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*aka Jean-Sébastien Senécal

Sofian Audry*

Education

- 2017 **Postdoctoral Studies**, *Massachusetts Institute of Technology*, Cambridge, USA.
Supervisor: Nick Montfort.
- 2016 **Ph. D. Humanities (Fine Arts)**, *Concordia University*, Montréal, Canada.
Advisors: Chris Salter (main), Jean Dubois, Bart Simon. Thesis title: *Machines That Learn: Aesthetics of Adaptive Behaviors in Agent-based Art*.
- 2010 **M. A. Communication (interactive media)**, *University of Quebec in Montreal*.
Advisor: Jean Décarie.
- 2003 **M. Sc. Computer Science (machine learning)**, *University of Montreal*.
Advisor: Yoshua Bengio.
- 2001 **B. Sc. Mathematics and Computer Science**, *University of Montreal*.
Completed with honours.

Professional experience

- 2020–present **Professor**, *University of Quebec in Montreal*.
Teaching: Algorithms and Interaction (EDM4600, 2020-2021); Interactive Spaces (EDM4660, 2020); Research-creation Seminar in Interactivity (EDM7112, 2021). Service: Curriculum revision (2020-2021); Faculty hiring committee (2021); Research and creation committee (2020-2021); Direction, HEXAGRAM-UQAM & Co-direction, HEXAGRAM research-creation network (2021-2022). Executive committee, HEXAGRAM research-creation network (2020-2021).
- 2019 **Assistant Professor of Communication, Media and Design / Computer Science**, *Clarkson University*.
Teaching: Interactive and Algorithmic Art (DA250) (2019).
- 2017–2019 **Assistant Professor of New Media**, *School of Computing and Information Science, University of Maine*.
Teaching: Creative Coding I (NMD105) (2019); Artificial Intelligence for Art & Design (NMD347) (2018-2019); Physical Computing & Interaction Design (NMD342) (2018); Practicum in New Media (NMD498-NMD499) (2018-2019). Service: Curriculum revision (2017); Faculty hiring committees (2018, 2019); Master thesis committees (2018-2019); Undergraduate advising (2017-2019).
- 2004–present **Independent new media artist**.
- 2015–2017 **Research assistant**, *LabXmodal, Concordia University*.
Research project on interactional synchrony and the use of real time biometric signals in intelligent environments.
- 2014–2016 **Lecturer**, *Design and Computation Arts Department, Concordia University*.
Creative programming I (CART253): beginner programming class for artists and designers using Processing.
Creative programming II (CART353): intermediate Processing class focusing on natural system simulation.
- 2013–2014 **Project coordinator**, *Perte de Signal*.
Development and coordination of a series of co-creation residencies in Africa (Tunis, Casablanca, Dakar).
- 2014 **Consultant**, *Quebec Center for Media Arts*.
Individual mentoring on grant writing for artists.
- 2013 **Teaching assistant**, *Design and Computation Arts Department, Concordia University*.
Creative programming I (CART253).

- 2010–2013 **Research assistant**, *LabXmodal, Concordia University*.
Research project on the applications of emergence and machine learning for interactive environments (partnership with Moment Factory and GSM).
- 2005–2017 **Consultant in new media art technologies**, *Self-employed*.
- 2005–2006 **Consultant**, *Martine Neddham*.
Maintenance of net.art works *Mouchette.org* and *DavidStill.org*; development of *Chinese virtual persons on the net* (Turbulence commission).
- 2005–2008 **Web developer**, *Koumbit*.
Founding member of the workers-managed web technologies organization; active member of the following committees: workers, production, finance, human resources, community life.
- 2005–2007 **Research assistant**, *Hexagram, CIAM, Concordia University*.
Highlights: adaptive intelligence for robotic art (Eric Raymond and Bill Vorn); interactive installation *Radicaux libres* (Jean Dubois and Philippe Jean).
- 2004 **Programmer analyst**, *ApSTAT Technologies*.
- 2003 **Research intern**, *Institute Dalle Molle for Adaptive and Perceptive Intelligence (IDIAP)*, Martigny, Switzerland.
- 1999–2001 **Teaching assistant**, *Department of Computer Science and Operations Research (DIRO), University of Montreal*.
Discrete Mathematics (IFT1063), Programming I (in Java) (IFT1010).
- 2000 **Research assistant**, *Machine Learning Laboratory (LISA), University of Montreal*.
- 1999 **Research intern**, *Computer Simulation Laboratory (LISUM), University of Montreal*.

Publications

- in press Audry, Sofian (2021). *Art in the Age of Machine Learning*. MIT Press, Boston. 248 pages.
- 2021 Audry, Sofian (2021). "Aglapheme. Version 0.2", in *Le Comportement des Choses*. Quinz, Emanuele (Ed). Les Presses du Réel, Paris, France. pp. 164–171.
- Audry, Sofian (2021). "Behavior Morphologies of Machine Learning Agents in Media Artworks", *Leonardo*, Vol. 54, No 3, pp. 269–273.
- 2020 Audry, Sofian, Dumont Gagné, Rosalie and Scurto, Hugo (2020). "Behaviour Aesthetics of Reinforcement Learning in a Robotic Art Installation", 4th Workshop on Machine Learning for Creativity and Design at Neural Information Processing Systems (NeurIPS 2020).
- Audry, Sofian (2020). "*for the sleepers in that quiet earth.: An Artbook Generated by a Deep Learning Agent*", in *Attention à la marche ! Mind The Gap!: Thinking Electronic Literature In A Digital Culture Penser la littérature électronique en culture*. Gervais, B., Marcotte, S. (Eds). Les Presses de l'Écureuil, Montreal, Canada. pp. 181–202.
- Armand, Edwige, Audry, Sofian, Garcia, Frédérick and Martinucci, TeZ Maurizio (2020). "Who is Speaking? Artscience Stagings of Nonhuman Sentience", ISEA 2020 Conference proceedings, Montreal, Canada. pp. 579–585.
- Bogart, Ben, Dinkins, Stephanie, Audry, Sofian, Kelly, Stephen and Kite, Suzanne (2020). "Machine Learning as Material: Research-Creation Approaches to Behavior and Imagination", ISEA 2020 Conference proceedings, Montreal, Canada. pp. 587–591.
- Gee, Erin, Lee, Alex M. and Audry, Sofian (2020). "Playing with Emotions: Biosignal-based Control in Virtual Reality Game Project H.E.A.R.T.", ISEA 2020 Conference proceedings, Montreal, Canada. pp. 489–492.
- Audry, Sofian (2020). "La matérialité révélatrice de l'apprentissage automatique", *ESPACE art actuel*, "IA - Art sans artistes", Issue 124, Winter 2020.
- 2019 Audry, Sofian and Ippolito, Jon (2019). "Can Artificial Intelligence Make Art without Artists? Ask the Viewer", *Arts*.
- Gee, Erin and Audry, Sofian (2019). "Automation as Echo", *ASAP/Journal*.

- Audry, Sofian (2019). "Unrolling the Learning Curve: Aesthetics of Adaptive Behaviors with Deep Recurrent Nets for Text Generation", International Symposium on Computational Media Art 2019 Conference proceedings, Hong Kong, China.
- 2018 Audry, Sofian (2018). "*for the sleepers in that quiet earth.*: Experiencing the Behavior of a Deep Learning Neural Network Agent through a Generative Artbook", ISEA 2018 Conference proceedings, Durban, South Africa.
- Salter, Chris and Audry, Sofian (2018). "Towards Probabilistic Worldmaking: Xenakis, n-Polytope and the Cybernetic Path to Chaos", in *Worldmaking as Techné: Exploring Worlds of Participatory Art, Architecture, and Music*. de Campo, A., Hosale, M., Murrani, S. (Eds). Riverside Architectural Press, Toronto, Canada. pp. 114–143.
- Audry, Sofian (2018). "Aesthetics of Adaptive Behaviors in Embodied Agents", Body of Knowledge 2016 Conference proceedings, UCI, Irvine, USA.
- 2017 Audry, Sofian et al. (2017). "256-Byte Creative Programs" (TROPE-17-02), The Trope Tank, MIT, Cambridge, USA.
- 2016 Senécal, Jean-Sébastien (2016). *Machines That Learn: Aesthetics of Adaptive Behaviors in Agent-based Art*. PhD thesis, Concordia University, Montréal. 307 pages.
- Audry, Sofian (2016). "Aesthetics of Adaptive Behaviors in Agent-based Art", ISEA 2016 Conference proceedings, Hong Kong, China.
- 2010 Audry, Sofian (2010). "Absences: Public Art Interventions in Natural Spaces using Autonomous Electronic Devices", ISEA 2010 Conference proceedings, pp. 469–471. Ruhr, Germany.
- Senécal, Jean-Sébastien (2010). Une exploration des processus d'assignation identitaires à travers une expérience interactive. Master thesis, École des Médias, Université du Québec à Montréal, Montréal. 40 pages.
- 2008 Bengio, Yoshua and Senécal, Jean-Sébastien (2008). "Adaptive Importance Sampling to Accelerate Training of a Neural Probabilistic Language Model" IEEE Transactions on Neural Networks, Vol. 19, No 4, pp. 713–722.
- 2006 Bengio, Y., Schwenk, H., Senécal, J. S., Morin, F. and Gauvain, J.-L. (2006). "Neural probabilistic language models", Studies in Fuzziness and Soft Computing, Vol. 194, p. 137-186, Berlin, Germany.
- 2003 Senécal, Jean-Sébastien (2003). Accélérer l'entraînement d'un modèle non-paramétrique de densité non normalisée par échantillonnage aléatoire. Master thesis, Département d'Informatique et de Recherche Opérationnelle, Université de Montréal, Montréal. 91 pages.
- Bengio, Yoshua and Senécal, Jean-Sébastien (2003). "Quick Training of Probabilistic Neural Nets by Importance Sampling". Ninth International Workshop on Artificial Intelligence and Statistics, Society for Artificial Intelligence and Statistics, Key West, Florida.

Artworks

- in progress Sofian Audry and Erin Gee. *Crocodile*. Interactive installation using affective computing and deep learning.
- Sofian Audry and TeZ. *Xenolalia*. Deep learning and bio-art generative installation
- Sofian Audry and Rosalie Dumont-Gagné. *Morphosis*. Machine learning robotic installation.
- 2019 Erik Adigard, Sofian Audry, FM Einheit, Dietmar Lupfer, Chris Salter, Alex Schweder and Sissel Tolaas . *SENSEFACTORY*. Large-scale immersive environment after Moholy-Nagy.
- Chris Salter in collaboration with Sofian Audry, Takashi Ikegami, Alexandre Saunier and Thomas Spier. *Totem*. Large-scale dynamic installation.
- Sofian Audry. *for the sleepers in that quiet earth*. Deep learning generative artbook. Editor: Nick Montfort. Publisher: Bad Quarto.
- 2018 Sofian Audry and Monty Cantsin. *The Sense of Neoism?! Artificial Counter-Intelligence Machine*. Deep learning neoist machine.
- Sofian Audry and Erin Gee. *to the sooe*. Deep learning sound work.
- 2017 Sofian Audry and Erin Gee. *of the soone*. Deep learning sound work.
- 2015 Sofian Audry, Samuel St-Aubin and Stephen Kelly. *Vessels*. Aquatic robotic installation.

- 2014 Sofian Audry and Samuel St-Aubin. *Archipelago*. Interactive sound installation.
- 2013 Sofian Audry. *Plasmosis*. Site-specific artificial life installation. Electronic & material design: Samuel St-Aubin.
- 2012 Chris Salter, Sofian Audry, Marije Baalman, Adam Basanta, Elio Bidinost and Thomas Spier. *N-Polytope: Behaviors in Light and Sound After Iannis Xenakis*. Immersive light and sound performance-installation.
- 2011 Sofian Audry. *Fifth Absence*. Site-specific artificial life intervention.
- 2010 Sofian Audry. *Third Absence*. Site-specific artificial life intervention.
- 2009 Sofian Audry. *Fourth Absence*. Site-specific artificial life intervention.
Sofian Audry. *Second Absence*. Site-specific artificial life intervention.
Sofian Audry. *First Absence*. Site-specific artificial life intervention.
- 2008 Sofian Audry and Samuel St-Aubin. *Accrochages*. Electronic interventions in urban space.
Sofian Audry. *Vévé*. Web-based interactive and generative poetry. Sound design: Alexandre Quessy.
Sofian Audry and Jonathan Villeneuve. *Trace S*. New media installation. Electronic design: Samuel St-Aubin.
- 2007 Sofian Audry and Jonathan Villeneuve. *Abysse*. Site-specific new media installation.
Sofian Audry and Jonathan Villeneuve. *Trace V*. New media installation. Electronic design: Samuel St-Aubin.
Sofian Audry. *Drift*. Interactive electronic object.
Sofian Audry and Jonathan Villeneuve. *Trace L*. New media installation. Sound design: Myriam Bessette.
- 2006 Sofian Audry. *CHARACTERS*. Web-based software artwork.
- 2005 Sofian Audry. *UPDATE 'me'*. Web-based software artwork.

Conferences and workshops

- 2021 **Ars Electronica Garden Hexagram**, *Beyond human art: creation and the posthuman*, Montreal, Canada. Round table.
With Edwige Armand, Navid Navab, Danny Perreault and Gisèle Trudel.
West Bund Museum, *AI Delivered: The Abject (panel)*, Shanghai, China. Panel.
With Leslie Garcia, Istvan Kantor and Paloma López. Moderator: Zhang Ga.
ALife Conference, *Artificial Perception: Machines with Lifelike Failings*, Online. Special session.
Organisateurs: Lana Sinapayen, Eiji Watanabe and Sofian Audry.
Écran total – University of Quebec in Montreal, *Ce que nous faisons avec les écrans et ce que les écrans font de nous*, Montreal, Canada. Round table.
With Julia Bonaccorsi, Catalina Briceño, Leona Nikolic and Stéphane Vial. Animation : Chiara Piazzesi.
Ciclo de Conversas Design + Multimédia 2021, *Art + Artificial Agents*, Coimbra, Portugal. Panel.
With Kaffe Matthews.
Molior 2021 Symposium – Rethinking our Futures: Art and Collaboration, *Human-Machine Collaboration in Digital Arts in the Age of Machine Learning*, Montreal, Canada. Keynote.
- 2020 **International Symposium on Electronic Art (ISEA)**, *Machine Learning as Material: Research-creation Approaches to Behavior and Imagination*, Montreal, Canada. Panel.
With Ben Bogart, Stephanie Dinkins, Suzanne Kite and Stephen Kelly.
ISEA, *Matters Mattering: Collective Interactions and Play*, Montreal, Canada. Panel.
With Erin Gee, Aisling Kelliher, Alex M. Lee, Renata Azevedo Moreira and Samuel Thulin.
ISEA, *Who is Speaking? Art-science Stagings of Nonhuman Sentience*, Montreal, Canada. Panel.
With Edwige Armand, Frédérick Garcia and Maurizio TeZ Martinucci.
ALife Conference, *Interdisciplinary Approaches to A-Life and the Digital Arts*, Online. Workshop.
Organisateurs: Chris Salter, Alex Saunier, Takashi Ikegami, Sofian Audry and David Howes.
SYNERGIA II, *Algorithmic creation as a vector of artistic diversity*, Laval University, Québec, Canada. Round table.
With Georges Azzaria, Véronique Guèvremont, Christophe Abrassart and Tom Lebrun.

- Artificial intelligence in the media arts, industry and knowledge communities**, *Limitations of artificial intelligence*, HEXAGRAM/CQAM/Element AI, Québec, Canada. Round table.
With François Quévillon, Alexandre de Brébisson and Christopher Salter.
- Artificial intelligence in the media arts, industry and knowledge communities**, *Research and development in artificial intelligence*, HEXAGRAM/CQAM/Element AI, Québec, Canada. Round table.
With Marine Theunissen, Maxim Chevalier-Boisvert and Ghyslain Gagnon.
- 2019 **KIKK Festival**, *Art + Artificial Agents*, Namur, Belgium. Keynote.
- International Digital Arts Market**, *Creation versus creativity: conceptualization of artistic thought*, Elektra Festival, Montréal, Canada. Round table.
Moderator. With Marilène Oliver, Hiroko Tasaka, Kaka Fritz Kim and Jonathan Parsons.
- Columbia University**, *Towards a History of Artificial Intelligence*, New York, USA. Workshop.
- Barbican**, *Messy Brains, Bodies, Machines and Worlds*, London, United Kingdom. Round table.
With Chris Salter, Takashi Ikegami and Ana Ridler.
- Forum Avantage Numérique**, *L'apprentissage automatique, nouveau territoire de la créativité*, Rouyn-Noranda, Canada. Keynote.
- Centre George Pompidou**, *Behavioral Matter*, Paris, France. Workshop.
- International Symposium on Computational Media Art (ISCMA)**, *Machine Learning and Text Generation*, Hong Kong, China. Panel.
With Winnie Soon, Haytham Nawar and Scott Fitzgerald.
- 2018 **École Nationale Supérieure de Création Industrielle (ENSCI-Les Ateliers)**, *Behavioral Matter*, Paris, France. Workshop.
- University of Ottawa**, *Artificial Intelligence in 21st Century Education*, Ottawa, Canada. Round table.
With Alastair Summerlee and Matthew Kean.
- Pulp and Paper Foundation's Paper Days, University of Maine**, *Growth Through Artificial Intelligence and Machine Learning*, Orono, USA. Panel.
With Alastair Summerlee and Matthew Kean.
- Electronic Literature Organization (ELO)**, *Apprentissage profond et littérature électronique/Deep Learning and Electronic Literature*, Montreal, Canada. Round table.
With Tom Lebrun and David "Jhave" Johnston.
- ELO**, *AI & Deep Learning Systems*, Montreal, Canada. Panel.
With Steve Dipaola.
- ISEA**, Durban, South Africa. Panel.
- École Nationale Supérieure des Arts Décoratifs (EnsAD)**, *Behavioral Objects Behavioral Matter*, Paris, France. Workshop.
- Artengine**, *Artificial Imagination*, Ottawa, Canada. Round table.
With Ben Bogart and Allison Parrish.
- University of Maine's Innovative Media Research and Commercialization Center**, *Visiting Artist Series*, Orono, USA. Lecture.
- 2017 **Leonardo/Hexagram/MILIEUX**, *L.A.S.E.R. Montreal*, Concordia University, Montréal, Canada. Round table.
With Roger Malina and Louise Poissant.
- Dirty Disciplines, Wild Knowledges**, *Remixing Knowledge in Dialogue: Navigating Interdisciplinarity Panel*, Concordia University, Montréal, Canada. Round table.
- Eastern Bloc**, *Lifelike Embodied Agents : Programming Artificial Behaviors as Art and Craft*, Montreal, Canada. Workshop.
- Media Lab Prado**, *I Love Free Software*, Madrid, Spain. Panel.
- 2016 **A Body of Knowledge: Embodied Cognition and the Arts**, *Claire Trevor School of the Arts, University of California, Irvine*, Irvine, USA. Panel.

- MILIEUX, LIBREMAPPING**, Concordia University, Montréal, Canada. Workshops.
- ISEA**, Hong Kong, China. Panel.
- 2015 **Neutral Ground**, Regina, Canada. Workshops.
- 2014 **Arte Alameda**, *Agencia Alien: Arte/Investigacion con el Non-humano*, Mexico City, Mexico. Workshop. Fundación Telefónica VIDA educational program.
- Festival International d'Art Vidéo**, Hassan II University, Casablanca, Morocco. Workshops.
- Sight & Sound**, *Biological Systems as Generative Models for the Future*, Montréal, Canada. Round table.
- Elektra Festival**, *Behaviors in Light and Sound after Iannis Xenakis*, Darling Foundry, Montréal, Canada. Round table.
- 2013 **E-Fest**, Tunis El Manar University, Tunis, Tunisia. Round table and workshop.
- Hexagram | CIAM**, *HEXA_OUT: When Forms of Life Collide*, Phi Center, Montréal, Canada. Round table.
- International Digital Arts Market**, Elektra Festival, Montréal, Canada. Panel with Alexandre Castonguay.
- 2012 **Organisation Internationale de la Francophonie**, *2nd Crea Numerica Meetings*, Tunis, Tunisia. Round table and workshop.
- Eastern Bloc**, *What space do/can/should hackers occupy in the gallery?*, Montréal, Canada. Round table.
- 2011 **International Digital Arts Market**, Festival NEMO, Paris, France. Panel.
- Society for Literature, Science, and the Arts**, Kitchener, Canada. Panel.
- 2010 **ISEA**, *Media Gardens*, Ruhr, Germany. Round table.
- Subtle Technologies**, Toronto, Canada. Poster presentation.
- International Digital Arts Market**, Elektra Festival, Montréal, Canada. Panel.
- Société des Arts Technologiques (SAT)**, *alt_NORD*, Montréal, Canada. Round table.
- 2009 **International Digital Arts Market**, Cimatics Festival, Brussels, Belgium. Panel.
- Avatar**, *Absences*, Québec, Canada. Panel.
- Chiang Mai University, New Media Arts Lab**, Chiang Mai, Thailand. Panel.
- ComPeung**, *Absences*, Doi Saket, Thailand. Panel.
- 2008 **Dorkbot BRU #2**, *Accrochages*, iMAL, Bruxelles, Belgique. Panel with Samuel St-Aubin.
- Dorkbot Paris #10**, *Accrochages*, Paris, France. Workshop with Samuel St-Aubin.
- Festival Métropolis Bleu**, *Vévé*, Montréal, Canada. Workshop.
- 2007 **Het Wilde Wetten**, Rotterdam, Netherlands. Panel.

Exhibitions and performances

- 2021 **Kranhalle NOI Techpark**, *TRANSART Festival of Arts*, Bolzano, Italy.
- International Conference on Computational Creativity, ICC3'21 Art Exhibition**. Online. Curators: Lilla Lo Curto and Bill Outcault.
- MUTEK Forum**, *New frontiers in digital and audiovisual creation*, Montreal, Canada.
- Chronus Art Center**, *AI Delivered: The Abject*, Shanghai, China. Curator: Zhang Ga.
- World Museum**, *AI: More Than Human*, Liverpool, UK. Curators: Suzanne Livingston and Maholo Uchida.
- 2020 **Digital Cultures Festival**, *The Sound Intervention Service*, Warsaw, Poland. Curator: Joseph Cutts.
- MacKenzie Art Gallery**, *To the Sooe*, Regina, Canada. Curator: Tak Pham.
- 2019 **NeurIPS Workshop on Machine Learning for Creativity and Design**, *AI Art Gallery*, Vancouver, Canada. Curator: Luba Elliott.

- Groninger Forum**, *AI: More than Human*, Groningen, Netherlands.
Curators: Suzanne Livingston and Maholo Uchida.
- Schauspielhaus Bochum**, *Dive Festival*, Bochum, Germany.
- Zebrastraat**, *International Exhibition for New Technology*, Ghent, Belgium.
New Technological Art Award
- Muffathalle**, *SENSEFACTORY*, Munich, Germany.
- Barbican**, *AI: More than Human*, London, United Kingdom.
Curators: Suzanne Livingston and Maholo Uchida.
- Musée régional de la Côte-Nord**, *Re-encodings*, Sept-Îles, Canada.
- 2018 **Eastern Bloc**, *Amplification*, Montreal, Canada.
Curators: Martín Rodríguez and Éliane Ellbogen.
- Ars Electronica**, *Taking Care*, Linz, Austria.
Curators: Ana Kerkeres and Chris Salter.
- ZKM**, *Open Codes*, Karlsruhe, Germany.
- Tolhuistuin Foundation**, *ROBOTANICA: The New Wilderness*, Amsterdam, Netherlands.
Curators: Arjen Bangma and Joannette van der Veer.
- NRW Forum Museum**, *PANDORAN VINCI: Artificial Intelligence Today*, Düsseldorf, Germany.
Curators: Tina Sauerlaender and Peggy Schoenegge (peer to space).
- La Gaîté Lyrique**, *Capitaine futur et la supernature*, Paris, France.
Curator: Jos Auzende.
- MIT Rotch Library**, *Author Function*, Cambridge, Massachusetts.
Curator: Nick Montfort.
- Festival Montréal en Lumière**, *Nuit Blanche*, Montreal, Canada.
- TTC Gallery**, *Murmurs and Palpitations*, Chicago, Illinois.
Curators: Chelsea Welch and Iryne Roh.
- 2017 **Dutch Design Week**, *ROBOTANICA: The New Wilderness*, Eindhoven, Netherlands.
- Transnatural**, *ROBOTANICA: The New Wilderness*, Amsterdam, Netherlands.
- Montreal Contemporary Art Museum**, *In Search of Expo 67*, Montréal, Canada.
Curators: Lesley Johnstone and Monika Kin Gagnon.
- Maison de la Culture Rivière-des-Prairies**, *Un million d'horizons (1 x 19 = 1 000 000)*, Montréal, Canada.
Curator: Nathalie Bachand.
- 2016 **Afropixel**, Dakar, Senegal.
- Marrakech Biennale**, Marrakech, Morocco.
- Festival Montréal en Lumière**, *Nuit Blanche, City Hall*, Montreal, Canada.
Curator: Eliane Ellbogen.
- 2015 **L'Ososphère**, *Jardin d'Hiver*, Strasbourg, France.
- Nuit Blanche**, Paris, France.
- Léo-Ayotte Exhibition center**, *Re-encodings*, Shawinigan, Canada.
- Eastern Bloc**, *Robotis Personae*, Montréal, Canada.
- 2014 **L'Imagier**, *Re-encodings*, Gatineau, Canada.
- International Digital Arts Biennale**, *Physical/ité*, Darling Foundry, Montréal, Canada.
- Vitra Design Museum**, Buckminster Fuller dome, Weil am Rhein, Germany.
- Club Transmediale**, Stattbad Wedding, Berlin, Germany.
- 2013 **BOZAR Electronic Art Festival**, Brussels, Belgium.
- LABoral**, *Vessels*, Gijón, Spain.

- Vaste et Vague**, *Séjour temporaire | altération provisoire*, Carleton-sur-Mer, Canada.
Curator: Marie-Hélène Leblanc.
- Elektra Festival**, *Ex Vivo*, Occurrences, Montréal, Canada.
Curator: Aurélie Besson.
- 2012 **E-Fest**, Tunis, Tunisia.
LABoral, *N_Polytope*, Gijón, Spain.
L'Écho d'un Fleuve, *Ubiquité*, Montréal, Canada. Presented by Péristyle Nomade.
- 2011 **Chiang Mai City Arts and Cultural Centre**, *ComPeung revisited*, Chiang Mai, Thailand.
Curators: Helen Michaelsen and Pisithpong Siraphisut.
Galerie Séquence, *Captatio oculi*, Chicoutimi, Canada.
Curator: Sylvain Campeau.
- 2010 **Nocturne Festival**, Halifax, Canada.
- 2009 **LAB30 Art Laboratory**, Kulturhaus abraxas, Augsburg, Germany.
Jeux de la Francophonie, *Crea Numerica*, Beirut, Lebanon.
Festival Montréal en Lumière, *Art souterrain*, Montréal, Canada.
ComPeung, Doi Saket, Thailand.
- 2008 **Galerie Art Mûr**, *Trace*, Montréal, Canada.
404 Festival, Trieste, Italy.
Festival Mal au Pixel, Paris, France.
Festival Métropolis Bleu, Montréal, Canada.
Bibliothèque et Archives Nationales du Québec, *États Généraux des Arts Médiatiques*, Montréal, Canada.
Curator: Valérie Lamontagne.
- 2007 **Piksel Festival**, *Fun House*, Lydgalleriet, Bergen, Norway.
Expression, *Projectiles*, St-Hyacinthe, Canada.
V2 Institute for the Unstable Media, *make do*, Rotterdam, Netherlands.
TENT Gallery, *Wrong Time, Wrong Place*, Rotterdam, Netherlands.
1313 Gallery, *Incidences*, Toronto, Canada.
Musée d'Art Contemporain des Laurentides, *Perte de Signal*, St-Jérôme, Canada.
- 2005 **Piksel Festival**, *Games! no fun!*, Hordaland Kunstsenter, Bergen, Norway.
Curators: Isabelle Arvers and Gisle Frøysland.
Artivistic Festival, Montréal, Canada.
Fort9, *nCON'T.ained inFORMATION*, Victoria, Canada.
Société des Arts Technologiques, *Homeostazie*, Montréal, Canada.

Funding

- 2021 **Research-creation support for new academics**, *Quebec Research Fund – Society and culture*.
Title: "Téléo : esthétique et pratique des œuvres robotisées contrôlées par apprentissage automatisé" (45,000 CAD).
Role: PI.
Programme d'aide financière à la recherche et à la création, *University of Quebec in Montreal*.
Title: "Finalisation et adaptation pour le web d'une installation IA et bio-art" (5,000 CAD).
- 2020 **Strategic clusters**, *Quebec Research Fund – Society and culture*.
Title: "Hexagram - Réseau de recherche-création en arts, cultures et technologies" (1,827,000 CAD). Role: PI.
Programme de projets concertés, *Pôle lavallois d'enseignement supérieur en arts numériques et économie créative*.
Title: "Déambulations numériques" (65,000 CAD). Role: PI. Co-PIs: Rosalie D. Gagné and Creative Lab.
Programme d'aide financière à la recherche et à la création, *University of Quebec in Montreal*.
Title: "Art in the Age of Learning Machines: Publication d'un livre au MIT Press" (5,000 CAD).

- Programme d'aide financière à la recherche et à la création**, *University of Quebec in Montreal*.
Title: "Créer et percevoir les comportements adaptatifs artificiels" (5,000 CAD).
- 2019 **Major Research Instrumentation Program**, *National Science Foundation*.
Title: "Acquisition of a high-performance computing instrument to support deep learning, modeling/simulation, and visualization for STEM+Art" (350,000 USD). Role: Co-PI. PI: Roy Turner.
- Concept to Realization Grant**, *Canada Council for the Arts*.
Title: "Morphoses" (34,225 CAD). Collaborator: Rosalie D. Gagné.
- Research and Creation**, *Canada Council for the Arts*.
Title: "Crocodile" (24,875 CAD). Collaborator: Erin Gee.
- Faculty Grant**, *Clement and Linda McGillicuddy Humanities Center, USA*.
Title: "Morphosis: Robots Learning to Roll" (5,000 USD).
- 2018 **Concept to Realization Grant**, *Canada Council for the Arts*.
Title: "Xenolalia" (30,270 CAD).
- Research-creation support program**, *Quebec Research Fund – Society and culture*.
Title: "Dynamic Light: Behavior and Temporal Dynamics in Contemporary Lighting Design" (145,000 CAD). Role: Co-PI. PI: Chris Salter.
- Travel grant (Netherlands)**, *Canada Council for the Arts*.
- Travel grant (Netherlands)**, *Quebec Art Council*.
- Alton '38 and Adelaide Hamm Campus Activity Fund**, *University of Maine Foundation, USA*.
- 2017 **Travel grant (Netherlands)**, *Quebec Art Council*.
- 2016 **Postdoctoral research-creation fellowship**, *Fonds de Recherche du Québec - Société et Culture*.
Title: "Agents connexionnistes à apprentissage profond en art et en science" (60,000 CAD).
- Research grant**, *Canada Council for the Arts*.
Title: "Morphoses: projet de recherche pour une installation robotique adaptative" (24,875 CAD). Collaborator: Rosalie D. Gagné.
- Co-production grant**, *Hexagram*.
- 2013 **Travel grant (Spain)**, *Quebec Art Council*.
- Travel grant (Spain)**, *Canada Council for the Arts*.
- 2011 **Travel grant (Thailand)**, *Quebec Art Council*.
- Travel grant (Spain)**, *Quebec Art Council*.
- 2010 **Research and production grant**, *Canada Council for the Arts*.
Title: "Vessels" (30,000 CAD). Collaborators: Adam Kelly, Stephen Kelly, Samuel St-Aubin.
- Development grant**, *Quebec Art Council*.
Title: "Vessels" (20,000 CAD). Collaborators: Adam Kelly, Stephen Kelly, Samuel St-Aubin.
- Doctoral research fellowship**, *Quebec Research Fund – Society and culture*.
Title: "L'Apprentissage Machine dans les Oeuvres d'Art Agentielles" (60,000 CAD).
- Travel grant (Germany)**, *Quebec Art Council*.
- Travel grant (Germany)**, *Canada Council for the Arts*.
- 2009 **Travel grant (Germany)**, *Quebec Art Council*.
- Travel grant (Yukon)**, *Canada Council for the Arts*.
- Travel grant (Yukon)**, *Quebec Art Council*.
- 2008 **Production grant**, *Fondation du Maire de Montréal pour la Jeunesse*.
- Residency grant**, *Quebec Art Council*.
- Travel grant (Thailand)**, *Quebec Art Council*.
- Travel grant (Belgium)**, *Quebec Wallonia Brussels Office for Youth*.
- Travel grant (Europe)**, *Quebec Art Council*.
- Travel grant (Europe)**, *Canada Council for the Arts*.

- 2007 **Production grant**, *Canada Council for the Arts*.
Travel grant (Belgium), *Quebec Wallonia Brussels Office for Youth*.
Travel grant (Norway), *Canada Council for the Arts*.
Travel grant (Netherlands), *Centre Interuniversitaire des Arts Médiatiques*.
Travel grant (Netherlands), *Ministry of Education, Recreation and Sports*.
- 2006 **Production grant**, *Centre Interuniversitaire des Arts Médiatiques*.
- 2005—2007 **Fellowship**, *Fonds à l'Accessibilité et à la Réussite des Études*.
- 2005 **Doctoral research fellowship**, *Fonds Québécois de la Recherche sur la Nature et les Technologies (declined)*.
- 2001 **Master research fellowship**, *Fonds pour la Formation des Chercheurs et l'Aide à la Recherche*.
Fellowship, *Département d'Informatique et de Recherche Opérationnelle, University of Montreal*.
- 1999 **Undergraduate student research award**, *Natural Sciences and Engineering Research Council of Canada*.

Recognitions

- 2019 **Official Selection (The Sense of Neoism?! An Infinite Manifesto)**, *New Technological Art Award*.
- 2014 **Doctoral Award of Excellence**, *Concordia University*.
- 2013 **Honourable mention (N Polytope)**, *Prix Ars Electronica*.
Special mention (N Polytope), *VIDA Art and Artificial Life Awards*.
- 2010 **Special Entrance Award**, *Concordia University*.
- 1999—2001 **Dean's honourable mention**, *Arts and Science Faculty, University of Montreal*.

Press

- 2021 Delacour, Emmanuel. "L'IA comme matière première des artistes". *CScience*, February 5, 2021.
- 2019 NTAA 2019 New Technological Art Award: International Art Exhibition. Zebrastraat – New Zebra Ghent Belgium. Lannoo, Tielt, Belgium. 111 pages. Exhibition catalog
Wesemann, Arnd. "Wenn Digitale Agenten Übernehmen". *Bühnentechnische Rundschau*, Issue 6, 2019.
"Rosalie D. Gagné, Sofian Audry & Martin Messier à Résonances Numériques KIKK Festival". *Le Lien Multimédia*, November 19, 2019.
- 2018 Berson, Amber. "Amplification". *Canadian Art*, October 23, 2018.
Richens, Meaghan. "Art and the Machine: Symposium to Explore Impact of Artificial Intelligence on Imagination". *ARTSFILE*, February 17, 2018.
Scheer, Ursula. "Der malende Roboter ist Expressionist". *Frankfurter Allgemeine*, June 4, 2018.
- 2015 "L'Ososphère à l'Université de Strasbourg". *UTV*, November 19, 2015.
Baichtal, John. *Building Your Own Drones: A Beginners' Guide to Drones, UAVs, and ROVs*. Que, 2015.
- 2014 *Carnet de Séjour*. Centre d'artistes Vaste et Vague, Carleton-sur-Mer, Canada, 2015. Exhibition catalog.
Brousseau, Marie-Hélène. "Sofian Audry: Perte de signal et morphologies variables". *Convergence*, no 90, June 2014.
- 2013 Fiset, Serge. "Du spectacle, du spectaculaire, de la fête! Of the spectacle, the Spectacular, the Party!" *Espace Sculpture*, no 105, Fall 2013.
Baichtal, John. "Waterborne Robots Display Emergent Behavior", *Makezine.com*, October 1, 2013.
Debatty, Régine. "Vessels, a fleet of robots with unpredictable behaviour". *We Make Money Not Art*, September 2, 2013.
Bosco, Roberta and Caldana, Stefano. "¿Plagio, apropiacionismo o desconocimiento?" *El Pais*, September 1, 2013.
"Séjour temporaire | altération provisoire", *Capsule Télé-Québec Gaspésie*.
González, Semíramis. "Vessels, a Research Residency at LABoral". August 12, 2013.

- Desloges, Josianne. "Séjour temporaire à Carleton-sur-Mer: fantaisies touristiques", *Le Soleil*, July 13, 2013.
- Debatty, Régine. "n-Polytope, Behaviors in Light and Sound after Iannis Xenakis". *We Make Money Not Art*, July 25, 2012.
- 2012 Palop, Benoît. "La perspective de l'agent et de l'algorithmie au centre du travail de Sofian Audry", *The Creators Project*, 2012.
- Garant, Barbara. "Captatio oculi", *Ciel Variable*, No 90, Montréal, Winter 2012.
- 2011 Garant, Barbara. "Autre temps, autres yeux", *VOIR*, Chicoutimi, May 12, 2011.
- 2009 Lamontagne, Valérie. "Sofian Audry and Jonathan Villeneuve: Entangled Technologies", *eTC : Revue de l'art actuel*, No 86, Montréal, 2009.
- 2008 Bélisle, J., Charron, M.-E., Gingras, N., Henricks, N. et Lamarche, B.. *10 : Dix ans de création numérique*. Perte de Signal, Montréal, Canada, 2008.
- CIBL "Radio-Montreal" 101.5 FM, "Le 4@6". April 30, 2008.
- Prémont, Charles. "Sofian Audry présente Flag", *Le Lien Multimédia*, April 22, 2008.
- 2007 "Wrong Time Wrong Place" on Antenne Rotterdam, June 22, 2007.
- Répertoire. Perte de Signal, Montréal, 2007.
- 2005 Ludovico, Alessandro. "Update 'me', i dati che muoiono", *Neural.it*, October 25th, 2005.

Residencies

- 2015 **Kër Thiossane**, Dakar, Senegal.
- 2014–2015 **Eastern Bloc**, Montréal, Canada.
- 2013 **LABoral**, Gijón, Spain.
- Vaste et Vague**, Carleton-sur-Mer, Canada.
- 2012 **LABoral**, Gijón, Spain.
- 2011 **Centre d'Art i Natura**, Farrera, Spain.
- ComPeung**, Doi Saket, Thailand.
- Rustines | Lab**, Perte de Signal, Montréal, Canada.
- 2010 **Center for Art and Tapes**, Halifax, Canada.
- 2009 **Klondike Institute of Art & Culture**, Dawson City, Yukon.
- Avatar**, Quebec City, Canada.
- ComPeung**, Doi Saket, Thailand.
- 2008 **iMAL**, Brussels, Belgium.
- Mains d'Oeuvres**, St-Ouen, France.
- Rustines | Lab**, Perte de Signal, Montréal, Canada.
- 2007 **Agence TOPO**, Montréal, Canada.
- Duende Studio**, Rotterdam, Netherlands.
- 2005 **BEK**, Bergen, Norway.

Jurys and committees

- 2020 **Artistic committee**, *ISEA 2020*, Montréal, Canada.
- Scientific committee: Postdoctoral research-creation fellowship**, *Quebec Research Fund – Society and culture*.
- 2011–2019 **Digital arts committee**, *Quebec Center for Media Arts (CQAM)*, Montréal, Canada.
- 2018–2021 **Reviewer**, *International Conference on New Interfaces for Musical Expression*.
- 2018 **Permanent Peer Committee (New Media)**, *Canada Council for the Arts*.
- 2009–2017 **President of the Board of Directors**, *Perte de Signal center*, Montréal, Canada.

- 2017 **Evaluation jury**, *Boston Festival of Indie Games*, Boston, USA.
- 2015 **Reviewing committee of the *Emerging Researchers' Symposium***, Re-Create 2015 Media Art History. Montréal, Canada.
- 2014 **Evaluation jury for the *Grants to New Media and Audio Artists: Research and Production Grants program***, *Canada Council for the Arts*, Ottawa, Canada.
- 2012 **Programming committee**, *Festival HTMLles*, Montréal, Canada.
- 2011 **Evaluation jury**, *Galerie Verticale*, Laval, Canada.
- 2010 **Evaluation jury for the *Open Source Residency program***, *Rustines / Lab*, Montréal, Canada.
- 2008 **Evaluation jury for the organizations and independent curators support program**, *Quebec Art Council*, Montréal, Canada.

Affiliations

Hexagram, *Concordia University*, Montréal, Canada.

International Network for Research-Creation in Media Arts, Design, Technology and Digital Cultures

HumanIA, *University of Quebec in Montreal*, Montréal, Canada.

Machine Agencies, *Concordia University*, Montréal, Canada.

LabXmodal, *Concordia University*, Montréal, Canada.

Center for Sensory Studies, *Concordia University*, Montréal, Canada.

The Trope Tank, *Massachusetts Institute of Technology*, Cambridge, USA.

Perte de Signal artist-run center, Montréal, Canada.

Quebec Center for Media Arts, Montréal, Canada.

Software development

- 2013–present **Lead developer**, *MapMap: open source video mapping software*.
<http://mapmap.info>
- 2015–present **Co-developer**, *Plaquette: open source framework for object-oriented physical computing*.
<http://sofapirate.github.io/Plaquette>
- 2010–2015 **Lead developer**, *Qualia: open source software library for agent-based artworks*.
<http://github.com/sofian/qualia>
- 2004–2012 **Co-developer**, *Drone: open source data-flow software for interactive media*.
<http://github.com/sofian/drone>
- 2007–present **Developer**, *several libraries and programs for the electronic platform Arduino*.
- 2004–present **Contributor**, *several libraries and frameworks including: Symphony, Drupal, ARToolKit, Torch, Plearn*.

Skills

areas of expertise	new media art theory and practice, creative AI, machine learning, artificial intelligence, artificial life, robotics, electronics, tangible media, computational creativity, science and technology studies, mathematics, software engineering, rapid prototyping
programming	C/C++, PHP, Java, Javascript, Python, MySQL, OpenGL, Bash, Scheme, Perl, Prolog, Assembly, BASIC; HTML, CSS, XML, YML, JSON, \LaTeX
tools/libraries	Arduino, Processing, P5.js, Qt, JQuery, TensorFlow, Keras, Pytorch, Numpy, Scipy, Symfony, Doctrine, Drupal, Wordpress
platforms	Linux, Mac OS, Windows, Arduino, AVR, Raspberry Pi, Commodore 64
softwares	PureData, Max/MSP, Final Cut Pro, Kdenlive, Photoshop, Gimp, Illustrator, Inkscape
languages	french (native), english (fluent)
other	team worker; strong communication skills; solid background in organizational governance