Dario **Sanfilippo**

ALGORITHMIC COMPOSER · COMPLEX ADAPTIVE SYSTEMS EXPERT

Sicily, Italy

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Education

The University of Edinburgh
Edinburgh, UK

PHD IN CREATIVE MUSIC PRACTICE
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
Naples, Italy

MA IN MUSIC AND NEW TECHNOLOGIES
Sep. 2011 - May 2013

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

Conservatory of Trapani
Trapani, Italy

BA IN MUSIC AND NEW TECHNOLOGIES
Sep. 2007 - Mar. 2011

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

Expertise

Sound and Music	Algorithmic composition, live electronics, improvisation, human-machine interaction, autonomous 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, feedback networks, time-variant systems, nonlinearities, filtering, non-standard synthesis, 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)
Vienna, Austria

RESEARCHER
Jun. 2020 - Present

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

Music and Performing Arts University (AAPU)
Vienna, Austria

RESEARCHER
Sep. 2018 - Present

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

Freelance
World

COMPOSER AND PERFORMER
Jan. 2005 - Present

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

Music and Performing Arts University (Rotting Sounds)
Vienna, Austria

RESEARCHER
Dec. 2018 - Mar. 2019

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

The University of Edinburgh
Edinburgh, UK

TEACHING FELLOW
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
Dundee, UK

TEACHING FELLOW
Jan. 2016 - Apr. 2016

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

Music and Performing Arts University (AAPU)   *Vienna, Austria*
Researcher   *Dec. 2014 - Aug. 2015*
- 1-bit audio, DSP, audio programming.

Guest Lectures

Music and Performing Arts University   *Graz, Austria*
Institute for Electronic Music and Acoustics (IEM)   *Mar. 2020*
- Music complex adaptive systems, DSP, Faust audio programming.

University of Helsinki   *Helsinki, Finland*
Sibelius Academy   *May 2019, Apr. 2018, Apr. 2017*
- Music complex adaptive systems, DSP, Faust audio programming.

City of Edinburgh   *Edinburgh, UK*
City Art Centre   *Nov. 2016*
- Distributed adaptation techniques for autonomous music.

The University of Edinburgh   *Edinburgh, UK*
Wee Red Bar   *May 2016*
- Ecosystemic performance theory and applications.

University of Applied Sciences   *Salzburg, Austria*
Design, Media, and Arts Department   *Apr. 2015*
- Ecosystemic performance theory and applications, adaptive signal processing.

Music and Theatre University   *Hamburg, Germany*
New Music Department   *Feb. 2015*
- Nonlinear feedback systems, Pure Data programming, improvisation.

Royal Conservatory   *The Hague, The Netherlands*
Institute of Sonology   *Nov. 2013*
- Music cybernetics and systems theory.

Goldsmiths University   *London, UK*
Electronic Music Department   *Nov. 2013*
- Music cybernetics and systems theory.

Institute for Sonic Art Research   *Ljubljana, Slovenia*
EarZoom   *Oct. 2013*
- Music cybernetics and systems theory, human-machine interaction performance.

Logos Foundation   *Ghent, Belgium*
Centre for Experimental Music   *May 2013*
- Music cybernetics and systems theory, human-machine interaction performance.

Music and Performing Arts University   *Vienna, Austria*
Electronic Music Department   *May 2013*
- Music cybernetics and systems theory, human-machine interaction performance, DSP, audio programming.

Music and Performing Arts University   *Graz, Austria*
Institute for Electronic Music and Acoustics (IEM)   *May 2013*
- Music complex adaptive systems, DSP, Faust audio programming.

Peer-reviewed Articles

(pending peer-review) A brief introduction to the history and aesthetics of music complex systems   *Taylor and Francis*
Journal of New Music Research   *2021*
- D. Sanfilippo

(pending peer-review) Complex adaptation in audio feedback networks for the synthesis of music and sounds   *MIT Press*
Computer Music Journal   *2021*
- D. Sanfilippo

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

MIT Press

Computer Music Journal

2021

• D. Sanfilippo

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

International Computer Music Association

Array Journal

2019

• A. Di Scipio and D. Sanfilippo

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

Firenze University Press

Music/Technology Journal

2018

• D. Sanfilippo

Feedback systems: an analytical framework

MIT Press

Computer Music Journal

2013

• D. Sanfilippo and A. Valle

Turning perturbation into emergent sound, and sound into perturbation

Online

Interference Journal

2013

• D. Sanfilippo

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

Aracne Editrice

Le Arti del Suono Review

2012

• D. Sanfilippo

Peer-reviewed Papers

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

Conference proceedings, Turin, Italy

Sound and Music Computing Conference

2021

• D. Sanfilippo

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

Conference proceedings, Saint-Denis, France

International Faust Conference

2020

• D. Sanfilippo

Creative use of bitstream DSP in Faust

Conference proceedings, Saint-Denis, France

International Faust Conference

2020

• T. Bovermann and D. Sanfilippo

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

Conference proceedings, Espoo, Finland

Sound and Music Computing Conference

2017

• D. Sanfilippo and A. Di Scipio

A practical and theoretical introduction to chaotic musical systems

Conference proceedings, Brighton, UK

International Conference on Live Interfaces

2016

• T. Clutterbuck, T. Mudd, D. Sanfilippo

Towards a typology of feedback systems

Conference proceedings, Ljubljana, Slovenia

International Computer Music Conference

2012

• D. Sanfilippo and A. Valle

Heterogeneously coupled feedback systems: the |. project

Conference proceedings, Ljubljana, Slovenia

International Computer Music Conference

2012

• D. Sanfilippo and A. Valle

LIES (distance/incidence) 1.0: a human-machine interaction performance

Colloquium of Musical Informatics

• 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   *Vienna, Austria*

Kunst Radio   *2014*

- Compositions by D. Sanfilippo and Peter Kutin.

Sea of Illusion   *Trapani, Italy*

Municipality of Trapani   *2010*

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

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 Flussi 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*