

**SEMINARIO:
“MUSIC AND MATHEMATICS IN 20TH CENTURY MUSIC”**

Profesor:

- Fabio De Santis De Benedictis (Livorno, Italia)

Organizado por:

- Conservatorio Superior de Música “Manuel Castillo” de Sevilla (CSMMCS)
- Departamento de Didáctica de la Expresión Musical y Plástica de la Universidad de Sevilla (DDEMP-US)

Contenidos:

- Ver documentación adjunta

Duración:

- 12 horas (presenciales)

Fechas:

- 5 de marzo: 8.30-11.30 / 18.30-21.30
- 6 de marzo: 15.30-21.30

Lugar:

- Aula 14 (C. Baños, 48)

Profesores Coordinadores:

- Prof^a. Pilar Calero
- Prof. Juan A. Pedrosa
- Prof. Antonio Flores

Dirigido a:

- Profesores y alumnos del CSMMCS
- Profesores y alumnos del DDEMP-US.
- Profesores y alumnos de otros Conservatorios.

Diploma:

- El DDEMP-US expedirá a los alumnos preinscritos un diploma acreditativo, siempre que cumplan con los criterios mínimos de asistencia (80%)

Preinscripción:

- Se efectuará telemáticamente a través de la web del conservatorio.

Fecha límite de inscripción:

- Lunes, 3 de marzo de 2014. (a las 12.00h)

Alumnos no preinscritos:

- Quienes no deseen inscribirse en el seminario pueden asistir libremente a cualquiera de las sesiones, pero no obtendrán el diploma acreditativo.

Sevilla, febrero de 2014.

Prof. Fabio De Sanctis De Benedictis
Professor of General Musical Culture (Complementary Harmony, ordinary courses) and of Musical Analysis (Bachelor and Master courses)

ISSM “P. Mascagni”, Leghorn – Italy

Music and Mathematics in 20th Century music: analysis, composition technique and algorithmic formalization

Program of the seminar

This seminar is devoted to the music of 20th Century, particularly characterized by mathematics processes in composition techniques.

List of works (provisional – work in progress) analyzed in more or less detailed manner:

- Milton Babbitt: *Post Partition*
- Luciano Berio:
 - *Sequenza* for Piano
 - *lied*, for solo Bb Clarinet
- Pierre Boulez:
 - *Structures Ia*
 - *Le Marteau sans Maître (Bourreaux de Solitude)*
- Elliott Carter:
 - *90+*
 - *Night Fantasies*
- Chick Corea: *Steps*
- Luigi Dallapiccola: *Quaderno musicale di Annalibera n. 1*
- Franco Donatoni: *Lumen*
- György Ligeti:
 - *Continuum*
 - *Vertige*
- Bruno Maderna: *Serenata n. 2*
- Olivier Messiaen: *Mode de Valeurs*
- Luigi Nono: *Il Canto Sospeso*
- Arnold Schoenberg:

- op. 19/6
- op. 33b
- op. 25
- op. 11/1
- Alexander Scriabin: *Prelude op. 74/1*
- Karlheinz Stockhausen: *Klavierstücke IX*
- Anton Webern: op. 27/2
- Iannis Xenakis:
 - *Herma*
 - *Metastaseis*
 - *Achorripsis*
 - *Analogique A-B*

Main Composition techniques considered:

- Dodecaphony
- Serialism
- Pitch-class Set Theory
- Spectral composition

The analysis method used will be related to Dodecaphony according to Babbitt concepts, Pitch-class Set Theory, Serial composition techniques desumed from Analytical Literature and own analysis. From some of these musical analysis will be possible to draw off composition rules for algorithmic rebuilding by PWGL, a Computer Aided Composition software.

This seminar is mainly directed to Composition students, but it can be successfully attended by all students interested to the matter, because it does not require any specific prerequisite. The lesson unities are composed by a theoretical part and a consequent analytic one, the former to outline method, the latter to show a possible application of the method.

Aim of this activity is to achieve specific composition techniques and analytic methods, to increase knowledge about the form of the works taken in account. The seminar can be developed in Italian or English.

Time-table and requested equipment

The seminar can be developed in six-twelve hours, according to the number of student involved, number of works examined, number of theoretical topics to afford.

It is necessary to have the possibility to connect my laptop to an audio stereo hi-fi (mini-jack input

to laptop) and to a beamer (VGA input to laptop).

References (in progress)

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Curriculum Vitae:

Fabio De Sanctis De Benedictis was born in Pisa in 1963.

He agreed in Violin, Choir Music and Conducting, Composition, the latter *cum laude*.

He triennially attended the composition courses kept by Giacomo Manzoni at the Fiesole Music School.

Winner in various national and international composition competitions, his scores are published or recorded on CD by *fonè*, *SAM* and *Ars Publica*; his musical analyses and writings has been published on specialized journals in Italy and abroad, such *Sonus*, *Aulos*, *Tibiae*, *Tetraktys*, *Civiltà Musicale*, *Musica Domani*, *Facoltà di Matematica* (Pisa University), *Analitica*. He took part to meetings and seminars for *Analitica* (Rimini), by *Domus Galileiana* (Pisa), in Lemmens Instituut (Leuveen, Belgium), in *EuroMac 2011 - VII European Music Analysis Conference*, in Rome, Santa Cecilia Conservatory, in Escola Superior de Artes Aplicadas by Instituto Politécnico de Castelo Branco (Portugal), in Academia “Gheorghe Dima” in Cluj (Romania).

His compositions have been performed in Italy and abroad.

Since 1992 he has taught *Harmony and Counterpoint* and *Foundations of Musical Composition for the Didactics of Music* in several Italian Conservatories, *Musical Analysis* in Professional Formation Courses financed by The European Community, in various seminaries kept in the Conservatory of Latina, and in the bachelor and master courses in the ISSM “P. Mascagni” in Leghorn.

He turned out winning, with chair assignation, in the contests for titles and exams to chairs in various Music Conservatoires, National Academy of Dance of Rome and in ISSM “P. Mascagni” in Leghorn.

He has taken up the half-yearly courses of *Harmony and Counterpoint Elements* in Cinema Music and Theatre Department, Faculty of Letters, University of Pisa, from 2001 to 2009.

At present he teaches *Harmony* and *Musical Analysis* in ISSM “P. Mascagni”, attends to Composition and Musical Analysis, mainly working on Open Source software and Linux/OsX platform in the ambit of electronic music.