

KAREN E. COLLINS

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CURRENT POSITION

Canada Research Chair (Tier II) in Interactive Audio, Canadian Centre of Arts and Technology, University of Waterloo, Waterloo, Canada.

EDUCATION

2002. Ph.D. Music. University of Liverpool. Liverpool, U.K. ("The Future is Happening Already: Industrial Music, Dystopia and the Aesthetic of the Machine": supervisors Philip Tagg and Sara Cohen).

1997. Bachelor of Arts (Honours Fine Arts). University of Waterloo. Waterloo, ON

PROFESSIONAL HONOURS, FELLOWSHIPS AND GRANTS (as Principle Investigator):

2009 "An Investigation into Audio's Impact on Gambling Behaviour: Annotated Literature Review and Research Plan Development". Ontario Problem Gambling Research Council grant, \$10,000.

2009 "SoundSign: Creating a Standard for Accessible Multimedia Sound Effects" C4 Consortium Proof of Principle grant. \$20,000.

2008 "The Psychic Psychologist": Developing Games for Distributed Classification of Audio Content" SSHRC Image, Text, Sound and Technology Grant. \$30,000.

2007 "Real-Time Automatic Composition for Interactive Media: The Next Generation of Audio Software" Canadian Foundation for Innovation Research Infrastructure Grant. \$109,548.

2007 "Real-Time Automatic Composition for Interactive Media: The Next Generation of Audio Software" Ontario Research Fund--Infrastructure Fund \$109,548. Matching funds for CFI grant, above.

2007 Canada Research Chair \$100,000 x 5 years.

2005-2007 Social Sciences and Humanities Research Council of Canada Post-Doctoral Fellowship held at the Institute for Comparative Studies in Literature, Arts and Culture, Carleton University, Ottawa. (Supervisor Paul Théberge). Total \$75,000.

1999-2002 Canada Special Opportunities Research Grant for PhD research, from Human Resources Development Canada: Canada Student Loans Program. \$9,000.

2001 Postgraduate Travel Grant—Conference fees and travel to Canada, granted by the School of Music, University of Liverpool. £450

PUBLICATIONS

Books:

2008. *Game Sound: An Introduction to the History, Theory and Practice of Video Game Music and Sound Design* (Cambridge, Mass. The MIT Press). ISBN-10: 0-262-03378-X ISBN-13: 978-0-262-03378-7

2008. (Ed.) *From Pac Man to Pop Music: Interactive Audio in Games and New Media* (Aldershot, UK. Ashgate). ISBN-10: 075466211-X ISBN-13: 978-0754662112

Refereed Journal Articles:

2009. "An Introduction to Procedural Audio in Video Games" *Contemporary Music Review*, Special Issue on Algorithmic Generative Audio. Vol 28/1 pp.5-15.

2008. "In the Loop: Confinements and Creativity in 8-Bit Video Games Music". *Twentieth Century Music* 4/1. 209-227.

2008. "Grand Theft Audio?: Video Games and Licensed IP". *Music and the Moving Image*, Vol 1/1, (University of Illinois Press). <http://mmi.press.uiuc.edu/1.1/collins.html>

2007. "Video Games Killed the Cinema Star" *Music, Sound and the Moving Image* (Liverpool: Liverpool University Press). Vol 1/1. pp 15-20. (invited)

2006. "Flat Twos and the Musical Aesthetic of the Atari VCS." *Popular Musicology Online*, Issue 1: Musicological Critiques. <http://www.popular-musicology-online.com/>

2006. "Loops and Bloops: Music on the Commodore 64." *Soundscapes: Journal of Media Culture*. Volume 8: February 2006. <http://www.icce.rug.nl/~soundscapes/>

2005. "From Bits to Hits: Video Games Music Changes its Tune". *Film International*, #12. pp. 4-19.

2005. "Dead Channel Surfing: Commonalities between Industrial Music and Cyberpunk Literature" *Popular Music*. Cambridge University Press (UK). Vol. 24, #2. pp. 165-178

Book Chapters:

2011 (Forthcoming). "Audio Implications of the Modes of Interactivity in Video Games and New Media." *The Oxford Handbook of New Audiovisual Aesthetics*. Edited by Claudia Gorbman, John Richardson and Carol Vernallis (invited).

2010 (Forthcoming). "Sound in Electronic Gambling Machines: A Case Study of Player Interaction". *Game Sound Technology and Player Interaction: Concepts and Developments*. Edited by Mark Grimshaw, IGI Global. (invited).

2010 (Forthcoming). "A History of Electronic Handheld and Mobile Video Game Sound". *The Oxford Handbook of Mobile Music and Sound Studies*, (Eds. Sumanth Gopinath and Jason Stanyek). Oxford University Press (invited).

2010 (Forthcoming). "One-Bit Wonders: Video Game Sound Before the Crash" *Before the Crash: Early Video Game History* (Ed. Mark J. P. Wolf), Wayne State University Press (invited).

2009. "Like Razors through Flesh: The Sonic Aesthetics of Hell in the *Hellraiser* Films." *Terror Tracks* (Eds. Philip Hayward and Rebecca Leydon, USA: Equinox Press), pp. 196-210.

2008. "Introduction" *From Pac Man to Pop Music: Interactive Audio in Games and New Media*, (ed. Karen Collins) Ashgate Publishing, pp. 1-12.

2007. "An Introduction to the Participatory and Non-Linear Aspects of Video Games Audio." Eds. Stan Hawkins and John Richardson. *Essays on Sound and Vision*. Helsinki: Helsinki University Press. pp. 263-298

2003. 'I'll be back: Recurrent Sonic Motifs in the Terminator Films'. *Off the Planet: Music, Sound and Sci-Fi Cinema*. (Ed. Philip Hayward. London: John Libbey Press), pp.165-175.

Refereed Published Conference Proceedings:

2009. (with Jill Tomasson Goodwin). "Client-Based Learning Models: Student-Designed Games for Business Applications" Future Play @ Game Developer's Conference Canada, Vancouver, BC. ACM Multimedia.

2009. "Generating Meaningful Sound: Quantifying the Affective Attributes of Sound Effects for Real-Time Sound Synthesis" *Audio Engineering Society*. 35th International Conference: Audio For Games, London, UK.

2001. (with Philip Tagg) 'The Sonic Aesthetics of the Industrial: Re-Constructing Yesterday's Soundscape for Today's Alienation and Tomorrow's Dystopia' *Sound Practice* UK: UK/Ireland Soundscape Community, editor John Drever. pp. 101-108. 2007.

--translated into Polish in 2003 and published as 'Industrialna estetyka dźwiękowa (rekonstrukcja pejzaży dźwiękowych przeszłości z perspektywy współczesnej alienacji i przyszłej dystopii)'. *Gościńiec Sztuki*. Vol 1/8 Issue VII, pp. 34-47. (Translation by Andrzej Dorobek)

--translated into Italian in 2007 and published as "L'estetica sonora della industrial music" in *In-formazione* 2/07 pp. 21-24 (Translation by Claudia Polo).

Patents:

2009. Patent application. "Method and System for Visual Symbolic Representation of Sound Effects in Multimedia."

Other Published Work:

2009. "So You Want to Work in Game Audio?" With Jennifer Lewis, Relic Entertainment, Damian Kastbauer (Bay Area Sound), Julian Kwasneski (Bay Area Sound), Alexander Brandon (Obsidian Entertainment), Jory Prum (Studio Jory), and David Lieberman (Anagraphical). Report on needs of industry to work with academe to ensure skills match between students and employer requirements. Conference proceedings from Project Bar-B-Q.

2008. "Overcoming Roadblocks in the Quest for Interactive Audio" Audio Artificial Intelligence report, with Charles Robinson (Dolby), Jocelyn Daoust (Ubisoft), Nicholas Duveau (Ubisoft), Guy Whitmore (Microsoft), Tracy Bush (NC Soft), Simon Ashby (Audio Kinetic), Jennifer Lewis (Relic) and Tom White (MIDI Manufacturer's Association), report on state of adaptive audio in video games, and a proposal for an adaptive audio artificial intelligence engine.

2008. Reviews of "Complete Guide to Film Scoring: The Art and Business of Writing Music for Movies and TV" by Richard Davis and "Music for New Media: Composing for Videogames, Web Sites, Presentations and other Interactive Media" by Paul Hoffert, for *Music, Sound and Moving Image*.

2007. Entry on Video Game Music, *Encyclopaedia of Popular Music of the World*, Part III: Genres. Ongoing project funded by Cassell, The British Academy, and the P.H. Holt Trust, published through Continuum (London), ed. Shephard, J. New York

2005. Review of "Making Beats: The Art of Sample-Based Hip Hop" by Joseph G. Schloss. Wesleyan University Press. *RPM: Review of Popular Music* (Newsletter of IASPM: The International Association for the Study of Popular Music).

CONFERENCE PLENARY SESSIONS AND KEYNOTES

2009 "Get Your Geek On: What Computer Science Methods can teach Musicology" Plenary session, International Association for the Study of Popular Music, Liverpool, UK.

CONFERENCE PAPERS AND POSTERS

2009. (with Jill Tomasson Goodwin). "Client-Based Learning Models: Student-Designed Games for Business Applications" Future Play @ Game Developer's Conference Canada, Vancouver, BC.

2009. "Client-Based Learning in a Game Design Class" IGDA Education SIG Summit, Game Developer's Conference, San Francisco, CA (poster session).

2009. "Generating Meaningful Sound: Quantifying the Affective Attributes of Sound Effects for Real-Time Sound Synthesis" *Audio Engineering Society*. 35th International Conference: Audio For Games, London, UK.

2008. "Procedural Audio in Games" Workshop conference paper, Canadian Game Studies Association.

2008. "Cover Songs in 8-Bit Game Audio" Conference paper for the International Association for the Study of Popular Music, Canadian Branch, St. Catherines, ON.

2007. "Grand Theft Audio? Licensed IP and Video Games" Conference paper for International Association for the Study of Popular Music Conference, Mexico City.

2004. "A Tale of Two Cities: The Sonic Aesthetic of the Utopian and Dystopian Future" Conference paper for the Society for Utopian Studies, Toronto.

2004. "One Bit Wonders: Interactive Audio in the 8-bit Era" Conference paper for the International Association for the Study of Popular Music Canada conference, Ottawa.

2003. "Dante for the Nuclear Age: The Machine in the Music of the *Terminator* Films" Conference paper for the International Association for the Study of Popular Music, McGill University, Montreal.

2002. 'A Tale of Two Cities: Musical representations of the Utopian and Dystopian Future City' paper delivered to International Association for the Study of Popular Music Canada Conference, Montreal.

2002. 'The Appropriation of Dystopia by Industrial Music' paper delivered at University of Liverpool postgraduate conference.

2001. (Co-authored with Dr. Philip Tagg) 'The Sonic Aesthetics of the Industrial: Re-Constructing Yesterday's Soundscape for Today's Alienation and Tomorrow's Dystopia' presented at *Sound Practice*, UK/Ireland Soundscape Studies Community conference, Dartington, UK.

2000. 'The Future's Not What it Used to Be: The Aesthetic of the Machine in 20th Century Futuristic Fantasies' paper delivered at 'Back to the Future' conference, University of Liverpool Department of English, Liverpool, UK.

CONFERENCE PANELS

2009. Panel Discussion (moderator): "Game Audio Education: Adding Audio to your Game Courses, and Games to your Audio Courses". Future Play @ Game Developer's Conference Canada, Vancouver, BC.

2009. "Panel Discussion: IAsig Interactive Audio Curriculum Guidelines". Game Developer's Conference, San Francisco, CA.

2009. "Panel Discussion: Education and Training in Game Audio: A Curriculum for a Degree in Audio Design for Game Development" *Audio Engineering Society*. 35th International Conference: Audio For Games, London, UK (panel discussion).

INVITED GUEST LECTURES, PUBLIC LECTURES and WORKSHOPS

2009. (With Bill Kapralos and Leonard Paul) 1.5 hour workshop "An Overview of Interactive Audio : Where are we Currently, and Where are we Heading?" for Digital Kung Fu : Interactive Workshop at the Centre for Digital Media (Vancouver, BC)

2008. 1-hour lecture on algorithmic audio to Silicon Knights video game company (St. Catherines, ON)

2008. 2-hour lecture on game audio to Game Design program at Algonquin College (Ottawa, ON).

2008. 2-hour lecture on post-production game audio at Fanshawe College, (London, ON) to Audio Post-Production program.

2007. Cognos Innovation Lecture, Sponsored public lecture, Ottawa, ON.

2007. 3-hour lecture on Game Audio, Faculté de Musique, Université de Montréal.

2007. 2-hour workshop with PhD students on dissertation writing, Carleton University, Ottawa.

2006. 3-hour lecture on Game Audio, Faculté de Musique, Université de Montréal.

2004. 3-hour lecture on Game Audio, Faculté de Musique, Université de Montréal.

2003. 3-hour lecture on Game Audio, Faculté de Musique, Université de Montréal.

2002. 2-hour lecture on music semiotics, Department of Music, City University, London, UK.

RECENT PRESS

2009. Interview for *DreamStation.cc* (weekly video game podcast) May 2009.

2008. Interview for *Westdeutscher Rundfunk Köln* for broadcast February 14, 2009.

2008. Interview with Heron & Crane Productions for MIT Press Podcast series.

2008. Interview with Jamin Brophy-Warren, *Wall Street Journal*, on game music composer Koji Kondo.

2008. Interview for film documentary on cyberpunk, *C/Punk/Doc* as part of DVD extra for *The Gene Generation*

2007, 2008, 2009. Three interviews for University of Waterloo student newspaper *Imprint*.

2006. (With Jayson Greene) interview about game audio for *Symphony* magazine, the official publication of the American Symphony Orchestra League. July 2006 issue.

ACADEMIC TEACHING EXPERIENCE:

2008-present. University of Waterloo, Waterloo, ON Canada. Assistant Professor, Digital Arts Communication.

- Casual Game Development. (approx 20 students) Designed and taught upper level course on developing casual games. Taught twice.
- Sound for Digital Media. (approx. 20 students) Online course. Designed and taught upper-level course online.

2006. Carleton University, Ottawa, ON, Canada. Lecturer (Adjunct), School of Music.

- Post World War II Popular Music History (MUSI 2007). Second-year large-enrolment elective. Two terms taught, with approximately 250 students total.

2003-5. University of Windsor, Windsor, ON, Canada. Lecturer (Adjunct), School of Music.

- Musical Explorations (32-107). Designed and taught first-year large enrolment course of 20th century avant-garde and electronic popular music history. Approximately 130 students.
- The Musical Experience (32-106). Designed and taught first-year large-enrolment elective open to only non-music students. Four courses taught, each with approximately 150-200 students.

2005 Brock University, St. Catherines, ON, Canada. Lecturer (Adjunct), Department of Communications, Popular Culture and Film.

- Popular Cinema (FILM 2P94). Second-year level course on popular cinema as it relates to issues of identity, genre, and ideology. Course cross references as a communications studies and popular culture studies course. Approximately 100 students.

2002-3. University of Western Ontario, London, ON, Canada. Lecturer (Limited duties appointment) Faculty of Music, Department of Music History

- Post World War II Popular Music History (Music 156/256). First year large-enrolment elective general music survey course, open to all students. Approximately 250 students.
- Genre Studies (Music 406). Fourth-year course in studying genres open to only music majors. 11 students.

1999–2002. *University of Liverpool, Liverpool, UK.* Lecturer (part-time), Institute of Popular Music

- Music on the Internet: (Part of Key Skills MUSI152). Half-term course teaching about music on the internet, possibilities of using the internet for music, and building a website. Approx. 30 students.
- Acoustics & Soundscapes (MUSI 153). Half-term course teaching basic physics of acoustics for musicians, and integrating soundscape studies. Approx. 30 students
- Introduction to Popular Music Studies (MUSI 151). General first-year level course introducing basic terminology, critical theory to music students. Approx. 50 students.
- Critical Reading (MUSI 153). Half-term course introducing critical reading in popular music studies. Approx 30 students.
- Research Techniques (part of Key Skills MUSI 152). Two lectures on various research techniques, including musicological, ethnographic, using the internet, etc. Approx. 40 students.
- Created and managed a research fund portfolio, instituted and ran student dissertation discussion group.

ADDITIONAL TEACHING EXPERIENCE

2003-5. *St. Joseph's Health Care, London, ON, Canada*

- Patient Educator: Responsible for educating patients about the use of an internet health clinic, through a scheduled lecture and one-on-one assistance.

1999. *North Liverpool Media, Liverpool, UK*

- Developed and taught course about creating media for the internet.

1996-1997 *Rosemount Public School, Kitchener, ON, Canada*

- Art and Music Therapy Assistant (Volunteer): Responsible for assisting the development of mentally challenged and autistic children through art and music.

SELECTED OTHER RELEVANT EXPERIENCE

2003-4. *St. Joseph's Health Care, London, ON, Canada*

Web Developer/Systems Analyst: Responsible for implementation of innovative internet clinic designed to reduce relapses in chronic pain patients. Featured in *Canadian Health Manager Magazine, The Londoner, Healthline*, and more.

1999-2002. *University of Liverpool, Liverpool, UK*

Web Developer: Developed websites for various departments (e.g. SOCRATES Student Exchange, International Recruitment and Relations Office, Institute of Popular Music).

2000-2001. *Paragon Int'l Projects, PLC, Chester, UK*

Multimedia and Internet Designer: Developed web pages and animation for over 200 Scandinavian companies.

AFFILIATIONS (Past and Present)

Digital Games Research Association (DIGRA), International Association for the Study of Popular Music (IASPM), Audio Engineering Society (AES), Society for Utopian Studies, Society for Music Theory, Game Audio Network Guild (GANG), Interactive Audio Special Interest Group (IASIG), Interactive Game Developer's Association (IGDA), SIGGRAPH, Canadian Game Studies Association.

SERVICE:

Peer Reviewing and Editorial Work

2007-present. Member of Board of Editors, *Music and the Moving Image*, University of Illinois Press. 4 articles reviewed.

2007- present. Member of Board of Editors, *Loaded* (Canadian Game Studies journal), York University.

2009. External tenure reviewer for University of Texas.

2008. Reviewer for *International Journal of Human-Computer Studies* (3 articles).

2008 Reviewer for book manuscript for MIT Press.

2008 Reviewer for science fiction book chapter for Bruce Johnson (University of New South Wales).

2008 Reviewer for Austrian Science Fund (FWF) grant 2008.

2008 Reviewer for article for *Music, Sound and Moving Image* (Liverpool).

2008. Reviewer for article for *Popular Music* (ed. John Street), Cambridge University Press.

2007 External reviewer on CRC application.

2006. Reviewer for article in *Popular Music* (ed. John Street), Cambridge University Press.

2006. Reviewer for article in *Essays on Sound and Vision*, eds. Stan Hawkins and John Richardson, Helsinki: Helsinki University Press.

2004. Reviewer for book manuscript for Peter Lang Publishing Company.

University of Waterloo Committee work

Teaching based research group committee ad-hoc advisory

Fine Arts merger committee

UW Game Development Club executive committee

Stratford Graduate Curriculum committee

Other Academic/Industry Service

2006-2007. Web developer for Canadian Branch of the International Association of the Study of Popular Music.

Assisted game development company Zygomatic Productions (London ON) with OMDC grant application and game company start-up.

2006-9 Educational liaison committee member, Interactive Audio Special Interest Group.

2009. Video Game Audio Archival Project work group member, Interactive Audio Special Interest Group.

City Community Volunteer Work

2008-present. Waterloo Regional Police, Auxiliary Constable

2007. Elections Officer, Elections Canada

2002-6. Volunteer for a national political party, and scrutineer for Elections Canada (provincial and federal elections).

2003-5. Executive Committee member and web developer, Forest City Tae Kwon Do, a non-profit organisation designed to give less fortunate students a chance to build confidence, work on a disability (visual impairment, physical, emotional and mental disabilities) and keep fit through martial arts (aikido and tae kwon do). I was awarded the John Lemieux Memorial Award in 2004 for my contribution to the organisation.