

# Curriculum Vitae – Clara E. James – March 2019



<b>Personal Information</b>		
Name; Nationality	Clara James; Dutch, Swiss working permit Ci	
Date of Birth	21.08.1962	
Address	Avenue de Champel 47 - 1206 Genève	
Telephone; email	+41 22 388 5677; clara.james@hesge.ch	
<b>Professional career</b>		
May 2012 – current	Full Professor UAS and Head of R&D <sup>1</sup>	HEdS - Haute école de santé de Genève <sup>2</sup>
April 2019 - current	Director Geneva Musial Minds Lab / GEMMI lab	HES-SO <sup>3</sup>
August 2013-current	Privat Docent	FPSE <sup>4</sup> UNIGE <sup>5</sup>
August 2011-April 2012	Junior Lecturer	FPSE UNIGE
2003-2011	Assistant /Head assistant	FPSE UNIGE
1988-1999	Musician (violinist); performer, teacher	Inter alia member of <i>Amsterdam Sinfonietta</i>
<b>Diplomas</b>		
2008	PhD in neuroscience	Lemanic Neuroscience Doctoral School, UNIGE <sup>5</sup> & UNIL <sup>6</sup>
2004	Master in cognitive psychology	FPSE <sup>4</sup> UNIGE
2002	Bachelor in psychology	FPSE UNIGE
1987; 1989	Professional musician (BSc, MSc)	Amsterdam & Rotterdam Conservatories
1980	Gymnasium diploma (scientific)	Vossius gymnasium Amsterdam
<b>Grants &amp; Prices</b>		
2007-2018	Dalle Molle Price 2017 "Best research project"; Research and travel grants for a total of ~ 1.1 Mio CHF comprising SNSF <sup>7</sup> grant no.100014_125050 (2009-2014) & 100019E-170410 (2018-2021)	Accademia d'Archi, Genève; HES-SO <sup>3</sup> ; swissuniversities; SNSF <sup>7</sup> ; Fondations Dalle Molle, Maryon & Dr. med. Kurt Fries; Société Académique de Genève; Swiss Neuroscience Society
<b>Scientific conferences</b>		
2004-2018	35 posters & 14 oral presentations at national and international scientific conferences	Switzerland - Europe - USA - Canada - China
<b>Reviews for journals and funding agencies</b>		
2008-2018		Cerebral Cortex, Neuropsychologia, NeuroImage; Frontiers in Auditory Cognitive & Behavioral Neuroscience; Brain Topography; Acta Psychologia, SNSF <sup>7</sup> grant application;
<b>Direction of Master theses</b>		
2011-2018	7 Master's theses in cognitive, developmental, affective & clinical Psychology and Medicine	FPSE <sup>4</sup> UNIGE <sup>5</sup> (5), UNIL <sup>6</sup> (2)
<b>Oral presentations Scientific</b>		
2004-2019	Lap2019 Learning and Plasticity meeting; 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 <sup>8</sup> /CIBM <sup>9</sup> research day; Seminar Neurosciences cliniques CHUV <sup>11</sup> ; Interdisciplinary Colloquium Affective Sciences; Alpine Brain Imaging Meeting; Colloques Neuropsychologie/Psychiatrie; Neuroclub de Genève	Äkäslompolo, Finland; Campus de Bobigny Université Paris 13; HEG Arc, Neuchâtel; Campus Biotech Genève; FPSE <sup>4</sup> UNIGE <sup>5</sup> ; HUG <sup>10</sup> ; CHUV <sup>11</sup> ; Paladium de Champéry; Swiss Center for Affective Sciences, Geneva;
<b>Public</b>		
2007-2019	HEdS, 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	Grand auditoire de la Roseraie Genève ; Palexpo Genève; Swisstech Convention Center (EPFL <sup>12</sup> ); Connaissance 3, Morges; Festival de Jazz, Montreux; Uni Dufour Genève; Institut Jaques-Dalcroze; HUG <sup>1</sup>
<b>Media presentations</b>		
2007-2019	Tribune de Genève; Le Courrier, 24 Heures ; Hémisphères (HES-SO); Télévision Léman bleu; Revue "Génération"; Télévision Suisse Romande TSR ( <i>Specimen; Téléjournal; Sport Dimanche</i> ); Radio Suisse Romande RSR ( <i>Babylone; Les Temps qui courent; Espace 2 Magnétique; Impatience, la 1<sup>ère</sup>; CQDF -science et santé- la 1<sup>ère</sup>; On en parle, la 1<sup>ère</sup></i> ); Magazine <i>Science et Vie</i> – France; Magazine <i>Campus UNIGE</i> <sup>5</sup> .	
<b>Other</b>		
2013 – 2016	Member Editorial board journal "Hémisphères"	HES-SO <sup>3</sup>
2014 – current	Member Comité directeur « PhD en science biomédicale mention santé globale »	Medical faculty of the University of Geneva
<b>Research Interests</b>		
	<ul style="list-style-type: none"> <li>- Neuronal substrates at the root of perceptual, cognitive and motor functioning</li> <li>- Experience-driven brain and behavioral plasticity, following musical activity over the lifespan</li> <li>- Links between general and musical cognition and their neuronal substrates</li> <li>- Developing musical training regimens that 1) combat age-induced cognitive and sensorimotor decline and brain degeneration 2) boost cognitive and sensorimotor development in children</li> </ul>	

<sup>1</sup> Research and Development

<sup>2</sup> Geneva School of Health Sciences

<sup>3</sup> Haute Ecole Spécialisée de Suisse occidentale/University of Applied Sciences and Arts Western Switzerland

<sup>4</sup> Faculté de Psychologie et des Sciences de l'Education

<sup>5</sup> Université de Genève/University of Geneva

<sup>6</sup> Université de Lausanne/University of Lausanne

<sup>7</sup> Swiss National Science Foundation

<sup>8</sup> Brain and Behavior Laboratory, Centre Médical Universitaire, Genève

<sup>9</sup> Centre d'Imagerie BioMédicale/Center for Biomedical Imaging

<sup>10</sup> Hôpitaux Universitaires de Genève

<sup>11</sup> Centre Hospitalier Universitaire Vaudois

<sup>12</sup> Ecole Polytechnique Fédérale de Lausanne

## 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., Roullet 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. doi:10.1016/j.humov.2018.07.007
- Coll, S.Y., Vuichoud, N., Grandjean D., **James, C.E.**, 2019. Neuroimaging of Music Processing in Pianists With and Without True Absolute Pitch. *Frontiers in Neuroscience* 13, 142. doi: 10.3389/fnins.2019.00142. Impact factor 3.7. [Swiss National Science Foundation; Grant number: 100014\\_125050 \(C.James\)](#)

## 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.

## GRANTS & PRICES

<u>2007</u>	<b>Travel grant (CHF 1'000.-)</b> from the Swiss Neuroscience Society to attend the 2007 "Human Brain Mapping" meeting in San Francisco, USA, June 10-14, 2007.
<u>2008</u>	<b>Travel grant (CHF 1'800.-)</b> 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>	<b>SNSF Grant no. 100014_125050 of CHF 301'986.-</b> (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>	<b>Travel grant (CHF 2'500.-)</b> from the Société Académique de Genève to attend the 2012 "18 <sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping", Beijing, China, June 10-14, 2012.
<u>2012-13</u>	<b>Supplementary Grant of CHF 43'738.- for a 6-month prolongation of the SNSF Project no. 100014_125050</b> from the "Behavioral, neuro-functional and neuro-anatomical correlates of experience dependent music perception" (principal investigator).
<u>2014</u>	<b>2 HES-SO grants of CHF 22'000.-</b> for preparation of research proposals
<u>2015</u>	<b>HES-SO grant of CHF 14'064.</b> for scientific writing
<u>2015</u>	<b>Fondation pour la promotion des soins infirmiers, CHF 25'611.-</b> for the organization of a Study Day "Journée Santé, Handicaps & Vieillessement".
<u>2016</u>	<b>CHF 29'400- from the swiss universities and CHF 8'750 from the HES-SO</b> for the organization of the <b>Professional &amp; Scientific summer school "Digital Health 2016, Early Diagnosis &amp; Prevention"</b> , June 22-24 2016.
<u>2016</u>	<b>HES-SO grant of CHF 30'000.-</b> for preparation of an interdisciplinary research proposal
<u>2016-2018</u>	<b>Grant of CHF 30'000.-</b> mandate from the <b>Accademia d'Archi</b> , 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>	<b>Price of 10'000.- CHF</b> of the <b>Fondation Dalle Molle</b> « Pour la qualité de la vie ». Best research project. 2017, 18.10 2017.
<u>2017</u>	<b>Grant of CHF 8'000.-</b> from the <b>Stiftung Edith Maryon</b> . 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>	<b>SNSF Grant no. 100019E-170410 of CHF 342'428.-</b> 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 <b>47'128.-</b>
<u>2018-2021</u>	<b>Grant of CHF 118'000.- Dr. med. Kurt-Fries Stiftung.</b> 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>	<b>HES-SO grants of CHF 30'217.- &amp; 24'265.-</b> 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>2019</u>	<b>FNS grant for Open Access publication in Frontiers in Neuroscience de USD 3177.15</b> for the publication « Neuroimaging of Music Processing in Pianists With and Without True Absolute Pitch ».
<u>2007-2019 total funding</u>	<b>1'094'064 CHF</b>