

Curriculum Vitae – Clara Eline James - February 2022

Dutch nationality, born 21.08.1962 Amsterdam, the Netherlands

Mother tongue: Dutch; spoken and written fluently: French, English, German

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Host Institute website: <https://www.hesge.ch/heds/annuaire/clara-james>



Research interests

- ✓ Neuronal substrates at the root of perceptive, cognitive and motor functioning
- ✓ Experience-driven brain and behavioral plasticity following musical, artistic and physical activity over the lifespan
- ✓ Links between general and musical cognition and their neuronal substrates
- ✓ Cognitive and brain features of musicians with absolute pitch
- ✓ Developing musical, artistic and physical training regimens that:
 - Countervail age-induced cognitive and sensorimotor decline and brain degeneration
 - Boost cognitive, sensorimotor and associated brain development in normally developing and high-risk children

Current position(s)

<u>2019-current</u>	Director of the Geneva Musical Minds Laboratory / GEMMI lab	HEdS-GE ¹ HES-SO ² ; Geneva University Neurocenter UNIGE ³
<u>2013-current</u>	Privat Docent Neuropsychology of Music (Master)	FPSE ⁴ UNIGE within the NEAD ⁵ (Prof. Grandjean)
<u>2012-current</u>	Full Professor UAS, Head of R&D ⁶ and of the Research Institute of the HEdS-GE	HEdS-GE - Haute école de santé de Genève, HES-SO, Department of Radiology

Governing activities

<u>2020-2021</u>	Vice-president of the R&D Health Committee of the HES-SO
<u>2019-current</u>	Director of the Geneva Musical Minds Lab (GEMMI lab)
<u>2012-current</u>	Head of R&D and of the Research Institute of the HEdS-GE
<u>2012-current</u>	President of the R&D board of the HEdS-GE
<u>2012-current</u>	Member of the R&D Health Committee of the HES-SO
<u>2012-current</u>	Member of the Direction board of the HEdS-GE

Education

Diplomas	
<u>2008</u>	PhD in Neurosciences of the Universities of Geneva and Lausanne, FPSE UNIGE. 20-03-08
<u>2004</u>	Master's degree in Cognitive Experimental Psychology at the FPSE UNIGE
<u>2002</u>	Bachelor's degree in Psychology at the FPSE UNIGE
<u>1987-1990</u>	Professional musician: BSc Music Pedagogy & MSc Music Performance at the superior Conservatoires of Amsterdam & Rotterdam, the Netherlands (main instrument: violin).

Continuous education

<u>October 2017</u>	Utrecht SPM 12 fMRI course, Den Dolder, the Netherlands. Basic & Resting State fMRI. 23-27.10.2017
<u>September 2017</u>	R courses Universität Zürich: Introduction to R, 7-8.09.2017 & R4All (advanced), 14-15.09.2017
<u>August 2017</u>	Summerschool "Data Science, Statistical programming with R", Utrecht, the Netherlands. 14-18.08.2017
<u>January 2015</u>	Certificate of Attendance "Good Clinical Practice", Obtained at the HUG ⁷ . 21-23.01.2015
<u>September 2015</u>	Second Brain Connectivity Course, Grenoble Institute of Neuroscience in Grenoble, FRANCE. Overview of currently used methods for brain connectivity analysis resting-state fMRI and Diffusion Imaging. 21-25.09.2015
<u>February 2013</u>	Statistical Parametric Mapping Course 2013, Advanced Imaging Course. Translational Neuromodeling Unit of the Institute for Biomedical Engineering, University of Zurich & ETH Zurich. 13-15.02.2013
<u>June 2007 & June 2010</u>	Participation in 2-day workshops on structural brain imaging preceding the Human Brain Imaging meetings of 2007 (Chicago, USA) & 2010 (Barcelona, Spain) "Diffusion and Structural MRI".
<u>October 2009</u>	Participation in the 6-day training course on MRI analyses "SPM for Basic and Clinical Investigators", Martinos Centre for Biomedical Imaging, Charlestown, Massachusetts, USA. 5-9.10.2009

¹ Geneva School of Health Sciences HES-SO / Haute école de santé de Genève HEdS-GE HES-SO

² HES-SO University of Applied Sciences and Arts Western Switzerland / HES-SO Haute Ecole Spécialisée de Suisse occidentale

³ University of Geneva / Université de Genève

⁴ Faculty of Psychology and Educational Sciences / Faculté de Psychologie et des Sciences de l'Education

⁵ Neuroscience of Emotion and Affective Dynamics lab, University of Geneva

⁶ Applied Research and Development R&D / Recherche appliquée et Développement (Ra&D)

⁷ Geneva University Hospitals / Hôpitaux Universitaires de Genève

<u>August 2008</u>	Workshop "Robust methods and Exploratory Data Analysis in Psychology". FPSE UNIGE
<u>May 2005</u>	"Intensive Course on Human Neuroimaging: Methods, Experimental Design, and Analyses". Neuropsychology Division & Radiology Service, CHUV.
<u>November 2003</u>	Neuroscan School, London, England, "Advanced EEG/ERP Acquisition & Analysis"

Professional and academic experience (before current positions)

Employment history

<u>2011-2012</u>	Junior Lecturer (Chargée de cours)	FPSE UNIGE
<u>2003-2011</u>	Scientific Collaborator	FPSE UNIGE
<u>1988-1997</u>	Musician (violinist); performer	Orchestras: <i>Amsterdam Sinfonietta; Royal Concertgebouw Orchestra; European Union Youth Orchestra; Opéra de Lyon</i>
<u>1988-1997</u>	Musician (violinist); teacher	Violin and Chamber music teacher at the <i>Conservatoire populaire of Uithoorn</i> , the Netherlands

Competences in informatics

Office	Word, Excel, Powerpoint, Outlook
Scientific	Matlab, SPM12 ⁸ , Cartool ⁹ , E-prime, Statistica, R (programming language)
Imaging	Adobe Photoshop & Illustrator

Teaching activities

<u>2013-current</u>	Privat Docent Neuropsychology of Music (MSc)	FPSE UNIGE
<u>2011-2013</u>	Investigation methods (Neuroimaging; BSc)	FPSE UNIGE
<u>2007-2012</u>	Motor Learning and Development (BSc)	FPSE UNIGE
<u>2007-2009</u>	Human action, in collaboration with Prof. Paolo Viviani (BSc)	FPSE UNIGE
<u>2004-2011</u>	Motor Learning (BSc)	HEdS-GE, Physiotherapy Department

Supervision of junior researchers at Master, Postdoc and PhD level

<u>2021-2023 ongoing</u>	Direction of Neuroscience Master thesis (Geneva Neuroscience Center) of Dimitra Kokkinou in the context of COPE, a project on Mild Cognitive Impairment (Financing: Alzheimer Suisse; Fondation Gebauer, HES-SO).
<u>2019-2022</u>	Direction of Neuroscience Master theses (Geneva Neuroscience Center) of 1) David Müller & 2) Cécile Mueller in the context of SNSF no.170410. Grades: both obtained 6/6
<u>2019-2020</u>	6-month supervision of thesis internship of Mattia Nese, PhD student at the Department of Psychology at the University of Bologna, Italy, in the context of FNS project 170410.
<u>2020</u>	9-month supervision of postdoc internship of Albulena Shaqiri (PhD in neuroscience), in the context of FNS project 170410. She was engaged via the BNF ¹⁰ (paid for by the unemployment).
<u>2018-ongoing</u>	Supervision of Post-Doctoral student Damien Marie in the context of FNS project 170410.
<u>2018-2020</u>	Direction of Master theses in Psychology (FPSE) of 1) Nadia Bersier & 2) Pauline Berthousoz in the context of SNSF no. 170410. Grades: both obtained 5.5/6
<u>2018-2020</u>	Direction of Master thesis in Music Education (HEM-GE ¹¹) of Bernat Catala Rams in the context of SNSF no. 170410.
<u>2017</u>	Member of the thesis committee for the Doctorate in Neuroscience of the Universities of Geneva and Lausanne (Lemanic Neuroscience Doctoral School; no. 219) of Natalia Fernandez Clares (2017). "From cognition to gait: the crucial role of attention across the lifespan & the power of musical exposure as a rehabilitation tool". Faculty of Science.
<u>2016</u>	Direction of Master's thesis in affective & clinical psychology of Noémie Vuichoud. FPSE UNIGE.
<u>2013</u>	Direction of Master's thesis in cognitive psychology of Donato Cereghetti. FPSE UNIGE.
<u>2012</u>	Direction of Master's thesis in cognitive psychology of Elodie Rouillet. FPSE UNIGE.
<u>2012</u>	Direction of Master's thesis in Medicine, University of Lausanne of Céline Decloux. (Tutor: Dr A. Croquebois).
<u>2011</u>	Direction of Master's thesis in developmental psychology of Marion Bonnemain. FPSE UNIGE.
<u>2009-2012</u>	Supervision of Post-Doctoral student Mathias Oechslin within the context of FNS project 125050.
<u>2010</u>	Direction Master's Thesis at the Institute of Sport Sciences of the University of Lausanne of Laetitia Hyvert.

⁸ Statistic Parametric Mapping: software for (f)MRI analyses

⁹ EEG analyses software

¹⁰ BNF: National Qualification Program https://www.bnf.unibe.ch/index_eng.html

¹¹ Geneva University of Music / Haute école de musique de Genève HES-SO

Research projects as principal/leading investigator financed by third party funding bodies

<u>2020-2021</u>	Supplementary SNSF Grant of 108'625.- for a 6-month prolongation of Project no. 170410
<u>2020-2021</u>	Grant of CHF 64'000.- from "Alzheimer Suisse" (November 2019) and CHF 39'394.- (May 2020) & CHF 32'673.- (May 2021), the latter to cope with COVID delays, from the "Gebauer Stiftung" for the project " Countervail cognitive, sensorimotor and cerebral decline in patients with Mild Cognitive Impairment, comparing musical, psychomotor and social animation interventions ". Total sum: 139'067.- CHF
<u>2018-2021</u>	Grant of CHF 118'000.- Dr. med. Kurt-Fries Stiftung. Contribution to SNSF grant no.170410
<u>2018-2021</u>	SNSF Lead Agency Grant no.170410 of CHF 342'428.- plus 47'128.- overhead funding, 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). Acronym: TBM
<u>2016-2018</u>	Grant of CHF 30'000.- mandate from the Accademia d'Archi, with the support of CARIGEST SA in the search for anonymous sponsorship 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>2012-13</u>	Supplementary SNSF Grant of CHF 43'738.- for a 6-month prolongation of Project no. 125050
<u>2009-13</u>	SNSF Grant no. 125050 of CHF 301'986.- for a 3-year research project entitled " Behavioral, neuro-functional and neuro-anatomical correlates of experience dependent music perception "

Prizes, fellowships, distinguished memberships

<u>2019-current</u>	Member of the Geneva University NeuroCenter
<u>2017-current</u>	Member Programme Committee of the Geneva Health Forum
<u>2017</u>	Price for Best research project. 2017, CHF 10'000.-; Fondation Dalle Molle "Pour la qualité de la vie".
<u>2014-current</u>	Member Comité directeur "PhD en science biomédicale mention santé globale". Medical faculty UNIGE
<u>2013-2017</u>	Member Editorial Board "Hemisphères", La revue Suisse de la recherche et de ses applications, HES-SO

Editorial activities

<u>2020-2022</u>	Guest Associate Editor in Frontiers Auditory Cognitive Neuroscience. Research topic: Neuroscience and New Music: Assessing Behavioral and Cerebral Aspects of Its Perception, Cognition, Induction, and Entrainment.
<u>2011-current</u>	Review Editor for Frontiers in Auditory Cognitive Neuroscience
<u>2008-current</u>	Reviews for Acta Psychologica, Brain Topography, Brain Research, NeuroImage, Neuropsychologia, Cerebral Cortex, Frontiers in Behavioral Neuroscience, Frontiers in Auditory Neuroscience, Frontiers in Psychology, BMC Neuroscience, Human Brain Mapping

Organization of scientific conferences and symposia

<u>2021</u>	Co-organization of the Symposium: "The impact of long-term music interventions on behavior and brain plasticity over the live span"; Conference Neurosciences and music VII "Connecting with music over the lifespan", organized in collaboration with Eckart Altenmüller (invited chair Gottfried Schlaug). Aarhus, Denmark June 18-21 2021. <i>Originally planned on June 19-22, 2020, postponed with one year following the Covid-19 Pandemic.</i>
<u>2021</u>	Co-organization of the conference Music for Development & Rehabilitation, Campus Biotech, Geneva, Switzerland. Co-organizers Prof. Petra Hüppi (Chair, Medical Faculty UNIGE), Prof. Didier Grandjean (FPSE UNIGE), July 8, 2021. <i>Originally planned on 10.12.2020, postponed with 6 months following the Covid-19 Pandemic.</i>
<u>2016</u>	Professional & Scientific summer school "Digital Health 2016, Early Diagnosis & Prevention", Financed by the swissuniversities. Grand auditoire de la Roseraie, HEdS-GE, 22-24.06.2016.
<u>2015</u>	Study Day "Santé, Handicaps & Vieillissement". Financed by La Fondation pour la promotion des soins infirmiers. Grand auditoire de la Roseraie, HEdS-GE, 13.11.2015

Outreach

Oral presentations at scientific conferences on invitation

<u>2022</u>	50 ^e Entretien de Médecine Physique et de Réadaptation. Colloque Audition et Cognition. Title: Effets cognitifs et cérébraux des interventions musicales sur le vieillissement normal. Vendredi 25 mars 2022. Montpellier, France. https://www.empr.fr/
<u>2021</u>	Conference Music for Development & Rehabilitation. Chair of symposium "Music for Rehabilitation". Title of presentation: "Countervail age-related cognitive and cerebral decline through music interventions". Campus Biotech, Geneva, Switzerland, 08.07.2021. https://www.campusbiotech.ch/en/node/1035
<u>2021</u>	Conference Neurosciences and music VII "Connecting with music over the lifespan". Title: "Is it never too late? Effects of music interventions in healthy seniors on cognitive function, motor control, listening skills, and brain plasticity". Aarhus, Denmark, 19.06.2021. http://iscrizioni.fondazione-mariani.org/en/neuromusic7/nmvii-programs/nmvii-scientific-program.html

<u>2019</u>	Network for Interdisciplinary Research in Music. University of Applied Sciences "Hanzehogeschool Groningen", Research Center Art and Society, the Netherlands. Keynote lecture: "Impact of music practice on brain and behavior over the lifespan". 08.11.2019. https://mailingtool.iwink.nl/webapp.php?rh=permalink&mailing=96939&hash=51766aea5303056c863bda51cf30f274
<u>2019</u>	2nd European Music School Symposium, University of music and performing arts, Vienna, Austria. Title: "Two years of Orchestra in Class enhance cognitive and sensorimotor development of primary schoolchildren". 10-11.10. 2019.
<u>2019</u>	"How musical practice sculpts brain and behavior," Learning and Plasticity meeting, Äkäslompolo, Finland. 7-10.04.2019.
<u>2018</u>	Chaire Recherche en Sciences Infirmières, AP-HP Assistance Publique Hôpitaux de Paris, LEPS Laboratoire Educations et Pratiques de Santé, Université Paris 13. Title: "Le pouvoir de la musique", Seminar. 20.09.2018.
<u>2018</u>	Forum de l'innovation France-Suisse, Silver Economy 2018. Title: "Entraîner le cerveau avec la musique : plasticité cérébrale et bénéfices cognitifs induits par la pratique musicale chez les personnes âgées en Allemagne et en Suisse". Haute école de gestion Arc, Espace de l'Europe 21, Neuchâtel. 21.03.2018.
<u>2017</u>	"HES@CampusBiotech", La recherche appliquée dans les hautes écoles spécialisées". Title: "The power of music: how musical practice sculpts brain and behavior". Campus Biotech Auditorium, Genève. 12.04.2017.
<u>2016</u>	Anniversary Symposium of the Brain & Behaviour Laboratory 2009-2016. Title: "How musical practice sculpts brain and behavior". Auditorio de Pédiatrie – HUG. Genève, 28.11.2016.
<u>2015</u>	4th International Conference on Music & Emotion (ICME), Geneva, Campus Biotech. Title: "Musical Minds: Musical practice driven behavioral and cerebral brain plasticity". 12-16.10.2015.
<u>2014</u>	Geneva Aging Series, 3rd Edition on Recent Developments in Cognitive Aging. FPSE, University of Geneva. Title: "Drill the brain through music or walking: impact of distinct training regimens on age-induced cognitive decline". 04.09.2014.
<u>2011</u>	Oral presentation. Seminar "Neurosciences cliniques" at the CHUV ¹² , Lausanne. Title: "Behavioral, neuro-functional and neuro-anatomical correlates of experience dependent music perception". 01.06.2011.
<u>2011</u>	Conference at the BBL ¹³ /CIBM ¹⁴ Research day, Nouvel auditoire de pédiatrie, Hôpital des enfants, HUG, Geneva. Title: "Musical syntax processing as a function of musical expertise: Functional Magnetic Resonance Imaging data". 20.04.2011
<u>2010</u>	Interdisciplinary Colloquium "Music and Emotion" organized by the Swiss Center of Affective Sciences. Uni Mail, Geneva. Title: "Behavioral, neuro-functional and neuro-anatomical correlates of experience dependent music perception". 4.12, 2010.
<u>2007</u>	Alpine Brain Imaging Meeting, Champéry, Switzerland. James, C., Michel, C., Britz, J., Vuilleumier, P., Bigand, E. & Hauert, C.-A. Title: "The Musical Brain: Unravel processing of syntactical incongruities in expressive music by experts and laymen using functional electrical neuroimaging". 14-19.01 2007.
<u>2005</u>	Seminar, program "Colloques Neuropsychologie/Psychiatrie", organized by l'Unité Psychiatrique Hospitalière adulte, l'Unité de Neuropsychologie and the Service de rééducation des HUG: Title: "Musique et cerveau". Genève, 12.12.2005.

Selected peer-reviewed poster presentations at scientific conferences

<u>2022</u>	Alpine Brain Imaging Meeting 2022; Champéry, Switzerland. James, C.E., Stucker, C., Junker-Tschopp, C., Fernandes A.M., Revol, A., Mili I.D., Kliegel M., Frisoni G.B., Brioschi Guevara, A., Marie, D. "Musical and psychomotor interventions for cognitive, sensorimotor, and cerebral decline in patients with Mild Cognitive Impairment (COPE): a study protocol for a multicentric randomized controlled study" 09-14.01.2022. https://www.unige.ch/ABIM/program/2021/
<u>2022</u>	Alpine Brain Imaging Meeting 2022; Champéry, Switzerland. Marie D., Müller C.A.H., Altenmüller E., Krüger T.H.C., Worschel F., Scholz D.S., Jünemann K., Grouiller F., Sinke C., Kliegel M., Van De Ville D., James C.E. "Train the brain with music: brain structural and behavioral plasticity in 132 healthy elderly after 6 months of piano practice versus music sensitization" 09-14.01.2022. https://www.unige.ch/ABIM/program/2021/
<u>2021</u>	Conference Neurosciences and music VII "Connecting with music over the lifespan", Aarhus, Denmark. Title: "Train the brain with music – Can six months of musical intervention lead to structural connectivity changes in healthy elderly?" Jünemann K., Sinke C., Worschel F., Marie D., Kliegel M., James C.E., Altenmüller E., Krüger T.H.C. 18-21.06 2021. http://iscrizioni.fondazione-mariani.org/en/neuromusic7
<u>2021</u>	Conference Neurosciences and music VII "Connecting with music over the lifespan", Aarhus, Denmark. Title: "Improved speech in noise perception in the elderly after six months of musical instruction". Worschel F., Marie D., Jünemann K., Sinke C., Krüger T.H.C., Grossbach M., Scholz D.S., Abdili L., Kliegel M., James C.E., Altenmüller E. 18-21.06 2021. http://iscrizioni.fondazione-mariani.org/en/neuromusic7

¹² Centre Hospitalier Universitaire Vaudois

¹³ Brain and Behaviour Laboratory

¹⁴ Centre d'Imagerie BioMédicale

<u>2020</u>	Alpine Brain Imaging Meeting 2020; Champéry, Switzerland. Marie, D., Altenmüller E., Kliegel M., Krüger T.H.C., Van De Ville D., Worschel F., Grouiller F., Sinke C., Hering, A., Scholz D.S., Juenemann K., Abdili, L., James C.E. "Effects of a music intervention on brain structure and executive functioning in healthy elderly after 6 months: a randomized controlled trial on piano practice versus music sensitization". 12-16.01.2020. https://www.unige.ch/ABIM/program/2020/
<u>2020</u>	Alpine Brain Imaging Meeting 2020; Champéry, Switzerland. James C.E., Altenmüller E., Kliegel M., Krüger T.H.C., Van De Ville D., Worschel F., Grouiller F., Sinke C., Hering, A., Scholz D., Juenemann K., Abdili, L., Marie, D. "Train the brain with music (TBM): Brain plasticity and cognitive benefits induced by musical training in elderly people in Germany and Switzerland, an RCT comparing musical instrumental practice to sensitization to music". 12-16.01.2020. https://www.unige.ch/ABIM/program/2020/
<u>2017</u>	16th Rhythm Production and Perception Workshop, Birmingham. De Pretto, M., James, C.E. Duration-based timing induced neuronal entrainment during sensorimotor synchronization to irregular stimuli. 03-05.07.2017.
<u>2016</u>	22nd Annual Meeting of the Organization for Human Brain Mapping, Geneva, Switzerland. James, C.E., Coll, S., Vuichoud, N. & Grandjean, D. "Electrical Neuroimaging of Music Processing in Pianists with Absolute versus Relative Pitch". 26-30.06.2016.
<u>2014</u>	The Neurosciences and Music - V. Cognitive Stimulation and Rehabilitation. Dijon, France. James, C.E., Cereghetti, D., Rouillet, E., & Oechslin M.S. "Electrophysiological evidence for a specific neural correlate of musical violation expectation in primary-school children". 29.05-1-06.2014.
<u>2013</u>	Society for Neuroscience 43rd Annual Meeting. San Diego, USA, November 9-13, 2013. James, C.E., Oechslin, M.S., Van De Ville D., Lazeyras F., Michel, C.M. "ERP microstates and source imaging reveal progressive changes in cerebral processing of musical syntax with level of musical expertise".
<u>2012</u>	18 th Annual Meeting of the Organization for Human Brain Mapping, Beijing, China. 1. James, C.E., Oechslin, M.S., Van De Ville, D., Hauert, C.-A., Descloux, C. & Lazeyras, F. "The paradox of expertise: Musical training intensity induces progressive increases and decreases of grey matter density". 2. Oechslin, M.S., Descloux, C., Chanal, J.A., Van De Ville, D., Lazeyras, F. & James, C.E. "Hippocampus size predicts fluid intelligence in musically trained people". 0-14.06.2012
<u>2011</u>	The Neurosciences and Music – IV. Learning and Memory, Edinburgh, Scotland, UK. "Musical syntax processing as a function of musical expertise: 1. James, C.E., Van De Ville D., Lazeyras F., Hauert, C.-A. & Oechslin, M.S. Spatio-temporal ERP analyses and source imaging". 2. Oechslin, M.S., Van De Ville D., Lazeyras F., Hauert, C.-A. & James, C.E. "Musical syntax processing as a function of musical expertise: Functional Magnetic Resonance Imaging data". 09-12.06.2011
<u>2010</u>	16 th Annual Meeting of the Organization for Human Brain Mapping, Barcelona, Spain. James, C.E., Michel, C.M., Britz, J., Vuilleumier, P. & Hauert, C.-A. "Processing of metric deviance in music by experts and laymen revealed by ERP source imaging". 06-10.06.2010
<u>2009</u>	The CNS (Cognitive Neuroscience Society) annual meeting. San Francisco, USA. James, C.E., Michel, C.M., Britz, J., Vuilleumier, P. & Hauert, C.-A. "Rhythm evokes Action: Processing of metric deviances in expressive music by experts and laymen revealed by electrical neuroimaging". 21-24.03.2009
<u>2008</u>	6 th FENS Forum of European Neuroscience. Geneva, Switzerland. James, C.E., Britz, J., Vuilleumier, P., Hauert, C.-A. & Michel, C.M. "Plasticity in right limbic structures mediates harmony incongruity processing in musical experts". 12-16.07.2008

Oral presentations, general public

<u>2022</u>	Soirée de clôture "Bien vieillir avec la musique", "Train the brain with music: Brain Plasticity and cognitive benefits induced by musical practice in elderly people in Germany and Switzerland" (SNSF no.170410). HEdS-GE Grand auditoire de la Roseraie, 07.04.2022
<u>2020</u>	Oral presentation « Perception et traitement cérébral de la musique tonale et atonale » Ensemble Contrechamps & Groupe genevois de Philosophie. Studio Ernest Ansermet, Genève, 04.11.2020, 18h15. <i>Postponed following the Covid-19 Pandemic, originally planned 19 mars 2020, 18h15. Realized by video capture:</i> https://youtu.be/pgmnpvSlhH0
<u>2019</u>	Oral presentation "L'impact de l'Orchestre en classe au sein d'une école publique genevoise sur le développement cognitif et sensorimoteur de l'enfant". HEdS-GE Grand auditoire de la Roseraie, 12.03.2019
<u>2018</u>	Salon Planète Santé Life. Palexo Genève. "La puissance de la musique". 04.10.2018
<u>2018</u>	Carnotzet scientifique, L'art et la science, Neurhone, Musée d'art du Valais, Sion. "Comment la pratique musicale sculpte le cerveau et le comportement". 23.05.2018. https://www.neurhone.ch/calendrier/2018/5/23/carnotzet-scientifique-lart-et-la-science
<u>2016</u>	Formation continue pour la "Confédération des écoles genevoises de musique, rythmique Jacques-Dalcroze, danse et théâtre". "Le cerveau musicien". Geneva. 06.09.2016

<u>2014</u>	Salon Planète Santé Life. Swiss Convention Center (EPFL ¹⁵), Lausanne. "La musique comme médicament". 13.11.2014
<u>2013</u>	Connaissance 3, Université du troisième âge du Canton de Vaud, Morges. "Le cerveau musica". 29.11.2013
<u>2010</u>	"L'expression musicale: du cerveau à l'émotion" "Festival de Jazz de Montreux". 16.07.2010
<u>2010</u>	Conference at the International Brain Week "Cerveau, musique et émotions". Uni Dufour, Geneva. 15.03.2010
<u>2009</u>	"Conférence et spectacle <i>l'art et l'épilepsie</i> ", in collaboration with Dr. Fabienne Picard, HUG. Geneva. 14.10.2009
<u>2009</u>	In collaboration with Prof. Dominique Muller (Medical Faculty, UNIGE), Continuous Education Program of the "Confédération des écoles genevoises de musique, rythmique Jacques-Dalcroze, danse et théâtre" "Musique, Cerveau et Perception Musicale". Geneva. 02.09.2009.
<u>2007</u>	Introduction to the "Closure Concert of the International Brain Week", "Music and the Brain". HUG. Geneva. 18.03.2007

Selected media presentations also see http://avisdexperts.ch/experts/clara_james

<u>2022</u>	Report sur la Soirée de clôture "Bien vieillir avec la musique", "Train the brain with music: Brain Plasticity and cognitive benefits induced by musical practice in elderly people in Germany and Switzerland" (SNSF no.170410) in the daily journal "Tribune de Genève", "La pratique musicale un elixir pour mieux vieillir", by Rocco Zacheo. 09.04.2022.
<u>2021</u>	Radio Interview by Sophie Proust, RTS1, "On en parle", "Apprendre la musique après 50 ans", 22.03.2021. https://www.rts.ch/la-1ere/programmes/on-en-parle/12028339-apprendre-la-musique-apres-50-ans-22-03-2021.html?mediaShare=1
<u>2021</u>	Radio Interview by Dominique Bourgknecht, RTS 1, Vertigo "Les vers d'oreille", jeudi 21.01.2021. https://www.rts.ch/play/radio/redirect/detail/11877981
<u>2020</u>	Radio interview by Stéphane Délétroz, RTS1, CQFD "Les effets de la musique sur le cerveau", mercredi, 23.12.2020. https://www.rts.ch/la-1ere/programmes/cqfd/11811004-les-effets-de-la-musique-sur-le-cerveau-leducation-musicale-23-12-2020.html?mediaShare=1
<u>2020</u>	Video report on the ongoing SNSF 170410 project "Bien vieillir avec la musique" by Audrey Sommer of the "Revue Générations". 26.02.2020. "Revue Générations". https://www.youtube.com/watch?v=tsZIErliBM4
<u>2020</u>	Interview in the "Tribune de Genève", by Rocco Zacheo. "Comment la musique peut nous aider en période de pandémie": La musique, ce vaccin universel qui console https://www.tdg.ch/culture/musique/musique-vaccinuniversel-console/story/19588879 20.04.2020. Also published in "24 heures" Vaud et régions https://www.24heures.ch/savoirs/sante/musique-vaccin-universel-console/story/28279147 19.04.2020
<u>2019</u>	Television report on the ongoing SNSF 170410 project "Bien vieillir avec la musique"; RTS1 "36.9°". 18.12.2019 https://www.hesge.ch/heds/actualites/2019/replay-letude-bien-vieillir-musique-prof-dr-clara-james-lemission-399deg RTS
<u>2019</u>	Interview in the journal "La Liberté", 29.06.2019, by Elisabeth Haas "Une super oreille musicale"
<u>2019</u>	Interview for the section "Notre Santé" of the daily journal "La Côte", by Anne Devaux "Comment la musique vole au secours du cerveau". 11.05.2018
<u>2019</u>	Interview in the "Tribune de Genève", by Rocco Zacheo. "Jouer d'un instrument, un pas précieux pour les enfants" https://www.tdg.ch/culture/jouer-instrument-decisif-enfants/story/14394935 20.03.2019
<u>2019</u>	Television interview, at "Léman bleu", by Pascal Décaillat, "Yeux dans les Yeux", "Musique et cerveau". http://www.lemanbleu.ch/replay/video.html?VideoID=37582 11.03.2019
<u>2019</u>	Radio interview (RTS), by Benoît Perrier, in "Magnétique ", Espace 2. https://www.rts.ch/play/radio/magnetique/audio/le-magazine-de-toutes-les-musiques?id=10244193 11.03.2019
<u>2019</u>	Interview in the journal "le Courrier" by Sébastien Brunschwig "Un orchestre en classe pour améliorer ses notes". https://lecourrier.ch/2019/03/11/un-orchestre-en-classe-pour-ameliorer-ses-notes/ 11.03.2019
<u>2018</u>	Interview for Planète Santé, le portail médical, Magazine "Ma santé au quotidien" & the Journal la Côte, by Aude Raimondi https://www.planetesante.ch/Magazine/Psycho-et-cerveau/Mecanismes-du-cerveau/La-musique-modifie-notre-cerveau 09.05.2018
<u>2018</u>	RTS1, interview by Lydia Gabor, "On en parle", "Les effets positifs de la stimulation musicale chez les tout-petits". 03.03. 2018.
<u>2018</u>	Journal Interview for "Revue Générations", by Audrey Sommer: "Bien vieillir, la musique pour rester jeune". April 2018. https://www.generations-plus.ch/?q=magazine/sant%C3%A9forme/se-soigner/bien-vieillir-%E2%80%93-la-musique-pour-rester-jeune
<u>2017</u>	Radio interview by Bastien Confino, RTS1, CQFD "Rencontre avec Clara James". 30.07.2017
<u>2016</u>	Television interview "flash" by Cédric Moret, RTS "Sport dimanche", CLE Mag: les sportifs utilisent la musique pour se préparer". 06.11.2016

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<u>2016</u>	Radio interview by Stéphane Gabioud, RTS1, CQFD, "Les secrets de la mémoire", Episode 8 "La musique" (on links between music and memory). 26.10.2016
<u>2016</u>	Radio interview as "grand invité" by Stéphane Gabioud, RTS1, CQFD. 01.04.2016
<u>2014</u>	Television interview for "Specimen" "La musique, cette potion magique", TSR, 12.03.2014
<u>2012</u>	Radio interview "Babylone", by Nancy Ypsilantis & Sarah Dirren, Espace 2 - Radio Suisse Romande. "Ouverture festival Musiques et Sciences". 12.11.2012
<u>2010</u>	Radio interview, portrait sur Clara James, "Musique et émotions", by Nancy Ypsilantis for "Impatience", "Radio Suisse Romande la 1 ^{ière} ". 24.12.2010
<u>2010</u>	Radio interview "Faites chanter vos neurones", by Nancy Ypsilantis & Cécile Guérin for "Impatience", Radio Suisse Romande la 1 ^{ière} . 14.09.2010
<u>2010</u>	Television interview by Chantal Pannatier for the "Téléjournal" of the "Télévision Suisse Romande" "Pourquoi notre cerveau réagit si vivement à la musique ?" 17.03.2010
<u>2010</u>	Newspaper interview "La musicalité est inscrite dans nos gènes", by Anne-Muriel Brouet, published in the "Tribune de Genève". 15.03.2010

Publications in peer-reviewed scientific journals

- Worschech, F., Altenmüller, E., Junemann, K., Sinke, C., Kruger, T. H. C., Scholz, D. S., Müller, C. A. H., Kliegel, M., **James, C. E.**, & Marie, D. (2022). Evidence of cortical thickness increases in bilateral auditory brain structures following piano learning in the elderly. In Press. *Ann N Y Acad Sci*. Impact Factor 4.7. [Swiss National Science Foundation](#); [Grant number: 100019E-170410 \(C.James\)](#)
- Jünemann, K., Marie, D., Worschech, F., Scholz, D. S., Grouiller, F., Kliegel, M., Van De Ville, D., **James, C. E.**, Krüger, T. H. C., Altenmüller, E., & Sinke, C. (2022). Six Months of Piano Training in Healthy Elderly Stabilizes White Matter Microstructure in the Fornix, Compared to an Active Control Group. *Frontiers in aging neuroscience*, 14. Impact Factor: 5.75. [Swiss National Science Foundation](#); [Grant number: 100019E-170410 \(C.James\)](#)
- Worschech, F., Marie, D., Jünemann, K., Sinke, C., Kruger, T. H., Grossbach, M., Scholz, D. S., Abdili, L., Kliegel, M., & **James, C. E.**, Altenmüller, E. (2021). Improved speech in noise perception in the elderly after six months of musical instruction. *Frontiers in Neuroscience*, 15, 840. doi: 10.3389/fnins.2021.696240. Impact Factor 4.7. [Swiss National Science Foundation](#); [Grant number: 100019E-170410 \(C.James\)](#)
- James, C.E.**, Zuber, S., Dupuis-Lozeron, E., Abdili, L., Gervaise, D., Kliegel, M. (2020). How musicality, cognition and sensorimotor skills relate in musically untrained children. *Swiss Journal of Psychology*, 79(3-4), 101–112. doi:10.1024/1421-0185/a000238. Impact Factor 0.8. [Swiss National Science Foundation](#); [Grant number 100014_152841 \(S.Zuber\)](#).
- James, C.E.**, Altenmüller, E., Kliegel, M., Kruger, T.H.C., Van De Ville, D., Worschech, F., Abdili, L., Scholz, D.S., Junemann, K., Hering, A., Grouiller, F., Sinke, C., Marie, D. (2020). Train the brain with music (TBM): brain plasticity and cognitive benefits induced by musical training in elderly people in Germany and Switzerland, a study protocol for an RCT comparing musical instrumental practice to sensitization to music. *BMC Geriatr* 20, 418. doi:10.1186/s12877-020-01761-y. Impact Factor 3.0. [Swiss National Science Foundation](#); [Grant number: 100019E-170410 \(C.James\)](#)
- James, C.E.**, Zuber, S., Dupuis-Lozeron, E., Abdili, L., Gervaise, D., and Kliegel, M. (2020). Formal string instrument training in a class setting enhances cognitive and sensorimotor development of primary school children. *Frontiers in Neuroscience* 14:567. doi: 10.3389/fnins.2020.00567. Impact Factor 4.7. [Swiss National Science Foundation](#); [Grant number 100014_152841 \(S.Zuber\)](#).
- 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 \(C.James\)](#)
- 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. doi:10.1016/j.humov.2018.07.007. Impact Factor 1.8.
- 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(4) 1209-1218. doi:10.1093/cercor/bhx033. Impact Factor: 8.3. [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 \(C.James\)](#)
- 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: 2.1. [Swiss National Science Foundation](#); [Grant number: 100014_125050 \(C.James\)](#)

Lovis, C., James, C. (2016). Santé digitale: petit guide à l'usage du néophyte. <i>Rev Med Suisse</i> 12(521), 1108-1112. PMID: 27487680.
De Pretto, M., James, C. E. (2015). Principles of Parsimony: fMRI Correlates of Beat-Based Versus Duration-Based Sensorimotor Synchronization. <i>Psychomusicology: Music, Mind and Brain</i> 25(4), 380-391. doi: 10.1037/pmu0000122.
James, C. E. , Cereghetti, D. M., Roulet Tribes, E., & Oechslin, M. S. (2015). Electrophysiological evidence for a specific neural correlate of musical violation expectation in primary-school children. <i>NeuroImage</i> 104, 386-397. doi: 10.1016/j.neuroimage.2014.09.047. Impact Factor 5.5. 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. <i>Brain Structure and Function</i> , 219(1), 353-366. doi: 10.1007/s00429-013-0504-z . Impact Factor: 5.6. 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. <i>Hippocampus</i> 23, 552-558. Impact Factor: 4.3. Swiss National Science Foundation; Grant number: 100014_125050 (C.James)
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. <i>Cerebral Cortex</i> 23, 2213-2224. doi: 10.1093/cercor/bhs206. Impact Factor: 8.3. Swiss National Science Foundation; Grant number: 100014_125050 (C.James)
James, C. E. , Dupuis, E., Hauert, C.-A. (2012). Appraisal of musical syntax transgression by primary-school children: Effects of age and practice. <i>Swiss Journal of Psychology</i> 71(3) (161–168). doi: 10.1024/1421-0185/a000084. Impact Factor: 0.6.
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. <i>Human Brain Mapping</i> , 33(12), 2751-2767. doi: 10.1002/hbm.21397. Impact factor 6.3.
Tallet, J., Barral, J., James, C. , & Hauert, C. A. (2010). Stability-dependent behavioural and electro-cortical reorganizations during intentional switching between bimanual tapping modes. <i>Neuroscience Letters</i> , 483(2), 118-122. doi: 10.1016/j.neulet.2010.07.074. Impact Factor: 2.1.
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. <i>Hippocampus</i> , 19(4), 371-378. doi: 10.1002/hipo.20526. Impact Factor 3.9. 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. <i>Neuroimage</i> , 42(4), 1597-1608. doi: 10.1016/j.neuroimage.2008.06.025. Impact Factor 5.8.
Lehmann, S., Morand, S., James, C. , & Schnider, A. (2007). Electrophysiological correlates of deficient encoding in a case of post-anoxic amnesia. <i>Neuropsychologia</i> , 45(8), 1757-1766. doi: 10.1016/j.neuropsychologia.2006.12.018. Impact Factor 3.5. Swiss National Science Foundation; Grant number: 32000-113436 (A. Schnider)

In Press in peer-reviewed scientific journals

Junemann, K., Engels, A., Marie, D., Worschech, F., Scholz, D. S., Grouiller, F., Kliegel, M., Van De Ville, D., Altenmüller, E., Krüger, T. H. C., James, C.E., Sinke, C. (2022). Increased Functional Connectivity in the Right Dorsal Auditory Stream after a Full Year of Piano Training in Healthy Older Adults. Submitted. [Swiss National Science Foundation; Grant number: 100019E-170410 \(C.James\)](#)

Editorial

James, C. E. (2012). Music and language processing share behavioral and cerebral features. *Frontiers in Psychology*, 3, 52. <https://doi.org/10.3389/fpsyg.2012.00052>. Impact Factor: 2.8.

Contributions to books

James, C.E., Marie, D. La pratique musicale, un outil pour stimuler le développement cognitif, sensorimoteur et cérébral tout au long de la vie : le cas du vieillissement normal. In *Audition et Cognition*. Coordonné par S. SAMSON, B. TILLMANN, C. JOURDAN, V. BRUN. Ed. Sauramps Médical, Mars 2022:141-154.

James, Clara E. (2021). *Orchestre à l'école : cent mille et une histoires*, 84-85. S'épanouir à l'école : programme "orchestre en classe"

Altenmüller, E., & **James, C. E.** (2020). The impact of music interventions on motor rehabilitation following stroke in elderly. In L. L. Cuddy, S. Belleville, & A. Moussard (Eds.), *Music and the Aging Brain* (pp. 407-432). Elsevier. doi : 10.1016/B978-0-12-817422-7.00016-X

James, C. E. (2019). Préface de Clara James. In: M. Thaut & Hoemberg, V, Manuel clinique de rééducation par la musique : comment la musique contribue à soigner le cerveau, (pp. 9-11 ; 458-459 (bibliographie)). *De Boeck Superieur*. ISBN : 978-2-8073-2183-0

Other publications

James, C. E. (2021). Orchestre en classe, un programme sur le développement cognitif et sensorimoteur de l'enfant. ? *Educateur 2021/10*, 30-31. ISSN 1634-6750.

James, C. E. (2018). La musique à l'école, à quoi bon ? *Educateur 2018/2*, 38-39. ISSN 0013-113X

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.