

**Personal Information**

Name; Nationality Clara James; Dutch, Swiss working permit Ci
 Date of Birth 21.08.1962
 Address Avenue de Champel 47 - 1206 Genève
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Professional career

May 2012 - current	Full Professor and coordinator of R&D ¹	Haute école de santé de Genève ² HES-SO ³
August 2013-current	Privat Docent	FPSE ⁴ UNIGE ⁵
August 2011-April 2012	Junior Lecturer	FPSE UNIGE
2003-2011	Assistant /Head assistant	FPSE UNIGE
1988-1999	Musician (violinist); performer, teacher	Inter alia member <i>Amsterdam Sinfonietta</i>

Diplomas

2008	PhD in neuroscience	Lemanic Neuroscience Doctoral School, UNIGE ⁵ & UNIL ⁶
2004	Master in cognitive psychology	FPSE ⁴ UNIGE
2002	Bachelor in psychology	FPSE UNIGE
1987; 1989	Professional musician: Teacher; Soloist	Amsterdam & Rotterdam Conservatories
1980	Gymnasium diploma (scientific)	Vossius gymnasium Amsterdam

Grants & Prices

2007-2018	Dalle Molle Price 2017 "Best research project"; Research and travel grants for a total of ~ 1 Mio CHF comprising SNSF ⁷ grant no.100014_125050 (2009-2014) & no. 100019E-170410 (2018-2021)	Accademia d'Archi, Genève; HES-SO ³ ; swissuniversities; SNSF ⁷ ; Fondations Dalle Molle, Maryon & Dr. med. Kurt Fries; Société Académique de Genève; Swiss Neuroscience Society
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Scientific conferences

2004-2018	34 posters & 15 oral presentations at national and international scientific conferences	Switzerland - Europe - USA - Canada - China
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Reviews for journals and funding agencies

2008-2018		Cerebral Cortex, Neuropsychologia, NeuroImage; Frontiers in Auditory Cognitive & Behavioral Neuroscience; Brain Topography; Acta Psychologica, SNSF ⁷ grant application;
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Direction of Master theses

2011-2018	7 Master's theses in cognitive, developmental, affective & clinical Psychology and Medicine	FPSE ⁴ UNIGE ⁵ (5), UNIL ⁶ (2)
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Oral presentations

Scientific	2004-2018	Chaire Recherche en Sciences Infirmières AP-HP - LEPS Université Paris 13; Forum de l'innovation France-Suisse Silver Economy 2018; HES@CampusBiotech; 4th International Conference on Music & Emotion; Geneva Aging Series; BBL ⁸ /CIBM ⁹ research day; Seminar Neurosciences cliniques CHUV ¹¹ ; Interdisciplinary Colloquium Affective Sciences; Alpine Brain Imaging Meeting; Colloques Neuropsychologie/Psychiatrie; Neuroclub de Genève	Campus de Bobigny Université Paris 13; HEG Arc, Neuchâtel; Campus Biotech Genève; FPSE ⁴ UNIGE ⁵ ; HUG ¹⁰ ; CHUV ¹¹ ; Paladium de Champéry; Swiss Center for Affective Sciences, Geneva
Public	2007-2018	Salon Planète Santé Life; Musée d'art du Valais; Université du troisième âge; Festival de Jazz de Montreux; International Brain week, Geneva; Fédération écoles genevoises de musique; Conférence et spectacle l'art et l'épilepsie	Palexpo Genève; Swisstech Convention Center (EPFL ¹²); Connaissance 3, Morges; Festival de Jazz, Montreux; Uni Dufour Genève; Institut Jaques-Dalcroze; HUG ¹

Media presentations

2007-2018	Revue "Génération"; Télévision Suisse Romande TSR (<i>Specimen; Téléjournal; Sport Dimanche</i>); Radio Suisse Romande RSR (<i>Babylone; Les Temps qui courent; Espace 2; Impatience, la 1^{ère}; CQDF -science et santé- la 1^{ère}; On en parle, la 1^{ère}</i>); Magazine <i>Science et Vie</i> – France; Quotidien <i>Tribune de Genève</i> ; Magazine <i>Campus UNIGE</i> ⁵ .
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Other

2013 – 2016	Member Editorial board journal "Hémisphères"	HES-SO ³
2014 – current	Member Comité directeur « PhD en science biomédicale mention santé globale »	Medical faculty of the University of Geneva
2015 – current	Advisor and member of research committee	Geneva Emotion and Music laboratory

Research Interests

- Neuronal substrates at the root of perceptual, cognitive and motor functioning
- Experience-driven brain and behavioral plasticity, following musical activity over the lifespan
- Links between general and musical cognition and their neuronal substrates
- Developing musical training regimens that 1) combat age-induced cognitive and sensorimotor decline and brain degeneration 2) boost cognitive and sensorimotor development in children

¹ Research and Development² School of Health Sciences, Geneva³ Haute Ecole Spécialisée de Suisse occidentale/University of Applied Sciences and Arts Western Switzerland⁴ Faculté de Psychologie et des Sciences de l'Éducation⁵ Université de Genève/University of Geneva⁶ Université de Lausanne/University of Lausanne⁷ Swiss National Science Foundation⁸ Brain and Behavior Laboratory, Centre Médical Universitaire, Genève⁹ Centre d'Imagerie BioMédicale/Center for Biomedical Imaging¹⁰ Hôpitaux Universitaires de Genève¹¹ Centre Hospitalier Universitaire Vaudois¹² Ecole Polytechnique Fédérale de Lausanne

GRANTS & PRICES

<u>2007</u>	Travel grant (CHF 1'000.-) from the Swiss Neuroscience Society to attend the 2007 "Human Brain Mapping" meeting in San Francisco, USA, June 10-14, 2007.
<u>2008</u>	Travel grant (CHF 1'800.-) from the Société Académique de Genève to attend the 2008 "The Neurosciences and Music III, Disorders and Plasticity" meeting in Montreal, McGill University, June 25-28, 2008
<u>2009</u>	SNSF Grant no. 100014_125050 of CHF 301'986.- (Fonds National Suisse de la Recherche Scientifique) for a 3-year research project entitled "Behavioral, neuro-functional and neuro-anatomical correlates of experience dependent music perception" (principal investigator).
<u>2012</u>	Travel grant (CHF 2'500.-) from the Société Académique de Genève to attend the 2012 "18 th Annual Meeting of the Organization for Human Brain Mapping", Beijing, China, June 10-14, 2012.
<u>2012-13</u>	Supplementary Grant of CHF 43'738.- for a 6-month prolongation of the SNSF Project no. 100014_125050 from the "Behavioral, neuro-functional and neuro-anatomical correlates of experience dependent music perception" (principal investigator).
<u>2014</u>	2 HES-SO grants of CHF 22'000.- for preparation of research proposals
<u>2015</u>	HES-SO grant of CHF 14'064. for scientific writing
<u>2015</u>	Fondation pour la promotion des soins infirmiers, CHF 25'611.- for the organization of a Study Day "Journée Santé, Handicaps & Vieillessement".
<u>2016</u>	CHF 29'400- from the swiss universities and CHF 8'750 from the HES-SO for the organization of the Professional & Scientific summer school "Digital Health 2016, Early Diagnosis & Prevention", June 22-24 2016.
<u>2016</u>	HES-SO grant of CHF 30'000.- for preparation of an interdisciplinary research proposal
<u>2016-2018</u>	Grant of CHF 30'000.- mandate from the Accademia d'Archi , for the study « L'impact de l'initiative "Orchestre en classe" au sein d'une école publique genevoise sur le développement cognitif et sensorimoteur de l'enfant ».
<u>2017</u>	Price of 10'000.- CHF of the Fondation Dalle Molle « Pour la qualité de la vie ». Best research project. 2017, 18.10 2017.
<u>2017</u>	Grant of CHF 8'000.- from the Stiftung Edith Maryon . Contribution to the research project entitled « Train the brain with music: Brain Plasticity and cognitive benefits induced by musical practice in elderly people in Germany and Switzerland ».
<u>2018-2021</u>	SNSF Grant no. 100019E-170410 of CHF 342'428.- for a 3-year research project entitled « Train the brain with music: Brain Plasticity and cognitive benefits induced by musical practice in elderly people in Germany and Switzerland » (Swiss Main Applicant); overheads of CHF 47'128.-
<u>2018-2021</u>	Grant of CHF 105'000.- Dr. med. Kurt-Fries Stiftung. Contribution to the research project « Train the brain with music: Brain Plasticity and cognitive benefits induced by musical practice in elderly people in Germany and Switzerland ».
<u>2018-2021</u>	HES-SO grants of CHF 30'217.- & 24'265.- Contribution to the research project entitled « Train the brain with music: Brain Plasticity and cognitive benefits induced by musical practice in elderly people in Germany and Switzerland ».

RESEARCH INTERESTS

- Neuronal substrates at the root of perceptive, cognitive and motor functioning
- Experience-driven brain and behavioral plasticity as a function of musical activity over the lifespan
- Links between general and musical cognition and their neuronal substrates
- Developing musical training regimens that combat age-induced cognitive and sensorimotor decline and brain degeneration
- Developing musical training regimens that boost cognitive and sensorimotor development in children

PUBLICATIONS (PEER REVIEWED)

- Lehmann, S., Morand, S., **James, C.**, & Schnider, A. (2007). Electrophysiological correlates of deficient encoding in a case of post-anoxic amnesia. *Neuropsychologia*, 45(8), 1757-1766. doi: 10.1016/j.neuropsychologia.2006.12.018. Impact Factor 3.48. [Swiss National Science Foundation](#); Grant number: 32000-113436 (A. Schnider)
- James, C. E.**, Britz, J., Vuilleumier, P., Hauert, C. A., & Michel, C. M. (2008). Early neuronal responses in right limbic structures mediate harmony incongruity processing in musical experts. *Neuroimage*, 42(4), 1597-1608. doi: 10.1016/j.neuroimage.2008.06.025. Impact Factor 5.69.
- James, C.**, Morand, S., Barcellona-Lehmann, S., Michel, C. M., & Schnider, A. (2009). Neural transition from short- to long-term memory and the medial temporal lobe: a human evoked-potential study. *Hippocampus*, 19(4), 371-378. doi: 10.1002/hipo.20526. Impact Factor 3.91. [Swiss National Science Foundation](#); Grant number: 32000-113436 (A. Schnider)
- Tallet, J., Barral, J., **James, C.**, & Hauert, C. A. (2010). Stability-dependent behavioural and electro-cortical reorganizations during intentional switching between bimanual tapping modes. *Neuroscience Letters*, 483(2), 118-122. doi: 10.1016/j.neulet.2010.07.074. Impact Factor: 2.06.
- James, C. E.**, Michel, C. M., Britz, J., Vuilleumier, P., & Hauert, C. A. (2012). Rhythm evokes action: Early processing of metric deviances in expressive music by experts and laymen revealed by ERP source imaging. *Human Brain Mapping*, 33(12), 2751-2767. doi: 10.1002/hbm.21397. Impact factor 6.26.
- James, C. E.**, Dupuis, E., Hauert, C.-A. (2012). Appraisal of musical syntax transgression by primary-school children: Effects of age and practice. *Swiss Journal of Psychology* 71(3) (161–168). doi: 10.1024/1421-0185/a000084. Impact Factor: 0.64.
- Oechslin, M.S., Van De Ville, D., Lazeyras, F., Hauert, C.A., **James, C.E.** (2013). Degree of musical expertise modulates higher order brain functioning. *Cerebral Cortex* 23, 2213-2224. doi: 10.1093/cercor/bhs206. Impact Factor: 8.31. [Swiss National Science Foundation](#); Grant number: 100014_125050 (C.James)
- Oechslin, M.S., Descloux, C., Croquelois, A., Chanal, J., Van De Ville, D., Lazeyras, F., **James, C.E.** (2013). Hippocampal volume predicts fluid intelligence in musically trained people. *Hippocampus* 23, 552-558. Impact Factor: 4.30. [Swiss National Science Foundation](#); Grant number: 100014_125050 (C.James)
- James, C.E.**, Oechslin, M.S., Van De Ville, D., Hauert, C.A., Descloux, C., Lazeyras, F. (2014). Musical training intensity yields opposite effects on grey matter density in cognitive versus sensorimotor networks. *Brain Structure and Function*, 219, 353-366. doi: 10.1007/s00429-013-0504-z Impact Factor: 5.62. [Swiss National Science Foundation](#); Grant number: 100014_125050 (C.James)
- James, C. E.**, Cereghetti, D. M., Rouillet Tribes, E., & Oechslin, M. S. (2015). Electrophysiological evidence for a specific neural correlate of musical violation expectation in primary-school children. *NeuroImage*, 104, 386-397. doi: 10.1016/j.neuroimage.2014.09.047. Impact Factor 5.46. [Swiss National Science Foundation](#); Grant number: 100014_125050 (C.James)
- De Pretto, M., **James, C. E.** (2015). Principles of Parsimony: fMRI Correlates of Beat-Based Versus Duration-Based Sensorimotor Synchronization. *Psychomusicology: Music, Mind and Brain*, 25(4), 380-391. doi: 10.1037/pmu0000122
- Lovis, C., **James, C.**, 2016. Santé digitale: petit guide du néophyte. *Rev Med Suisse* 12(521), 1108-1112. PMID: 27487680.
- Jenni, R., Oechslin, M. S., & **James, C. E.** (2017). Impact of major and minor mode on EEG frequency range activities of music processing as a function of expertise. *Neurosci Lett*, 647, 159-164. doi:10.1016/j.neulet.2017.03.022. Impact Factor: 2.12. [Swiss National Science Foundation](#); Grant number: 100014_125050 (C.James)
- James, C.E.**, Oechslin, M.S., Michel, C. M., & De Pretto M. (2017). Electrical Neuroimaging of Music Processing Reveals Mid-Latency Changes with Level of Musical Expertise. *Frontiers in Neuroscience* 11, 613. doi: 10.3389/fnins.2017.00613. Impact factor 3.7. [Swiss National Science Foundation](#); Grant number: 100014_125050 (C.James)
- Oechslin, M. S., Gschwind, M., & **James, C. E.** (2018). Tracking Training-Related Plasticity by Combining fMRI and DTI: The Right Hemisphere Ventral Stream Mediates Musical Syntax Processing. *Cereb Cortex* 28, 1209-1218. doi:10.1093/cercor/bhx033 Impact Factor: 8.29. [Swiss National Science Foundation](#); Grant number: 100014_125050 (C.James)
- De Pretto, M., Deiber, M.P., **James, C.E.**, 2018. Steady-state evoked potentials distinguish brain mechanisms of self-paced versus synchronization finger tapping. *Hum Mov Sci* 61, 151-166. Impact Factor 1.84.

EDITORIALS

- James, C. E.** (2012). Music and language processing share behavioral and cerebral features. *Frontiers in Psychology*, 3, 52. doi: 10.3389/fpsyg.2012.00052. Impact Factor: 2.80.

OTHER PUBLICATIONS (WITHOUT PEER REVIEW)

- James, C. E.** (2012). La musicalité humaine au travers du cycle de vie; Perspectives comportementales et neuroscientifiques. *Le Bulletin de L'AmiRéSoL*. ISSN 1634-6750.
- James, C. E.** (2018). La musique à l'école, à quoi bon ? *Educateur* 2018/2.