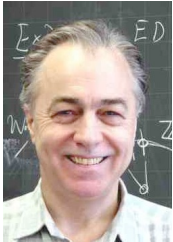## 1. President's Foreword

Dear members and friends of the Society,

We are now approaching ten years after the initial SMCM conference in Berlin 2007. The next Biennial International Conference on Mathematics and Computation in Music will take place at the UNAM in Mexico City. We are grateful to its spiritus rector Emilio Lluis Puebla, and if you visit the conference site http://www.mcm2017.org, you will be excited by the attractive presentation of venue, organization and conference details. I urge all our society members to envisage an active participation.

Apart from this major event, an attractive conference should be mentioned: Mariana Montiel and Bob Peck are currently co-organizing a special session, "Mathematics and Music," for the American Mathematical Society, as a part of the 2017 Joint Mathematics Meetings in Atlanta, Georgia (see sec. 5)

The weight of our Society is also increasing by one of those quasi-physical "ever increasing constants": Moreno Andreatta, vice-president of the Society and co-editor of the Springer series Computational Music Science. He has been a major constant for the development of our Society and is now making his next big step: his appointment as a Director of Research within the CNRS French national competition. Warmest congratulations, dear Moreno!

Our two publication vectors: the Taylor & Francis based Journal of Mathematics and Music (JMM), and the Springer series Computational Music Science (CMS) are flourishing thanks to the JMM's very efficient editors Thomas Fiore and Clifton Callender and Springer's engaged editor Ronan Nugent in his collaboration with the book editors Moreno Andreatta and myself. Please, think about the JMM topic for the 2017 Special Issue! Two new CMS books (*Math for Hot Music* and *All About Music*) have been published in 2016 (see sec. 5), and it is important to see books of introductory nature being written, a very important factor for the propagation of mathematical music theory. The publication of the conference book *Mathemusical Conversations* is another major contribution to the globalization of our science; my thanks go to its editors Jordan B.L Smith, Elaine Chew (SMCM member), and Gerard Assayag (see sec. 5).

From time to time, I step back and have a bird's-eye view upon our efforts, as a scientist and artist alike. In this mood I am wondering about what happened to a delicate topic that had also been raised by Moreno, among others: What about a reversed relationship of mathematics and music, namely the possibility to get creativity in mathematics from music, well not just inspiration (as Einstein used to have in his musical daydreams), but real added value.

Hoping that such thoughts may boost your creative power I thank you all for your singular efforts and success

Guerino Mazzola
President, SMCM

2. Membership Renewal

This is a gentle reminder to renew your society membership and your subscription to Journal of Mathematics & Music at http://www.smcm-net.info/registration.html. Yearly dues for membership in SMCM and subscription to Journal of Mathematics and Music are $50, or $90 for two years. If there are any subscription issues, please write clampitt.4@osu.edu.

David Clampitt
Treasurer, SMCM

3. The Journal of Mathematics and Music

At the Journal of Mathematics and Music, we have a few updates concerning the 2016 Special Issue and the new LaTeX template, and a call for 2017 Special Issue proposals.

The 2016 Special Issue "Machine Learning and Music Generation" was guest edited by Jose Iñesta, Darrell Conklin, and Raphael Ramirez. It contains 5 papers by Kirlin-Yust, Kosta-Ramirez-Bandtlow-Chew, Conklin, Ponce de Leon-Inesta-Calvo-Zaragoza-Rizo, and Giraldo-Ramirez. An Editorial by the Guest Editors opens the issue. SMCM members can expect the 2016 Special Issue in the mail by early November.

The topic for the 2017 Special Issue is still open. Please send us your proposals for the 2017 Special Issue as soon as possible. Top papers selected from a small conference or workshop, then fully refereed at the journal, could form a Special Issue. Truly excellent long manuscripts could also be considered.

On the technical side, we are pleased to report the successful launch of our JMM LaTeX template for authors last year. The LaTeX template eases the submission process, the review process, and the production process. The template folder (available on the journal website) also contains a template for online supplements. Of course, submissions in Word are also reviewed as normal, but we encourage all authors familiar with LaTeX to use the LaTeX template.

Please send us your excellent manuscripts, and recommend the journal to your colleagues, both as authors and readers. Proposals for future special issues are also welcome. We look forward to any feedback on the journal. As always, we thank authors, reviewers, and editors for maintaining the high quality of the journal.

Thomas Fiore and Clifton Callender
Co-Editors in Chief, *Journal of Mathematics and Music*

4. The Society's Next Biennial Conference

It is our honor and pleasure to invite all scholars and artists who are engaged in the fascinating relation between mathematics and music to attend the **6th Biennial International Conference on Mathematics and Computation in Music (MCM2017)**. MCM2017 will be held June 26-29, 2017 at the Universidad Nacional Autónoma de México (UNAM), Mexico City, México. Papers (long and short) and panel submissions are due March 31, 2017. Please visit http://www.mcm2017.org for information.

Emilio Lluis-Puebla for the Organizing Committee.

5. News

Appointments

Moreno Andreatta has been appointed a Director of Research within the CNRS French national competition. This is the very first time that such a position is offered to a researcher working on mathematics and music, with the exception of Jean-Claude Risset – a member of our Society - who also had a similar position but more for his research in physics and sound synthesis. Moreno's research project is entitled "Algebraic, topological and categorical models in computational musicology" and will be conducted in collaboration between IRCAM, the Institut of Research in Advanced Mathematics (IRMA) and the department of musicology of the University of Strasbourg.

Conferences and Festival

Giles Baroin has been invited to present a movie and a concert in Ljubljana, Slovenia at a festival is organized by Mathema, the Slovenian "Institute for popularization of mathematics", in partnership with the European Society for Mathematics and Arts (ESMA): http://mathema.si/esma/fr/program/

Mariana Montiel and Bob Peck organized a special session on mathematics and music for the American Mathematical Society (AMS) South East regional meeting in March, 2016 in Athens, GA that was very well received: http://www.ams.org/meetings/sectional/2237_program_ss14.html#title They are currently co-organizing a special session, "Mathematics and Music," for the American Mathematical Society, as a part of the 2017 Joint Mathematics Meetings in Atlanta, Georgia. The special session will be held during the mornings of Friday, January 6, and Saturday, January 7, and will feature talks by fourteen researchers in the field of mathematical music theory. The full schedule of the session: http://jointmathematicsmeetings.org/meetings/national/jmm2017/2180_program_ss9.html#title.

Publications

The *Proceedings of MCM2015*, edited by Tom Collins, David Meredith, and Anja Volk, was one of the top 25% most downloaded eBooks in its category in the past year, with a total of 22,108 chapter downloads between June 2015 and June 2016.

Amiot, Emmanuel. *Music Through Fourier Space: Discrete Fourier Transform in Music Theory*. Springer Series Computational Music Science, 2016. ISBN 978-3-319-45581-5 http://www.springer.com/us/book/9783319455808
- This book explains the state of the art in the use of the discrete Fourier transform (DFT) of musical structures such as rhythms or scales. In particular the author explains the DFT of pitch-class distributions, homometry and the phase retrieval problem, nil Fourier coefficients and tilings, saliency, extrapolation to the continuous Fourier transform and continuous spaces, and the meaning of the phases of Fourier coefficients.

Mazzola, Guerino, Mannone, Maria, Pang, Yan. *Cool Math for Hot Music*. Springer Series Computational Music Science, 2016. ISBN 978-3-319-42937-3 http://www.springer.com/us/book/9783319429359
- *Cool Math for Hot Music* is a first introduction to mathematics for music theorists, covering basic topics such as sets and functions, universal properties, numbers and recursion, graphs, groups, rings, matrices and modules, continuity, calculus, and gestures. It approaches these abstract themes in a new way: Every concept or theorem is motivated and illustrated by examples from music theory (such as harmony, counterpoint, tuning), composition (e.g., classical combinatorics, dodecaphonic composition), and gestural performance. The book includes many illustrations, and exercises with solutions.

Mazzola, G., Mannone, M., Pang, Y., O'Brien, M., Torunsky, N. *All About Music*. Springer Series Computational Music Science, 2016. ISBN 978-3-319-47334-5 http://w.springer.com/us/book/9783319473338
- *All About Music* explains music's comprehensive ontology, its way of existence and processing, as specified in its compact characterization: music embodies meaningful communication and mediates physically between its emotional and mental layers. The book unfolds in a basic discourse in everyday language that is accessible to everybody who wants to understand what this topic is about. Musical ontology is delayed in its fundamental dimensions: its realities, its meaningful communication, and its embodied utterance from musical creators to an interested audience. The authors' approach is applicable to every musical genre and is scientific, the book is suitable for non-musicians and non-scientists alike.

Smith, J.B.L., E. Chew, and G. Assayag (Eds.). *Mathemusical Conversations: Mathematics and Computation in Music Performance and Composition*. Imperial College Press / NUS Institute for Mathematical Sciences Lecture Notes Series, World Scientific. 2016
- *Mathemusical Conversations* is based on the workshop of the same name held in Singapore in February 2015, which was co-hosted, and generously funded, by the Institute for Mathematical Sciences and the Yong Siew Toh Conservatory of Music at the National University of Singapore. Interested individuals and institutions can purchase the book from World Scientific (bit.ly/Mathemusical-WS: quote WSMTH1220 to receive a 20% discount) or Amazon (US: bit.ly/Mathemusical-Amazon; UK: bit.ly/Mathemusical-AmazonUK).
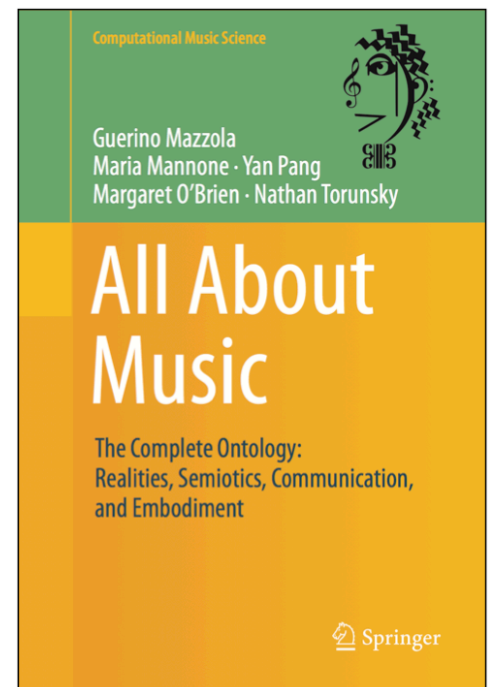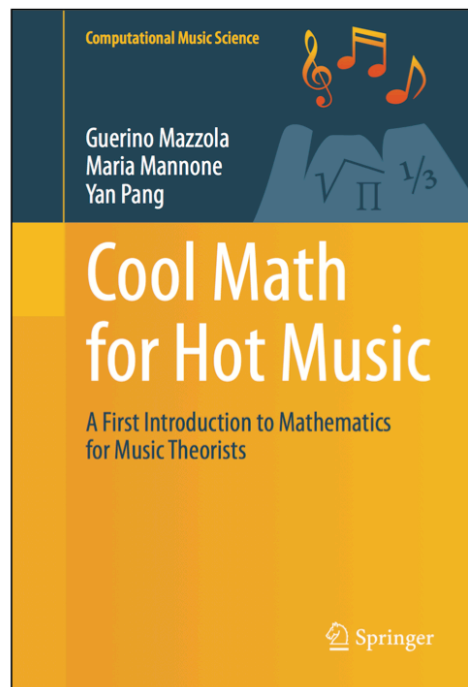
About Us

The Society for Mathematics and Computation in Music (SMCM) was founded in 2006 as an international forum for researchers and musicians working in the trans-disciplinary field at the intersection of music, mathematics and computation. The SMCM is registered in the USA. At its inaugural meeting in Berlin, on May 20, 2007, 13 board members were elected, from which were selected the officers for the society. The official website of the Society can be found at *www.smcm-net.info*.

To become an accredited individual SMCM member, please visit our online registration form at *www.smcm-net.info/registration.html*. Membership includes a print subscription to the Journal of Mathematics and Music, the SMCM's official journal. For full information on the Journal of Mathematics and Music, a publication by Taylor & Francis, including manuscript submission instructions, library subscription options, details on free email alerting services, editorial board information and the online edition, please visit its homepage at *www.informaworld.com/JMM* .