Stefania Serafin

CONTACT INFORMATION
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GENDER
Female

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EXPERTISE
Multimodal perception and cognition, virtual, augmented and extended reality, sound and music computing.

EDUCATION

2001–2004 **Stanford University**, Stanford, California, USA.
Ph.D. in Computer-Based Music Theory and Acoustics.
Dissertation: *The Sound of Friction: Real-Time Models, Playability, and Musical Applications.*
Advisor: Professor Julius O. Smith.

1999–2001 **Stanford University**, Center for Computer Research in Music and Acoustics (CCRMA).
Master in Computer-Based Music Theory and Acoustics.

1997–1998 **IRCAM, Centre G. Pompidou**, Paris, France.
DEA-ATIAM (Master's Degree) in Acoustics, Signal Processing, and Computer Science Applied to Music.

1992–1996 **University Ca Foscari, Venice, Italy**.
Bachelor in Computer Science.

PROFESSIONAL EXPERIENCE

2026– **Technical University of Denmark**. *Professor.*

2025 **New York University**, New York, USA.
Visiting professor.

2022– **Copenhagen Hearing and Balance Center, Rigshospitalet**, Copenhagen, Denmark.
Affiliated researcher.

2020–2021 **International Research Management Course, CBS.**

2018–2026 **Aalborg University**, Copenhagen, Denmark.
Professor, Media Technology.
Head of the Multisensory Experience Laboratory.
Supervisor of MSc and PhD students; instructor of MSc and PhD courses.
Head of the MSc in Sound and Music Computing.

2012–2018 **Aalborg University**, Copenhagen, Denmark.
Professor (MSO) in Sound for Multimodal Environments.
Head of the Multisensory Experience Lab.
Supervisor of MSc and PhD students; course instructor.
Creator and Head of the MSc in Sound and Music Computing.

2006–2012 **Aalborg University**, Copenhagen, Denmark.
Associate Professor in Sound Modeling.
Maternity leave: October 2008 – June 2009.

2003–2006 **Aalborg University**, Copenhagen, Denmark.
Assistant Professor in Sound Modeling.

2003 (Summer) **KTH Royal Institute of Technology**, Stockholm, Sweden.
Visiting Researcher.

2003 **VRSonic Inc.**, USA.
Consultant.
Design and development of parameter-based audio effects.

2003 (Spring) **University of Virginia**, Charlottesville, USA.
Visiting Faculty.

2002 (Aug–Sept) **University of Cambridge**, UK.
Visiting Researcher.

1999 **Stanford University**, Stanford, USA.
Visiting Scholar.

1997–1999 **IRCAM, Analysis–Synthesis Team**, Paris, France.
Researcher and Software Developer.

Management Experience

[2024–2025] **Chair**, Academic Council, Technical Faculty of IT and Design, Aalborg University. [2024–2025] **Member**, Mission Management Team for Aalborg University's Mission on the Well-being of Children and Youth. [2014–2024] **President**, International Sound and Music Computing Association (SMC). [2022–] **Advisory Board Member**, Heka VR. [2020–] **Advisory Board Member**, *SONICOM Project* (H2020-FETPROACT-2018-2020). [2014–] **Head and Co-founder**, MSc Programme in Sound and Music Computing, Aalborg University (with Prof. Mads G. Christensen). [2012–] **Head**, Multisensory Experience Lab, Aalborg University Copenhagen. [Until 2021] **Vice President for Europe**, International Computer Music Association (ICMA). [2010-2022] **Member**, Department Research Committee, Department of Architecture, Design and Media Technology, Aalborg University. [—] **Member**, Danish Bibliometric Expert Group on Digital Communication (Group 66).

Funded Projects

[2026–2028] **Principal Investigator**, *Implex Project*, funded by EUREKA and Innovation Fund Denmark. Budget: 7.6 M DKK. [2024–2028] **Co-Principal Investigator**, *Audio-Only VR for Blind Gamers*, funded by the Independent Research Fund Denmark (DFF2). Budget: 6.7 M DKK. [2024–2026] **Principal Investigator**, *Godt Hørt – Nutidig og Relevant Viden om Hørelsen for Unge med og uden Høretab*, funded by the A.P. Møller Foundation. Budget: 1 M DKK. [2024] **Principal Investigator**, *Hørt – Nutidig og Relevant Audiologi for Unge med Høretab*, funded by Helsefonden. Budget: 300 K DKK. [2023–2027] **Principal Investigator**, *Telecyclette Project*, funded by Velux Stiftung. Budget: 4.1 M DKK. [2023–2024] **Principal Investigator**, *PreHear*, funded by the GN Foundation. Budget: 900 K DKK. [2022–2024] **Principal Investigator**, *Lyt Igen Project*, funded by the Villum Foundation. Budget: 4 M DKK. [2018–2024] **Project Leader**, *Nordic Sound and Music Computing Network*, NordForsk Nordic University Hub. Budget: 27 M NOK (17.5 M DKK). [2019–2021] **Supervisor**, Marie Curie Postdoctoral Fellowship, Dr. Simone Spagnol. Total budget: 1.45 M DKK. [2017–2019] **Supervisor**, International Postdoctoral Fellow Dr. Michele Geronazzo, funded by Aalborg University. [2017–2021] **Principal Investigator**, *European Art Science Technology Network for Digital Creativity (EASTN-DC)*, Creative Europe, Large-Scale Project (`http://www.eastn.eu`). [2017] **Principal Investigator**, *White Paper: Virtual Reality and the Senses*, funded by the Danish Sound Innovation Network. [2016–2017] **Principal Investigator**, *Sound Design for Autonomous Cars*, supported by Hyundai and managed by Audiowise. [2016] **Principal Investigator**, *Evaluation of Sound Quality with Audiovisual Feedback*, funded by the Danish Sound Innovation Network. [2016] **Principal Investigator**, *Foosions Project* — Virtual Reality Simulation of a Supermarket (with Prof. Bent Mikkelsen, Department of Production). [2016] **Principal Investigator** , *Multimodal Interaction in Virtual Reality*, funded by the Danish Sound Innovation Network. [2015] **Principal Investigator** , *Product Sound Design*, funded by the Danish Sound Innovation Network. [2014] **Principal Investigator** , *Audio–Haptic Feedback for Car Applications*, Fonden Entrepreneurship. [2010-2012]. **Principal Investigator** , Digital Re-working/re-appropriation of ElectroAcoustic Music, DREAM, EU. [2008-2012] **Principal Investigator** , *Natural Interactive Walking Project*, EU FET Open. [2002-2005] **Affiliated researcher** , *Being there without going (BENOGO)*, EU-FET project (IST-2001-39184).

Awards and Distinctions

[2026] IEEE Virtual Reality Technical Achievement Award. [2025] Awarded the **Knight's Cross of the Order of the Dannebrog**, by H.M. The King of Denmark. [2025] Selected by the Dean of the Faculty of IT and Design, Aalborg University, as the sole TECH representative on the **AAU**

Excellence Scientific Board, a program for training promising early-career researchers. [2023] **Teacher of the Year Award**, Study Board of Media Technology, Aalborg University. [2023] **Best Use of Sound Award**, 28th International Conference on Auditory Display (ICAD 2023). [2021] **Winner of the Danish Sound Prize**, Danish Sound Network. [2021] **Best Paper Award**, Digital Audio Effects Conference (DAFx 2021). [2015] **Winner**, ACM 3D User Interfaces Competition, with the project *Digital Intonarumori* (IEEE VR Conference). [2014] **Best Paper Award (2nd place)**, IEEE Virtual Reality Conference. [2010] **Best Paper Award (Top 10%)**, IEEE Multimedia Signal Processing Conference. [2009] **Best Paper Award**, IEEE Virtual Reality Conference. [1998–1999] **Scholarship**, French Embassy in Italy — one-year training program in France. [1997–1998] **Post-Laurea Fellowship**, University of Venice — fully funded postgraduate studies abroad.

Keynote Speeches

[2025] **IEEE Conference on Virtual Reality and 3D User Interfaces (IEEE VR 2025)**, St. Malo, France, March. [2025] **XR4Rehab**, Special Session on Multisensory Rendering, Lecco, Italy, June. [2025] **20 Years of Sound Environments Symposium**, Lund University, Sweden, February. [2023] **Audio Engineering Society (AES) International Conference on Spatial and Immersive Audio**. [2023] **GN Resound Annual Event**, Ballerup, Denmark. [2022] **Danish Sound Days**, DTU Skylab, Lyngby, Denmark. [2022] **Center for Computer Research in Music and Acoustics (CCRMA) Open House**, Stanford University, USA. [2022] **ACM AudioMostly Conference**. [2019] **Audio Engineering Society (AES) Convention**, Dublin, Ireland, May. [2018] **International Conference on Auditory Display (ICAD)**, Houghton, USA, June. [2016] **Interactive Audio Systems Symposium**, University of York, UK. [2015] **Symposium on Sound and Interactivity**, Singapore. [2014] **Emufest**, Rome, Italy. [2014] **4th International Workshop on Cognitive Information Processing (CIP 2014)**. [2013] **HCI Korea Conference**, Seoul, South Korea.

Conference Chairing

[2024] Paper Co-Chair, *Audio Engineering Society, Audio in Virtual and Augmented Reality.* [2023] General Chair, *Digital Audio Effects Conference (DAFx).* [2023] Paper Co-chair, *ACM Symposium on Virtual Reality Software and Technology (VRST).* [2019] Paper co-chair, *Sound and Music Computing Conference (SMC).* [2018–] Program Co-chair, *ACM Symposium on Spatial User Interfaces (SUI).* [2017] Co-chair, *ACM New Interfaces for Musical Expression Conference (NIME).* [2015–] Program Chair, *ACM Symposium on Virtual Reality Software and Technology (VRST).* [2014–] Chair, *IEEE VR Workshop on Sonic Interactions in Virtual Environments (SIVE).* [2012] General Chair, *Sound and Music Computing Conference (SMC 2012)*, Copenhagen, July 12–14. [2011–] European Chair, *International Computer Music Association (ICMA).* [2010] Scientific Program Chair, *Haptic Audio Interaction Design (HAID).* [2008] Paper Chair, *ACM New Interfaces for Musical Expression (NIME).* [2007] Paper Chair, *International Computer Music Conference (ICMC)*, Copenhagen, August. [2005] Co-chair (with Amalia De Goetzen and Juraj Kojs), *Sound in Interactive Media Workshop*, Copenhagen, Denmark, May. [2004] Proceedings Chair, *Computer Music Modeling and Retrieval (CMMR 2004)*, Esbjerg, Denmark, May.

Program Committee Membership

[2018–] Program Committee Member, *ACM New Interfaces for Musical Expression (NIME).* [2017–] Program Committee Member, *Digital Audio Effects Conference (DAFx).* [2017] Scientific Committee Member, *eNTERFACE Summer Workshop on Multimodal Interfaces.* [2015–] Program Committee Member, *IEEE Virtual Reality Conference (IEEE VR).* [2011–] Technical Program Committee Member, *IEEE 3D User Interfaces (3DUI).* [2011–] Program Committee Member, *Haptic Audio Interaction Design (HAID).* [2008–] Technical Program Committee Member and Session Chair, *Sound and Music Computing Conference (SMC).*

Committees and Assessment Activities

[2025] External assessor for Professorship appointment, University of Oslo, Norway. [2019] External assessor for Professorship appointment, University of Oslo, Norway. [2017] External assessor for Associate Professorship positions, University of Trondheim, Norway. [2017] External assessor for Associate Professorship positions, Danish Technical University (DTU), Denmark. [2016] External assessor for Associate Professorship position, University of Oslo, Norway. [2016–2018] External examiner for the

Music Technology Program, University of Limerick, Ireland. [2016] External reviewer for project *"Spatial Audio over Virtual and Irregular Arrays"*, Science Foundation Ireland. [2016–] Technical expert for the EUREKA EU program. [2015] External assessor for PhD positions, University of Oslo, Norway. [2015] Reviewer for the *European Research Council (ERC)*, Advanced Grant program. [2010–] External assessor for Bachelor and Master's theses, as well as courses, Danish Technical University (DTU). [2009–] Reviewer for the EU Commission, *Future and Emerging Technologies (FET)* program. [2009] Reviewer for the *Natural Sciences and Engineering Research Council of Canada (NSERC)*. [2007–] Reviewer for the *Research Council of Norway*. [2004] Chair for revision of the Medialogy Bachelor study plan and creation of the Cand.Scient. study program, Aalborg University.

Reviewing Activities

Regular reviewer for journals: *IEEE Transactions on Visualization and Computer Graphics Frontiers in Virtual Reality International Journal of Human–Computer Studies IEEE Multimedia Virtual Reality* (Springer) *Multisensory Research Computer Music Journal IEEE Transactions on Haptics ACM Transactions on Applied Perception Journal on Multimodal User Interfaces* (Springer) *Journal of the Audio Engineering Society*

Regular reviewer for international conferences: *Sound and Music Computing Conference (SMC) IEEE Virtual Reality Conference (IEEE VR) IEEE 3D User Interfaces (3DUI)* — merged with IEEE VR in 2018 *ACM New Interfaces for Musical Expression (NIME) ACM CHI Conference on Human Factors in Computing Systems (SIGCHI) International Conference on Auditory Display (ICAD) AudioMostly Conference International Computer Music Conference (ICMC) ACM Symposium on Virtual Reality Software and Technology (VRST)*

Editorial Activities

[2024–] Member of the Editorial Board, *Empathic Computing Journal*. [2019–] Member of the Editorial Board, *Frontiers in Virtual Reality*. [2017–] Member of the Editorial Board, *Multimodal Technologies and Interaction* (MDPI Open Access). [2018] Co-editor (with Vesa Välimäki, Tapio Lokki, and Meinard Müller) of a Special Issue on *Sound and Music Computing*, *Applied Sciences*. [2013] Co-editor (with Karmen Franinović) of the book *Sonic Interaction Design*, MIT Press. [2009] Co-editor (with Davide Rocchesso) of a Special Issue on *Sonic Interaction Design*, *International Journal of Human–Computer Studies*.

PhD Student Supervision

[2025–] **Max Vaehrens**, *Audio-only VR*, supported by DFF. [2023–] **Anders Bargum**, *Deep-learning based voice conversion systems*, Industrial PhD with KhoraVR. [2023–] **Peter Kurucz**, *Auditory plausibility in VR*, external supervisor, University of Queensland. [2023–] **Nete Rudbeck Kamper**, *TeenHear – Timely and relevant audiology for adolescents with hearing loss*, external supervisor, University of Copenhagen. [2022–2026] **Francesco Ganis**, *Exploring music and sound training for children with hearing challenges*, supported by NordForsk. [2022–2026] **Mark Dourado**, *Measuring multimodal communication*, Industrial PhD with GN Resound. [2021–2024] **Razvan Paisa**, *The Musical Touch: Exploring vibrotactile augmentation of music for cochlear implant users*, supported by NordForsk. [2020–2026] **Jesper Andersen**, *Music and technology*, supported by the Danish Ministry of Culture. [2019–] **Camilla Jaller**, *Measuring VR experiences*, Industrial PhD in collaboration with Makropol. [2018–2021] **Silvin Willemsen**, *The Emulated Ensemble: Real-Time Simulation of Musical Instruments using Finite-Difference Time-Domain Methods*, supervisor, NordForsk Nordic Sound and Music Computing Hub. [2018–2021] **Emil Høeg**, *Just Like Riding a Bike: Exploring the Motivating Capabilities, Contextual Barriers and Facilitators of Virtual Reality and Cycle Ergometers for the Rehabilitation of Older Adults in Clinical Practice*, co-supervisor, supported by Frederiksberg Kommune. [2017–2021] **Lui Thomsen**, *Virtual Reality in Mathematics Education (VRiME): An Investigation of the Design and Use of Virtual Reality in Teaching and Learning Mathematics*, co-supervisor, Industrial PhD in collaboration with Edulab. [2017–2020] **Ali Adjorlu**, *Adolescent Under Construction: An exploration of how virtual reality can be used to teach social and daily living skills to children and adolescents diagnosed with Autism Spectrum Disorder*, supervisor, Aalborg University Copenhagen. [2017–2020] **Vanessa Carpenter**, *Designing for Meaningfulness in Future Smart Products*, co-supervisor, PhD in collaboration with DELTA / FORCE Technology. [2013–2016]

Jon Ram Bruun Pedersen, *Going Outside While Staying Inside: Exercise Motivation with Immersive vs. Non-Immersive Recreational Virtual Environment Augmentation for Older Adult Nursing Home Residents*, co-supervisor, supported by Aalborg University. [2013–2016] **Justyna Maculewicz**, *Rhythmic-based audio-haptic feedback for motoric tasks*, co-supervisor, supported by Aalborg University. [2012–2015] **Niels Christian Nilsson**, *Walking Without Moving – An exploration of factors influencing the perceived naturalness of virtual locomotion methods in immersive virtual environments*, co-supervisor, supported by Aalborg University. [2012–2015] **Smilen Dimitrov**, *Towards an open digital audio workstation for live performance: the development of an open soundcard*, supervisor, supported by Aalborg University. [2010–2014] **Niels Bøttcher**, *Game audio design and evaluation*, supervisor, supported by Aalborg University. [2009–2013] **Luca Turchet**, *Audio-haptic simulation of walking sounds*, supervisor, supported by EU Natural Interactive Walking Project. [2008–2012] **Steven Gelineck**, *Exploratory and Creative Properties of Physical-Modeling-Based Musical Instruments*, supervisor, supported by Aalborg University.

PhD Committee Memberships

[2025] External committee member, for **Sasan Matifar** ,Technical University of Munich [2024] External commitee member for **Thomas van Gemert**, University of Copenhagen. [2023] External commitee member for **Nolan Lem**, Stanford University. [2022] External commitee member for **Nille Elise Kepp**, University of Copenhagen. [2022] External commitee member for **Alessandro Pasta**, Technical University of Denmark (DTU). [2022] Internal committee member, **Taewoong Lee**, Aalborg University. [2021] External committee member. **Dooley Murphy**, University of Copenhagen. [2015–] External committee member for several PhD defenses, University of Marseille, France. [2018] External committee member, **Charlotte Desvanges**, University of Edinburgh, UK. [2017] Internal committee member, **Neofytos Kaplanis**, Aalborg University, Denmark. [2016] External committee member, **Per Bækgaard**, Technical University of Denmark (DTU). [2014] External committee member, **Simon Conan**, University of Marseille, France. [2013] External committee member, **Jérôme Villeneuve**, University of Grenoble, France. [2012] External committee member, **Antti Jylhä**, Aalto University, Finland. [2012] External committee member, **Risto Holopainen**, University of Oslo, Norway. [2012] Internal committee member, **Rasmus Stenholt**, Aalborg University. [2011] External committee member, **Marco Fabiani**, KTH Royal Institute of Technology, Stockholm. [2010] External committee member, **Stefano Papetti**, University of Verona, Italy.

Teaching

Instructor for the following courses: [2024–] **Spatial User Interfaces**, MSc in Medialogy, Aalborg University Copenhagen. [2018–] **Physical Models for Sound Synthesis**, MSc in Sound and Music Computing, Aalborg University Copenhagen. [2025 (Fall)] **Design of Immersive Experiences**, MSc in Medialogy. [2015–] **Research in Sound and Music Computing**, MSc in Sound and Music Computing, Aalborg University Copenhagen. [2014–] **Sound Processing**, MSc in Sound and Music Computing, Aalborg University Copenhagen. [2011] **Multimodal Interaction in Virtual Environments**, PhD Course, Aalborg University. [2010–] **Modeling Physical Systems**, MSc in Medialogy. [2008–] **Multimodal Perception and Cognition**, MSc in Medialogy. [2005–] **Interactive Acoustics**, MSc in Medialogy. [2007] **Audio Design**, BSc in Medialogy. [2007] **Research Training**, MSc in Medialogy. [2004–2008] **Cross-Modal Perception**, MSc in Medialogy. [2006] **Perception (Sound)**, BSc in Medialogy. [2006] **Automatic Perception II (Sound)**, BSc in Medialogy. [2005] **Automatic Perception I (Sound)**, BSc in Medialogy. [2004–2005] **Automatic Perception (Sound)**, BSc in Medialogy. [2004] **Cross Sensorial Processing**, MSc in Medialogy. [2004] **Programming Sound Effects**, BSc in Medialogy. [2004] **Music Informatics**, BSc in Medialogy. [2003–2004] **Auditory Perception**, Medialogy, Aalborg University. [2004] **Medialogy Math I**, Aalborg University. [2004] **Soundtrack for Animation**, Aalborg University. [2003] **Music Informatics**, Medialogy, Aalborg University. [2003] **Computer Applications in Music**, University of Virginia. [2002] **Physical Interaction Design Workshop I & II**, CCRMA, Stanford University. [2005] **Sound for Mobile Devices**, Helsinki University of Technology (HUT), Finland (8-hour class). [2005] **Physical Modeling Synthesis**, ESMUC, Barcelona (8-hour class).