes recommended by the reviewers, and that you have followed carefully the SMC2019 template.

Please note
At least one author of your paper must register to the conference before April 10, 2019. Failure to have at least one such registration will result in removal of the paper from the Program and from the Proceedings.

We are looking forward to seeing you in Malaga.
Best regards
Stefania Serafin, Federico Avanzini
SMC2019 Program Co-Chairs

---------- REVIEW 1 ----------
PAPER: 104
TITLE: Mass-Interaction Physical Models for Sound and Multi-Sensory Creation : Starting Anew
AUTHORS: Jerome Villeneuve and James Leonard

Overall evaluation: -1 (weak reject)

---------- Overall evaluation ----------
This contribution presents a revamping of the classic CORDIS-ANIMA framework as a java library for Processing. The intent is laudable and makes a lot of sense, especially because a wide variety of interesting multisensory behaviors can be obtained as side effects of numerical approximations of complex mass-link networks. However, the paper is more alchemical than scientific, both in appearance and in content.
On the formal side, there is a variety of typographical devices (italics, quotes, centering), extensive use of colloquial forms, and an abuse of footnotes.
On the content side, some relevant approaches to sound synthesis by physical modeling, and some related challenges, are just neglected. In particular, in the last couple of decades the computer graphics community has been proposing several methods and techniques, with impressive sonic results. For example, see the works of Doug James. Another neglected area is that of synthesis for sound design, with systems such as the sound design toolkit (Baldan et al., 2017) that are founded on ecological and embodied perception and interaction.
The equations (1-5) present the simple discretization scheme, without mentioning the instantaneous nonlinear dependencies that arise in the continuous-time systems and the consequent artifacts that may arise if these are not properly addressed in numerical models. Numerical artifacts may sound interesting, yet they can not be attributed to the physical structure and, as such, they are difficult to predict by design. The discretization model should be validated in some way, or some validating literature should be cited.

Section 3.2 on modularity raises several questions. For example, what should an irreducible module be? In some sense, any programming language is modular. Is there empirical evidence that masses and links are modules that afford thinking about sound before actually making the structure?

In many places the authors use "quotes" just to highlight words or sentences. Everywhere, the first double quote is '' instead of ``.
References to figures are sloppy, e.g. "(cf. fig2)"
Non-English words in fig. 2: "irreductible", "constituants".
"allows to address the modelling question from any kind of preliminary phenomenological consideration": what does it mean?
Under eq. 1 a bracket is open and never closed: "(discrete-time position..."
Sec. 6.2.1: "Fletcher and Ross<l>ing"
Reference 2: Publisher? In my copy I have W3K editions, 2010.

---------- REVIEW 2 ----------
PAPER: 104

TITLE: Mass-Interaction Physical Models for Sound and Multi-Sensory Creation : Starting Anew
AUTHORS: Jerome Villeneuve and James Leonard

Overall evaluation: 2 (accept)

---------- Overall evaluation ----------
According to the authors, this paper aims to express a refreshed vision of the mass-interaction MI physical modelling within the context of computer music and digital arts. It is indeed very refreshing and very well written. The authors express very clearly their intention theoretically and in practice with the miPhysics library for Processing. Moreover, they try to clarify the intention behind the MI modeling and simulation paradigm.

A very well articulated paper, though sometimes it feels like it has a double scope; this could possibly form 2 separate papers: one regarding the intention and the aesthetics of mass-interaction physical modelling and one about the use of 3D mass-interaction models for sound and music creation.

Few points that need improvement or correction:

-It's not very clear whether the authors take the MI research into a new direction or try to present more clearly and openly some concepts, ideas and tools from Cordis-Anima physical modelling paradigm.
-Perhaps the authors could add the following publication to the bibliography "Castagné, Nicolas, and Claude Cadoz. "10 criteria for evaluating physical modelling schemes for music creation." In DAFx03, pp. 7-p. 2003." as it is very relevant and includes some of the ideas covered here.
-The authors claim that this approach is still very fertile to explore. It would be beneficial here to mention in a bit more detail some interesting outcomes that came out of this approach in the past in areas such as computer-assisted composition, animation, sound synthesis, processing, interaction etc.
-If this is the first publication of miPhysics, the authors should clearly state this as an important component and effort that reflects their intention regarding mass-interaction physical modelling.
-It would be nice to read more about miPhysics and its integration with Haply. This could probably be the topic of a difference publication
-Please cite correctly the publication number [8] - Curtis Roads.
-Please explain why did you use the suggested discretisation scheme amongst the other ones mentioned in the paper.
-What is the difference between the presented computation algorithm with the one in Cordis-Anima?
-It's nice to see the spectrograms but it would be even better to have links to audio samples.

The paper consists of a very good contribution to the research related to the MI physical modelling within the context of digital arts and computer music

---------- REVIEW 3 ----------
PAPER: 104
TITLE: Mass-Interaction Physical Models for Sound and Multi-Sensory Creation : Starting Anew
AUTHORS: Jerome Villeneuve and James Leonard

Overall evaluation: 2 (accept)

---------- Overall evaluation ----------
This paper presents a very nice expansion of the traditional mass-spring-damping formalism, which become popular in the computer music community thanks to the very mysterious and cryptic software GENESIS.
it is nice that the authors are open regarding the mathematical formulation used, which, despite its simplicity, produces interesting sonorities and reveals some of the mysteries from previous systems.
It is also a plus that the authors provide an open source version of their software. Well done!

Please be more exaustive in your literature overview of physical modelling synthesis, including also the research proposed in the computer graphics community (for example: Van Den Doel, Kees, Paul G. Kry, and Dinesh K. Pai. "FoleyAutomatic: physically-based sound effects for interactive simulation and animation." Proceedings of the 28th annual conference on Computer graphics and interactive techniques. ACM, 2001. and all the citations (or some!)).

---------- METAREVIEW ----------
PAPER: 104
TITLE: Mass-Interaction Physical Models for Sound and Multi-Sensory Creation : Starting Anew

Two of the three reviewers are very positive, one is very negative, if not in score at least in the review. All of them are expert. So, the paper, which seems to feature a certain peculiare writing style, is accepted. It is suggested that the issues raised by the first reviewer are opportunely addressed.