

Swiss University Centre for Music Physiology

Contact: www.shzm.ch

Annual Report 2019 / 2020 and Newsletter August 2020

The cooperation with the University of Lausanne dedicated to the new research project “Music Performance Anxiety from the Challenge and Threat Perspective: Psychophysiological and Performance Outcomes” had begun in autumn 2019 and – after an interruption caused by the Corona-Virus pandemic continues from autumn 2020. This project, funded by the Swiss National Science Foundation (SNF), examines changes in stress, cognition, emotion and physiological parameters attributable to stage fright (stress hormone levels, cardio-vascular functions and respiration) with regards to how they relate to qualitative parameters relevant for solo performance quality. The project aims to make a further contribution to the prevention of performance anxiety and a constructive way of dealing with excessive levels of stage fright.

The newly approved SNF research project „The Influence of an Instrument’s Dimensions, String Length-dependent Finger Spacing and Position on Muscle Activity and Perceived Effort in Viola Playing” will begin next academic year, after the Corona-Virus pandemic has led to a lag in the project’s preparation. This use-inspired project aims to investigate how the instrument’s dimensions and string length-dependent finger spacing affect muscle activity and perceived effort in a player’s left hand and arm in conjunction with position effects on these parameters. The project will gather data on objective, physiological parameters such as biomechanics, span-widths and reach of fingers and the arm, as well as muscle activity as criteria, paving the way towards an individually suitable viola’s position and dimensions. A further aim is the development of ergonomic solutions for playing the viola based on objective data. They are expected to yield information on the influence of the string’s length and its influence on the hand, the size and position of the instrument as well as objective muscle activation and subjectively perceived effort. Results will allow for physiological guidelines and specific pedagogical recommendations as well as for targeted choice of instrument, ergonomic optimisation and prevention of playing-related health problems.

The completion of the research project “Neurofeedback-Training for Attention and Concentration in Music Students” is immanent. Within the framework of this study and after qEEG analysis, music students train professionally relevant attentional conditions using portable neurofeedback devices for several months. Before and after each training entity, students are examined and compared intra-individually by means of psychometric scales and qEEG. The aim of the training is to consciously access and generate different levels of concentration depending on the situations’ requirements, if needed independently of the neurofeedback training devices.

The continuing education study program in Music Physiology, supported by the SHZM and structured by lecturers of several Swiss music universities has accepted a new group of 8 students for the syllabus. More information on the syllabus aiming for the degrees CAS, DAS and MAS (Master of Advanced Studies) can be found on the website of the SHZM under [Links](#).

Three Diplomas of Advanced Studies (DAS), as well as two Master of Advanced Studies (MAS) degrees in music physiology will be completed next academic year due to the Corona Virus pandemic.

The graduates of this further education [program](#) in music physiology [studies](#) (from the DAS-level) have by now taught over 420 further training courses for other music institutions. Since 2013, they also contribute to the annual further education courses of the Zurich Music School and Conservatory, including the option of individual musicophysiological counselling for teachers and students.

The further education offers in music physiology, now available for over 14 years, continue to be offered for music universities wishing to host such events in collaboration with the SHZM. In addition to their own musicophysiological courses on offer, the respective music universities also have the option of booking one of 15 events, held in multiple languages. Information can be found on the SHZM website under Current Activities/Events.

The project designed eleven years ago to build up fitness and good physical condition amongst students of Swiss music universities continues on a regular basis. In coordination with the universities' sport offers, the introduction to this program is given by Christoph Mohler, directly in the respective music universities. In addition, there exists the possibility of booking a fitness check-up free of cost with suggestions for exercises and a progress control of development after several months. Music universities, who are currently not participating in this scheme, are invited to contact Horst Hildebrandt anytime (please refer to the SHZM's homepage for further information).

The SHZM's flyer can be downloaded and printed out in German, French and English from the homepage under the link "Downloads".

Important projects involving the SHZM were presented during the last season at continuing education courses and conventions in Basel, Bottmingen, Luzern, Prag, Wettingen and Zürich. Written publications have appeared in the Staccato-Verlag as well as the journals *promanu* und *Psychology & Health*.

Horst Hildebrandt, Johanna Gutzwiller and Irene Spirgi for the SHZM coordination team, August 2020.