

Dario Sanfilippo

ALGORITHMIC COMPOSER · COMPLEX ADAPTIVE SYSTEMS EXPERT

Sicily, Italy

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Education

The University of Edinburgh

PHD IN CREATIVE MUSIC PRACTICE

Edinburgh, UK

Sep. 2015 - Aug. 2019

- Thesis title: "Complex musical behaviours via time-variant audio feedback networks and distributed adaptation: a study of autopoietic infrastructures for real-time performance systems." Supervisors: Martin Parker, Michael Edwards, Michael Newton.

Conservatory of Naples

MA IN MUSIC AND NEW TECHNOLOGIES

Naples, Italy

Sep. 2011 - May 2013

- Thesis title: "Aesthetics, characteristics, and implementation of music feedback systems." Supervisor: Agostino Di Scipio.

Conservatory of Trapani

BA IN MUSIC AND NEW TECHNOLOGIES

Trapani, Italy

Sep. 2007 - Mar. 2011

- Thesis title: "Human-machine interaction performance with emergent music systems."

Expertise

Sound and Music

Algorithmic composition, live electronics, improvisation, installations, acoustics, psychoacoustics, acoustic ecology, sound design, live recording, mixing, mastering.

DSP

Cybernetics, chaos, complexity, adaptation, evolvability, machine listening, artificial life, artificial intelligence, agency, information processing, music information retrieval, bitstream audio, modelling.

Programming

C, C++, Faust, Pure Data, Lisp, Lua, Python, LaTeX.

Languages

English (fluent), Italian (native).

Professional Experience

Music and Performing Arts University (Rotting Sounds)

RESEARCHER

Vienna, Austria

Jun. 2020 - Present

- 1-bit audio, DSP, music complex adaptive systems, audio programming.

Music and Performing Arts University (AAPU)

RESEARCHER

Vienna, Austria

Sep. 2018 - Present

- 1-bit audio, DSP, music complex adaptive systems, audio programming.

Freelance

COMPOSER AND PERFORMER

World

Jan. 2005 - Present

- Autonomous systems, human-machine interaction, cybernetic music.

Music and Performing Arts University (Rotting Sounds)

RESEARCHER

Vienna, Austria

Dec. 2018 - Mar. 2019

- Performance, composition, installation, complex adaptive systems, DSP, audio programming.

The University of Edinburgh

TEACHING FELLOW

Edinburgh, UK

Jan. 2016 - May 2018

- Sonic structures (ARCH11009): post-grad course on DSP techniques implemented and deployed in real-time environments such as Pure Data, MaxMSP, and Supercollider.
- Non-real-time systems (MUSI11019): post-grad course on the LISP/Slippery Chicken environment for algorithmic composition.
- Algorithmic composition (MUSI10087): undergrad course on the LISP/Slippery Chicken environment for algorithmic composition.
- Digital media studio project (ARCH11006): undergrad and post-grad course focused on practical implementations and software-hardware hybrids for interactive sound environments and installation works.
- Adaptive audio signal processing workshop: three-day workshop for undergrad and post-grad students on adaptive time-domain algorithms for complex sound synthesis in Pure Data.

Abertay University

TEACHING FELLOW

Dundee, UK

Jan. 2016 - Apr. 2016

- Audio programming (CMP407): undergrad course on object-oriented audio programming in Pure Data.

Music and Performing Arts University (AAPU)

RESEARCHER

- 1-bit audio, DSP, audio programming.

Vienna, Austria

Dec. 2014 - Aug. 2015

Guest Lectures

Music and Performing Arts University

INSTITUTE FOR ELECTRONIC MUSIC AND ACOUSTICS (IEM)

- Music complex adaptive systems, DSP, Faust audio programming.

Graz, Austria

Mar. 2020

University of Helsinki

SIBELIUS ACADEMY

- Music complex adaptive systems, DSP, Faust audio programming.

Helsinki, Finland

May 2019, Apr. 2018, Apr. 2017

City of Edinburgh

CITY ART CENTRE

- Distributed adaptation techniques for autonomous music.

Edinburgh, UK

Nov. 2016

The University of Edinburgh

WEE RED BAR

- Ecosystemic performance theory and applications.

Edinburgh, UK

May 2016

University of Applied Sciences

DESIGN, MEDIA, AND ARTS DEPARTMENT

- Ecosystemic performance theory and applications, adaptive signal processing.

Salzburg, Austria

Apr. 2015

Music and Theatre University

NEW MUSIC DEPARTMENT

- Nonlinear feedback systems, Pure Data programming, improvisation.

Hamburg, Germany

Feb. 2015

Royal Conservatory

INSTITUTE OF SONOLOGY

- Music cybernetics and systems theory.

The Hague, The Netherlands

Nov. 2013

Goldsmiths University

ELECTRONIC MUSIC DEPARTMENT

- Music cybernetics and systems theory.

London, UK

Nov. 2013

Institute for Sonic Art Research

EARZOOM

- Music cybernetics and systems theory, human-machine interaction performance.

Ljubljana, Slovenia

Oct. 2013

Logos Foundation

CENTRE FOR EXPERIMENTAL MUSIC

- Music cybernetics and systems theory, human-machine interaction performance.

Ghent, Belgium

May 2013

Music and Performing Arts University

ELECTRONIC MUSIC DEPARTMENT

- Music cybernetics and systems theory, human-machine interaction performance, DSP, audio programming.

Vienna, Austria

May 2013

Music and Performing Arts University

INSTITUTE FOR ELECTRONIC MUSIC AND ACOUSTICS (IEM)

- Music complex adaptive systems, DSP, Faust audio programming.

Graz, Austria

May 2013

Peer-reviewed Articles

(pending peer-review) A brief introduction to the history and aesthetics of music complex systems

JOURNAL OF NEW MUSIC RESEARCH

- D. Sanfilippo

Taylor and Francis

2021

(pending peer-review) Complex adaptation in audio feedback networks for the synthesis of music and sounds

COMPUTER MUSIC JOURNAL

- D. Sanfilippo

MIT Press

2021

(pending peer-review) Time-domain algorithms for low-level and high-level audio information processing

COMPUTER MUSIC JOURNAL

- D. Sanfilippo

MIT Press

2021

Defining ecosystemic agency in live performance. The Machine Milieu project as practice-based research

ARRAY JOURNAL

- A. Di Scipio and D. Sanfilippo

International Computer Music Association

2019

Time-variant infrastructures and dynamical adaptivity for higher degrees of complexity in autonomous music feedback systems: the Order from Noise (2017) project

MUSIC/TECHNOLOGY JOURNAL

- D. Sanfilippo

Firenze University Press

2018

Feedback systems: an analytical framework

COMPUTER MUSIC JOURNAL

- D. Sanfilippo and A. Valle

MIT Press

2013

Turning perturbation into emergent sound, and sound into perturbation

INTERFERENCE JOURNAL

- D. Sanfilippo

Online

2013

Osservare la macchina performante e intonare l'ambiente: Microphone di David Tudor

LE ARTI DEL SUONO REVIEW

- D. Sanfilippo

Aracne Editrice

2012

Peer-reviewed Papers

(pending peer-review) Constrained differential equations as complex sound generators

SOUND AND MUSIC COMPUTING CONFERENCE

- D. Sanfilippo

Conference proceedings, Turin, Italy

2021

The Edge of Chaos library: a large set of Faust functions for the implementation of music complex adaptive systems

INTERNATIONAL FAUST CONFERENCE

- D. Sanfilippo

Conference proceedings, Saint-Denis, France

2020

Creative use of bitstream DSP in Faust

INTERNATIONAL FAUST CONFERENCE

- T. Bovermann and D. Sanfilippo

Conference proceedings, Saint-Denis, France

2020

Environment-mediated coupling of autonomous sound-generating systems in live performance: an overview of the Machine Milieu project

SOUND AND MUSIC COMPUTING CONFERENCE

- D. Sanfilippo and A. Di Scipio

Conference proceedings, Espoo, Finland

2017

A practical and theoretical introduction to chaotic musical systems

INTERNATIONAL CONFERENCE ON LIVE INTERFACES

- T. Clutterbuck, T. Mudd, D. Sanfilippo

Conference proceedings, Brighton, UK

2016

Towards a typology of feedback systems

INTERNATIONAL COMPUTER MUSIC CONFERENCE

- D. Sanfilippo and A. Valle

Conference proceedings, Ljubljana, Slovenia

2012

Heterogeneously coupled feedback systems: the |. project

INTERNATIONAL COMPUTER MUSIC CONFERENCE

- D. Sanfilippo and A. Valle

Conference proceedings, Ljubljana, Slovenia

2012

- D. Sanfilippo

CDs

Machine milieu

TBA

TBA 2021

- A. Di Scipio and D. Sanfilippo. Recorded in L'Aquila.

Fame d'aria

France

TSUKU BOSHI RECORDS

2015

- M. "SEC_" Napolitano and D. Sanfilippo. Recorded in Naples.

Sculptures musicales and other devices

Italy

DIE SCHACHTEL RECORDS

2014

- A. Di Scipio, D. Sanfilippo, and others. Recorded in Naples.

Hopeful monster

Italy

DIE SCHACHTEL RECORDS

2010

- D. Sanfilippo, A. Secchia, G. Pagano, A. Valle, D. Sciajno. Recorded in Palermo.

Hums

Italy

BOWINDO RECORDS

2009

- T. Hodgkinson, D. Sanfilippo, A. Secchia, G. Pagano, M. Pianges, D. Sciajno. Recorded in Palermo.

Premio malattia

Portugal

CREATIVE SOURCES RECORDS

2009

- D. Sanfilippo. Recorded in Trapani.

Awards and Grants

2020	Science Grant , City of Vienna	Vienna, Austria
2020	Artistic Research Grant , City of Vienna	Vienna, Austria
2019	FFG Grant (Innovation Check) , Austrian Research Promotion Agency	Vienna, Austria
2015	Thomas Laing Reilly full-time PhD Scholarship , The University of Edinburgh	Edinburgh, UK
2014	Artistic Research Grant , University of Toronto	Toronto, Canada
2012	Best Paper Award , International Computer Music Conference	Ljubljana, Slovenia

Commissions

BASP

Vienna, Austria

ROTTING SOUNDS

2021

- Bitstream autonomous music system by D. Sanfilippo and Till Bovermann.

Acoustic Shadows

Vienna, Austria

CITY OF VIENNA

2020

- Autonomous music system by D. Sanfilippo and Paul Gruendorfer.

Phase Transitions

Vienna, Austria

ROTTING SOUNDS

2019

- Three-month long piece through autonomous adaptive music system.

Order from Noise

Vienna, Austria

INTERNATIONAL SOCIETY FOR CONTEMPORARY MUSIC (IGNM)

2019

- Solo performance.

Loretta Strong

Nancy, France

ULTIMA NECAT THEATRE COMPANY

2015

- Development of an autonomous music system for a theatre piece.

Ice/Fire

KUNST RADIO

- Compositions by D. Sanfilippo and Peter Kutin.

Vienna, Austria

2014

Sea of Illusion

MUNICIPALITY OF TRAPANI

- Composition with photographs by D. Sanfilippo and Alfredo D'Amato.

Trapani, Italy

2010

Live Performance

Dec. 2020 **The University of Edinburgh**, solo.

Edinburgh, UK

Jun. 2019 **Republik Kugelmugel**, solo for the Klub Moozak concert series.

Vienna, Austria

Jun. 2019 **Steinergasse 8**, duo with Daniel Lercher for Der Blöde Dritte Mittwoch concert series.

Vienna, Austria

Jun. 2019 **Echoraum**, solo and duo with Philip Leitner for the International Society for Contemporary Music.

Vienna, Austria

Mar. 2019 **Music and Performing Arts University**, solo for the Rotting Sounds project.

Vienna, Austria

Nov. 2018 **Brick 5**, solo for the Velak Gala concert series.

Vienna, Austria

Oct. 2018 **Zentrale**, solo.

Vienna, Austria

Apr. 2018 **Sibelius Academy**, solo.

Helsinki, Finland

Oct. 2017 **The Biscuit Factory**, solo.

Edinburgh, UK

Mar. 2017 **National Centre for Space Studies**, duo with Gael Leveugle for the Sidération Festival.

Paris, France

Oct. 2016 **Cafe Oto**, duo with Mimmo "SEC_" Napolitano.

London, UK

Mar. 2016 **The University of Edinburgh**, solo.

Edinburgh, UK

Apr. 2015 **Theatre Divadlo 29**, duo with Mimmo "SEC_" Napolitano.

Pardubice, CZ

Feb. 2015 **Music and Theatre University**, solo.

Hamburg, Germany

Jun. 2014 **French Institute**, trio with Mimmo "SEC_" Napolitano and Jean-Philippe Gross.

Naples, Italy

Nov. 2013 **Goldsmiths University**, duo with Tim Hodgkinson.

London, UK

Aug. 2013 **Casina del Principe**, installation for Fluss Festival.

Naples, Italy

May 2013 **Logos Foundation**, solo.

Ghent, Belgium

May 2013 **Galerie Mario Mazzoli**, solo.

Berlin, Germany

Dec. 2012 **Castel Sant'Elmo**, homage to John Cage: realisation of Sculptures Musicales.

Naples, Italy

Nov. 2012 **Auditorium Casa della Musica**, solo for Colloquium of Musical Informatics.

Trieste, Italy

Sep. 2012 **Španski Borci**, solo for the International Computer Music Conference.

Ljubljana, Slovenia

May 2012 **Conservatory of Latina**, installation for Le Forme del Suono Festival.

Latina, Italy

May 2012 **Conservatory of Naples**, solo.

Naples, Italy

Apr. 2012 **University of Bangor**, installation for the Inter/actions symposium.

Bangor, UK

Nov. 2011 **Bunkier Sztuki**, solo for the Audio Art Festival.

Krakow, Poland

Jul. 2011 **Conservatory of Padova**, solo for the Sound and Music Computing conference.

Padova, Italy