

CENTRE FOR SYSTEMATIC MUSICOLOGY

The how and why of music



ANNUAL REPORT 2018

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Research highlights of centre members

Our doctoral students made significant progress during 2018. Music therapist **Helena Dukic** from Zagreb was funded by the Faculty of Humanities, University of Graz (Projektassistent/innen ohne Doktorat, Abschluss-Stelle) to complete her research on the narrative nature of music. In May, she won the Presentation Prize for a poster at the KOSMOS workshop “Mind Wandering and Visual Mental Imagery in Music” in Berlin, Germany. Flutist **Julie Delisle** from Montréal was guest researcher at the centre from May to August, funded by CIRMMT Inter-Centre Research Exchange Funding (Université de Montréal, McGill University, Université de Sherbrooke, École de Technologie Supérieure) to continue her research on the perception of digitally processed flute sounds. She finished her PhD after her stay in Graz and her thesis has been nominated for the “Liste d'honneur du doyen” at Université de Montréal. Doctoral student **Sabrina Turker** continued her research on neurological commonalities of music and language, funded by the Austrian Academy of Sciences. **Sabrina Sattmann** continued her research on musical chills while at the same time co-organizing ICMPC15/ESCOM10, the major international conference that we hosted in 2018.

Bachelor's student **Elli Xypolitaki** was funded by Erasmus to join the centre for 6 months from October 2018 to April 2019. She studied psychology at the Aristotle University of Thessaloniki. Her research addresses embodied music cognition and the clinical applications of music in psychopathological conditions. At the centre, she is working with Andrea Schiavio on the role of music listening for interoceptive awareness.

Associate Professor **Annemarie Seither-Preisler**, FWF postdoc **Andrea Schiavio**, and centre director **Richard Parncutt** contributed articles in diverse areas (neurology, music cognition, music theory, language development, philosophy, pedagogy, community music) to peer-

reviewed, international journals. Seither-Preisler's research repeatedly attracted media attention.

Realizing implications of our research

Recent research at the centre has interesting practical implications. We are exploring ways in which empirical findings in music psychology can be presented to the public and integrated into society.

Musical ability depends on a combination of “nature” (neurological foundations) and “nurture” (interaction with the social and physical environment). There are considerable transfer effects between musical and non-musical cognitive abilities, as Annemarie Seither-Preisler and her national and international colleagues have shown. Early musical training not only promotes auditory, attentional and literacy skills, but also has long-term effects on the neural efficiency of auditory processing in the developing brain from childhood into adolescence. The largest musical benefits were seen in children with the developmental disorders AD(H)D and dyslexia, which together occur with a prevalence of about 10% in school-aged children in industrial nations. Moreover, linguistic talent and musical talent are related to each other on the behavioral and neurological level, as demonstrated by Sabrina Turker and colleagues.

Educational systems should be investing more time, effort and money into the early music education for all children — not only for the sake of their musical and cultural development, but also to improve their perceptual, attentional, social, linguistic and motor skills and to reduce the incidence and severity of symptoms of AD(H)D and dyslexia. More research is needed on implementations: research-based approaches to music education that are appropriate for different ages, stages of neurocognitive development, individual cognitive abilities and aptitude profiles as well as specific developmental disorders and learning deficits.

One promising application is the linguistically founded Austrian kindergarten program *BAKABU Der Ohrwurm* to promote German language acquisition by singing and rhythmic movement, developed in collaboration with Annemarie Seither-Preisler. More than 300,000 children have participated in this successful educational program. Another example of research with interesting implications is recent work by Andrea Schiavio. If the human mind, including our thoughts and subjective experience, is inseparable from the body and its social and physical interactions, as his research in the area of embodied cognition suggests, the implications for music performance and pedagogy are clear. Musical practice and music education are not only about creating performances that sound impressive when recorded and reproduced. Both musical practice and music education are fundamentally social, cultural, and physical in nature, involving interactions among musicians and audiences. Schiavio's research is also making waves within related academic disciplines such as philosophy and psychology. In 2018, he was invited to give talks at four universities (Memphis, Lausanne, Oslo, Krakow) became vice-president of ESCOM, and signed a contract with MIT press for a co-authored monograph entitled *Musical bodies, musical minds: Enactive cognition and the meaning of human musicality*.

Psychologically oriented research by Richard Parncutt on the perception of musical pitch structures (intervals, chords, tonality, missing fundamentals) implies that conventional ways of thinking about music theory and musical structure need radical revision. His theoretical research on the role of mother-fetus and mother-infant relationships in the origin and early

development of music and religion has deep implications for the nature of humanity and how humans regard themselves by comparison to other species.

The broader context: Implications of research in history and climate change

While research with practical implications is not necessarily “better” than “pure research”, the practical implications themselves can also vary considerably in their social importance. Consider an example from another discipline.

Graz historians have made important contributions to our understanding of the history of antisemitism, the rise of National Socialism, and the causes and detailed history of the Holocaust. The Holocaust’s status as the worst crime ever committed suggests that nothing can be more important than the implementation of Holocaust research implications. These include strategies to suppress racism and threats to democracy of all kinds and at all political and social levels — another area in which the University of Graz has made leading international contributions.

Similarly, the implications of current climate research cannot be overstated. Entire ecosystems upon which humans depend for survival are under threat. If current trends continue, global mean surface air temperature could be 3 to 4°C higher than pre-industrial levels by 2100. If that happens, it is unclear whether humanity will survive the 22nd century. The outcome will depend on a complex interplay between natural positive and negative feedback processes over which future humans are unlikely to have significant control.

The implications of climate research could not be clearer. Global greenhouse gas emissions (primarily CO₂) and deforestation must be drastically reduced in the next few years. Perhaps the clearest indicator of the urgency of the situation is the humanity’s failure to reduce greenhouse gas emissions in the past two decades despite a long series of high-level scientific warnings and international meetings.

In this unprecedented situation, academics in all disciplines are called upon to take the findings of climate science seriously and to act on their implications in the interest of the majority — just as we would like others to act on the implications of our less existential, but nevertheless interesting and relevant research, in music psychology or any other area.

- As academics with special training and means of communication, we have an obligation to educate the public in ways that the media may fail to do. At the University of Graz, gender issues are now being addressed in all courses of study. Should climate change also be addressed in all courses, given its uniquely existential nature? Does this also apply to racism and poverty?
- Qualified academic colleagues should be encouraged to comment on relevant political developments and contribute constructively to political debates, for example by countering the false arguments of climate deniers or providing carefully worked-out economic solutions that will enable governments to achieve emission-reduction goals. Colleagues at the University of Graz are already making leading contributions in this area.
- Any person whose personal carbon footprint is high relative to the global mean has a moral obligation to reduce that footprint. Academics should be reducing their personal

emissions and encouraging non-academics to do the same. The project *Sustainable University of Graz* is making substantial progress toward reducing the university's total carbon footprint. But there is still a tendency to ignore the contribution of flying to conferences, both here and at other universities. The few available studies suggest that flying to conferences accounts for roughly one third of the total carbon emissions of a typical university or a typical academic. If we take that estimate as a rule of thumb, the implications are clear: we must urgently seek alternatives to the classical international conference, to which colleagues fly from all over the world. Moreover, we should do that now and not sometime in the future.

ICMPC15/ESCOM10: A multi-location, semi-virtual, global conference

With these considerations in mind, in July 2018 members of the Centre for Systematic Musicology successfully implemented a new kind of low-carbon international conference. The format could serve as a model for other conferences in all academic disciplines, as well as outside of academia. Within an existing conference tradition, the 15th International Conference on Music Perception and Cognition (ICMPC15) was combined with the 10th Triennial Conference of the European Society for the Cognitive Sciences of Music (ESCOM10).

All centre members contributed to ICMPC15/ESCOM10, and it would be impossible to thank them enough. Sabrina Sattmann and Richard Parncutt were involved in almost all aspects. Project assistant **Nils Mayer-Kahlen** and student assistant **Katharina Pollack** organized the technology and a team of assistants, upon whom we depended for the success of our new semi-virtual conference format. Student assistant **Sandra Tanzmeister** ran the secretary's office and conference finances. Student assistant **Theresa Schallmoser** organized the student support team (hospitality). **Annemarie Seither-Preisler** and student assistant **Magdalena Ramsey** took care of many organizational details including food and refreshments. **Andrea Schiavio** organized session chairs, while **Sabrina Turker** took care of speed poster presentations. Many students contributed as members of the student support team.

The combined conference happened simultaneously in four global locations ("hubs"): Sydney, La Plata (Argentina), Montreal, and Graz. The program ran around the clock for five days, each hub communicating in real time with other hubs toward the East in the morning and toward the West in the afternoon or evening. Every presentation was live-streamed by YouTube, but only registered conference participants had access to the URLs (the videos were "unlisted"). At the end of each talk, we switched to the interactive transmission software 'Zoom' (similar to Skype) for the discussion period. Thanks to the expertise and enthusiasm of our technical support team, no talk at any hub was cancelled for technical reasons.

We aimed to halve greenhouse emissions per conference participant. An analysis of the travel choices in collaboration with **Jakob Meyer** (Wegener Center for Climate and Global Change) showed that we did considerably better than that. If future conferences in this format have a larger number of hubs and more decentralized organization, emissions per participant may be reduced even further.

The conference also implemented an important implication of anti-racism research. To sustainably reduce the incidence and social salience of racism, we must include representatives of diverse cultural groups within academia at all hierarchical levels and strive for equality of opportunity. Research that is consistent with this approach is already strongly represented at the University of Graz in one of its main research areas, *Heterogeneity and Cohesion*. But

international academic conferences are still indirectly excluding participants who cannot afford the total cost of participation, including travel, accommodation, and registration in a rich country. The problem can be solved by locating conference hubs in both rich and non-rich countries and communicating electronically in real time. For individual participants, this strategy can substantially reduce all three contributions to the total cost of participation (travel, accommodation, registration), especially if participants live in the same country as a hub or in a neighbouring country.

The inclusive, equitable, accessible, intercultural character of ICMPC15/ESCOM10 was most visible at the La Plata (Argentina) hub. Most participants there could not have participated had the conference had a more conventional format and taken place only in Graz, as originally planned. Not surprisingly, participants in La Plata reported the highest levels of satisfaction with the new format.

The new format raised a series of fundamental issues. What obligation, if any, do academics have to consider the implications of research on other disciplines? The answer to this question evidently depends on the relative importance of those implications. If research implications are of incomparable importance (Holocaust research) or have existential character for all of humanity (climate research), then all academic disciplines should be implementing them. That is not only because the basic rights of billions of people are at stake, but also because the long history of our own academic traditions could gradually be coming to an end. Those who have the courage to consider that possibility have no choice but to make radical changes.

Given the undeniable importance of these issues, and in parallel with our other research projects, the Centre for Systematic Musicology is currently in 2019 promoting the idea of remote presentations and semi-virtual conferencing both within and outside our academic disciplines. We will gladly forward our technical guidelines to any interested colleague. We can also contribute to discussions and provide limited technical support.

Save the dates

- The centre (represented by Andrea Schiavio) is hosting a low-carbon international “Conference on Interdisciplinary Musicology” with the theme of “Embodiment in Music”, 26-28 September.
- The centre’s 10th anniversary celebrations will take place in Mehrzwecksaal, Wallgebäude on 15 October 2019.



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- Martina Wengenroth (Dept. of Neuroradiology, Univ. Hospital Lübeck, Germany)
- Simeon Zoellner (Dept. of Neurology, University Hospital Heidelberg, Germany)

FUNDED RESEARCH PROJECTS AND EVENTS

- Delisle, J.** “A study of perception of flute timbre and digital sound processing”. CIRMMT Inter-Centre Research Exchange Funding (Montréal, Qc, Canada). May–August 2018.
- Parncutt, R.** “15th International Conference on Music Perception and Cognition and 10th triennial conference of the European Society for the Cognitive Sciences of Music” (Graz hub) funded by Society for Education, Music and Psychology Research (SEMPRE, UK), Land Steiermark, University of Graz (Vice-Rector of Research and Faculty of Humanities), European Society for the Cognitive Science of Music (ESCOM), and Österreichische Forschungsgemeinschaft, 23–28 July 2018.
- Schiavio, A.** “Making music together”. Lise Meitner Postdoctoral Fellowship granted to Andrea Schiavio by the Austrian Science Fund (FWF), October 2017 – September 2019
- Schneider, P., & Seither-Preisler, A.** “Sound perception between outstanding musical abilities and auditory dysfunction: The neural basis of individual predisposition, maturation, and learning-induced plasticity in a lifespan perspective”. Heisenberg fellowship granted to P. Schneider and collaboration partners by German Science Foundation (DFG), February 2016 – January 2019.
- Schneider, P., & Seither-Preisler, A.** “Plasticity of the neuro-auditory network in musically trained adolescents”. Granted to P. Schneider and collaboration partners by German Science Foundation (DFG), February 2016 – January 2019.
- Turker, S., Christiner, M., & Sommer-Lolei.** “Exploring individual differences in language learning abilities: From linguistic morphology to brain morphology”. DOC-team fellowship of the Austrian Academy (ÖAW), September 2017 - September 2020.

PUBLICATIONS

Advance online publication

- Parncutt, R.**, Reisinger, D., Fuchs, A., & Kaiser, F. (2018). Consonance and prevalence of sonorities in Western polyphony: Roughness, harmonicity, familiarity, evenness, diatonicity, *Journal of New Music Research*. doi: 10.1080/09298215.2018.1477804
- Schiavio, A.**, Biasutti, M., van der Schyff, D., & **Parncutt, R.** (2018). A matter of presence. A qualitative study on teaching individual and collective music classes. *Musicae Scientiae*. doi: 10.1177/1029864918808833
- Schiavio, A.** (2018). Review of 'The Routledge Companion to Music Cognition', edited by Richard Ashley and Renee Timmers. *Psychomusicology: Music, Mind, & Brain*.
- Schiavio, A.**, van der Schyff, D., Gande, A., & Kruse-Weber, S. (2018). Negotiating individuality and collectivity in community music. A qualitative case study. *Psychology of Music*. doi: 10.1177/0305735618775806
- Vogel, S. E., Koren, N., Falb, S., Haselwander, M., Spradley, A., Schadenbauer, P., **Tanzmeister S.**, & Grabner, R. H. (2019). Automatic and intentional processing of numerical order and its relationship to arithmetic performance. *Acta Psychologica*, 193, 30-41.

Journal articles

- Delisle, J.**, & Popova, D. (2018). Enquête: Entretiens avec musiciens participant aux projets Extrakte (Berlin) et Sound of Montreal (Montréal). *Circuit: Musiques contemporaines*, 28(1), 87-99.
- Dukic, H.** (2018). Music, brain plasticity and the resilience, the pillars of new receptive therapy. *Psychiatria Danubina*, 30(3), 141-147.
- Meyer, L., Elsner, A., **Turker, S.**, Kuhnke, P., Friederici, A. D., & G. Hartwigsen (2018). Perturbation of left posterior prefrontal cortex modulates top-down processing in language comprehension. *NeuroImage*, 181, 598-604.
- Pfurtscheller, G., Schwerdtfeger, A., **Seither-Preisler, A.**, Brunner, C., Aigner, C.S., Calisto, J., Gens, J., & Andrade, A. (2018) Synchronization of intrinsic 0.1-Hz blood-oxygen-level dependent (BOLD) oscillations in amygdala and prefrontal cortex in subjects with increased state anxiety. *European Journal of Neuroscience*, 47, 417-426.
- Parncutt, R.**, & Hair, G. (2018). A psychocultural theory of musical interval: Bye bye Pythagoras. *Music Perception*, 35, 475-501. doi:10.1525/MP.2018.35.4.475
- Parncutt, R.** (2018). The reliability/validity of cognitive/emotional approaches to the evaluation of musical performance: Implications for competition juries. *Chopin Review*, 1, 38-51.
- Parncutt, R.** (2018). Mother–infant attachment, musical idol worship, and the origins of human behavior. *Musicae Scientiae*, 22, 474– 493.
- Schiavio, A.** (2018). Review of 'Music & Embodied Cognition' by Arnie Cox. *Journal of the American Musicological Society*, 71(2), 546-550
- Schiavio, A.**, & van der Schyff, D. (2018). 4E music pedagogy and the principles of self-organization. *Behavioral Sciences*, 8(8), 72.
- van der Schyff, D., **Schiavio, A.**, Walton, A., Velardo, V., & Chemero, T. (2018). Musical creativity and the embodied mind. Exploring the possibilities of 4E cognition and dynamical systems theory. *Music & Science*, 1, 1-18.

Zoellner, S., Benner, J., Zeidler, B., **Seither-Preisler, A.**, Christiner, M., Seitz, A., Goebel, G., Heinecke, A., Wengenroth, M., Blatow, M., & **Schneider, P.** (2018). Reduced cortical thickness in Heschl's gyrus as an in vivo marker for human primary auditory cortex. *Human Brain Mapping*. doi:10.1002/hbm.24434

Edited books

Parncutt, R., & Sattmann, S. (Eds.) (2018). Proceedings of ICMPC15/ESCOM10. Graz, Austria: Centre for Systematic Musicology, University of Graz.

Parncutt, R., & Sattmann, S. (Eds.) (2018). ICMPC15/ESCOM10: Abstract book (electronic). Graz, Austria: Centre for Systematic Musicology, University of Graz.

Chapters

Ameringer, V., Green, L., Leisser, D., **Turker, S.** (2018). Introduction: Towards an interdisciplinary understanding of language aptitude. In S. M. Reiterer (Ed.), *Exploring language aptitude: Views from psychology, the language sciences, and cognitive neuroscience* (pp 1-18). Cham, Switzerland: Springer.

Turker, S. (2018). Exploring the neurofunctional underpinnings of dyslexia: A review focusing on dyslexic children. In M. M. Marin & E. Luef (Eds.), *The talking species: Perspectives on the evolutionary, neuronal and cultural foundations of language* (pp. 337-376). Graz: UniPress Graz.

Turker, S. Reiterer, S. M., **Schneider, P., & Seither-Preisler, A.** (2018) The neuroanatomical correlates of foreign language aptitude. In S. M. Reiterer (Ed.), *Exploring language aptitude: Views from psychology, the language sciences, and cognitive neuroscience* (pp. 119-148). Cham, Switzerland: Springer.

CONFERENCE PRESENTATIONS

Keynotes

Parncutt, R. (2018, May 24). *Promoting European music psychology research: Cultural diversity, bilingualism, English as lingua franca, peer review, academic quality*. Keynote presented at Polish Music Psychology Conference (PsychoMuzy2018), Katowice, Poland.

Invited lectures

Dukic, H., & Jakovljevic, M. (2018, April 16), *Music and health*. Invited talk at the Festival of Science 2018, Karlovac, Croatia.

Dukic, H., & Parncutt, R. (2018, October), *Music and subconscious imagery*. Invited talk at the International Sound & Film Music Festival 2017, Pula.

Schiavio, A. (2018, March 17). *Enactive musical explorations*. Paper presented at Enactivism: Theory and Performance Conference, Department of Philosophy, University of Memphis, USA.

Schiavio, A. (2018, June 14). *Making music together between adaptivity and creativity*. Paper presented at SFPS, 6th International Congress of the French Society of Sport Psychology, University of Lausanne, Switzerland.

Schiavio, A. (2018, October 9). *Being, knowing, doing. 4E cognition and the dynamics of musical development*. Paper presented at RITMO Centre for Interdisciplinary Studies in Rhythm, Time and Motion, University of Oslo, Norway.

Schiavio, A. (2018, November 7-9) *As above, so below. Musical experience in our hands*. Paper presented at Auditory perception and musical sound workshop, Institute of Philosophy, Jagiellonian University, Krakow, Poland.

Seither-Preisler, A. (2018, March 8). *Pädagogische Implikationen der Ergebnisse der AMseL-Langzeitstudie*. Invited talk at Forum Unterricht, Pädagogische Hochschule Kärnten - Viktor Frankl Hochschule, Villach, Austria.

Seither-Preisler, A. (2018, March 10). *Wie die Gehirnentwicklung von frühem Musizieren profitiert und Lern- und Verhaltensauffälligkeiten entgegenwirkt: Ergebnisse der internationalen Langzeitstudie AMseL*. Invited talk at Tage der Bayrischen Schulmusik 2018, Verband der Bayrischen Schulmusik und Bayerisches Staatsministerium für Unterricht und Kultus, Munich, Germany.

Seither-Preisler, A. (2018, October 8). *Die Auswirkungen frühen Musizierens auf Gehirn und Verhalten unterbesonderer Berücksichtigung von Entwicklungsauffälligkeiten und Lernstörungen: Ergebnisse der internationalen AMseL-Langzeitstudie*. Invited talk at 8. Forum Unterricht, Pädagogische Hochschule Kärnten - Viktor Frankl Hochschule, Villach, Austria.

Other spoken presentations

- Delisle, J. & Heldt, K.** (2018, June 14-15). *Trans-traditional music making in Montreal and Berlin: Two case studies*. Presentation at (E)valuating Transnational Music Practices: Space, Diversity, and Exchange. Duisburg, Germany.
- Dukic, H., Parncutt, R., & Bunt, L.** (2018, July). *Musically induced archetypal imagery in Guided Imagery and Music therapy*. Presentation at ICMPC15/ESCOM10, Graz.
- Dukic, H., Parncutt, R., & Bunt, L.** (2018, September 20). *Narrative archetype elicitation in the imagery of clients in a GIM therapy sessions*. Presentation at EAMI European Conference, Dublin, Ireland.
- Jakovljevic, M. & Dukic, H.** (2018, May 24). *Music therapy and placebo*. Short talk at Psyche and body – A major challenge to modern clinical psychiatry, Graz, Austria.
- Parncutt, R.** (2018 January 18). *Low-carbon, multi-hub global conferencing: Balancing the real and the virtual*. Wegener Center Seminar T4Science, Graz, Austria.
- Parncutt, R.** (2018). *Low-carbon, multi-hub global conferencing: Balancing the real and the virtual*. AG Mobility meeting, University of Graz.
- Parncutt, R.** (2018, February 8). *Semi-quantitative ethics and the human cost of global warming*. Paper presented at 2nd World Symposium on Climate Change Communication, Graz, Austria.
- Parncutt, R.** (2018, February 15). *Halving the emissions of academic conferences: A multi-location, semi-virtual approach*. Paper presented at Eninnov2018: 15. Symposium Energieinnovation: Neue Energie für unser bewegtes Europa. Graz, Austria.
- Parncutt, R.** (2018, May 12). *Prenatal psychology and the origin of musical meaning*. Paper at 14th International Congress on Musical Signification (ICMS14), Cluj, Romania.
- Parncutt, R.** (2018, October 17). *An ecological-evolutionary approach to musical pitch perception, attention, and consciousness*. Paper presented at Conference on Interdisciplinary Musicology “Music and Meaning” (CIM18), Poznań, Poland.
- Parncutt, R.** (2018, October 18). *Cave acoustics, prenatal conditioning, and the origin of music*. Paper presented at Conference on Interdisciplinary Musicology “Music and Meaning” (CIM18), Poznań, Poland.
- Sattmann, S., & Parncutt, R.** (2018, July). *The role of empathy in musical chills*. Paper presented at ICMPC15/ESCOM10, Graz, Austria.
- Schiavio, A.** (with Gande, A., & Kruse-Weber, S.) (2018, February 22). *‘Meet4Music’. Negotiating meaning between community music, performativity, and the cognitive sciences*. Paper presented at Reflective Conservatoire Conference, London, UK.
- Schiavio, A.** (2018, April 13). *A conceptual framework for interactive musical learning*. Paper presented at Together in Music Conference: Expression, Performance and Communication in Ensembles, University of York, UK.
- Schiavio, A.** (2018, October 19). *Explorations and teleomusicality*. Paper presented at Conference on Interdisciplinary Musicology (CIM18), Poznań, Poland.
- Seither-Preisler, A., & Christiner, M.** (2018). *Musical listening mode predicts talent for imitating tonal languages*. ICMPC15/ESCOM10, Graz, Austria.
- Turker, S., Seither-Preisler, A., Reiterer, S. M., & P. Schneider** (2018). *The neurobiology of language learning ability and musicality* ICMPC15/ESCOM10, Graz, Austria.

Posters

- Dukic, H., & Parncutt, R.**, (2018, May 16), *Narrative archetypes in Guided Imagery and Music*. Poster presented at KOSMOS Workshop “Mind Wandering and Visual Mental Imagery in Music”, Berlin, Germany.
- Timmers, R., & Parncutt, R.** (2018 June 26). *How can music societies effect individual or social change? First steps towards change in ESCOM*. Poster presented at Musics, Selves and Societies: The Roles of Music in Effecting Change, Cambridge, UK.
- Turker, S., Peltzer-Karpf, A., Reiterer, S., Schneider, P., & Seither-Preisler, A.** (2018, June 19). *The role of auditory cortex morphology for language learning ability & musicality*. Poster presented at the 24th Annual Meeting of the Organization for Human Brain Mapping, Singapore.
- Turker, S., Seither-Preisler, A., Reiterer, S., Peltzer-Karpf, A., Parncutt, R., & Schneider, P.** (2018, August 16). *Pinpointing the neuroanatomical correlates of foreign language learning ability and musicality*. Poster presented at the 10th Annual Meeting of the Society for the Neurobiology of Language, Quebec City, Canada.
- Vogel, S., Turker, S., Schulz, L., Zeidler, S., Lyons, I., Ansari, D., & Grabner, R.** (2018, June 5). *Commonalities and differences in brain activation associated with ordinal processing: Evidence from functional magnetic resonance imaging*. Poster presented at the 5th biennial meeting of EARLI SIG 22 Neuroscience and Education, London, UK.
- Vogel, S., Turker, S., Schulz, L., Zeidler, S., Lyons, I., Ansari, D., & Grabner, R.** (2018, June 28). *The neural correlates associated with numerical and non-numerical as well as symbolic and non-symbolic ordinal processing*. Poster presented at Third Jean Piaget Conference, Geneva, Switzerland.

OTHER RESEARCH PRESENTATIONS

Research Seminar in Systematic Musicology, Graz

- Himberg, T. (2018, January 9). Entrainment, communication and emotions (Finland, virtual).
- Tschakert, G. (2018, January 16). Sweat, lactate and rock'n'roll: Music physiology meets exercise physiology.
- Perepelytsia, V. (2018, January 23). Singing talent and second language pronunciation.
- Lindenbeck, M. (2018, March 3). Musical pitch in cochlear-implant listeners.
- Delisle, J.** (April, 10). Analysis of flute timbre and extended techniques with acoustical descriptors (Montréal, virtual).
- Kozak, M. (2018 April, 17). Feeling music: Kinesthetic knowledge and the phenomenology of the backbeat (New York, virtual).
- Sari, T. (2018, April 24). Western classical music education in the Sultanate of Oman: Motivation and perceptions of students.
- Hansen, N. (2018, May 5). Lifetiming: Age-related changes in preferred performance tempo of mazurkas by Frédéric Chopin (Columbus Ohio, virtual).
- Sakka, L. (2018, June 6). Music-evoked episodic autobiographical memories in depressed individuals (Uppsala, virtual).
- Seibert, Ch. (2018, June 19). Situated aspects of musical experience: Conceptual framework and empirical approaches (Frankfurt, virtual).
- Shaffer-Liggett Peck, L. (2018, October 23). Musical awe: Understanding emotional experiences from powerful music (Oxford, virtual).
- Seither-Preisler, A.** (2018, October 30). Musicality and the imitation of tonal and non-tonal languages.
- Parncutt, R.** (2018, November 6). The obstetric dilemma, the mother schema, and the origin of religion and music.
- Brabec de Mori, B. (2018, December 4). Enchanted listening and the prehistoric emergence of speech and song.
- Turker, S.** (2018, December 11). Working memory, musicality, and arithmetic competence in children with dyslexia.

Elsewhere

- Delisle, J.** (2018, December 7). *Three perspectives on flute timbre: Instrumental, perceptual, and computational*. Music Perception and Cognition Laboratory, McGill University.
- Delisle, J.** (2018, November 20). *Trois perspectives sur le timbre de la flûte: Instrumentale, perceptive et computationnelle*. Thesis defence at Université de Montréal (Canada).
- Dukic, H.** (2018, October 15). *Guided Imagery and Music therapy*, Workshop at Faculty of Humanities and Social Sciences, University of Zagreb, Croatia.
- Turker, S.** (2018, December 4). *Foreign language learning and language aptitude*. Talk within lecture series *Kognitive Psychologie für LinguistInnen*, University of Graz, Austria.

Turker, S. (2018, December 6). *Behavioural and neuroscientific research on language learning, musicality and working memory in different populations*. Talk within seminar *Neurolinguistik*, University of Graz, Austria.

MEDIA COVERAGE

Annemarie Seither-Preisler

2018, June 1. *Musikforscherin: Das Gehirn macht die Musik*. Audi-Magazin (Menschen - Orte - Musik).

2018, September 1. *Sound perception between outstanding musical abilities and auditory dysfunction*. EU Research (Disseminating the latest research under FP7 and Horizon 2020).

2018, September 5. *Asiatischer Wikipedia-Eintrag zu "Lese-Rechtschreibstörung" (Hongkong)*. Wikipedia, online.

2018, September 24. *Volksschulen mit musikalischem Schwerpunkt: Ein Erfolgsmodell stellt sich vor*. 30 Jahre Musikvolksschulen, online.

2018, December 22. *Das Glücksspiel: Wenn nichts mehr hilft, dann hilft Musik*. Der Tagesspiegel, Berlin, Germany.

Andrea Schiavio

2018, September. *So strangely Podcast - New research in Music & Science*. Episode 4: "Development and Teleomusicality" with Mariusz Kozak. <http://sostrangely.com/episode-4/>

SUPERVISION OF THESES AND DISSERTATIONS

Richard Parncutt

Helena Dukic, Doctorate in Humanities, “Exploring the narrative nature of music: Comparing descriptions of music heard during therapy with clients' statements”

Maximilian Burkard, MA in Musikologie, “Theoretical discussion and empirical replication of a psychological study of musical meaning”

Michael Eder, MA in Musikologie, “Music, repetition and time perception: On the influence of inner-musical repetition on subjective duration”

Florian Schriebl, MA in Musikologie, “The scary side of sound: Eine musikalische Analyse von Parametern der Angst in Film, Musik und Computerspiel”

Annemarie Seither-Preisler

Sabrina Turker, Doctorate in Humanities, “The neuroanatomical correlates of foreign language aptitude”

Andrea Schiavio

Elli Xypolitaki, Erasmus+ Internship Programme, Department of Psychology, Aristotle

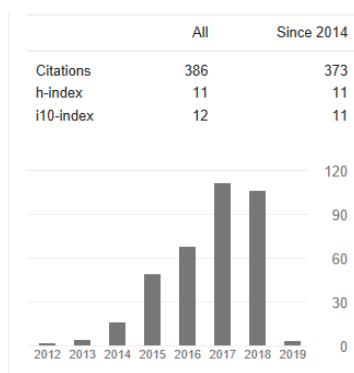
University of Thessaloniki, Greece: “Can music listening improve interoceptive awareness?”

Caroline Curwen (2nd supervisor), PhD student, Department of Music, University of Sheffield, UK: “Music-colour synaesthesia”

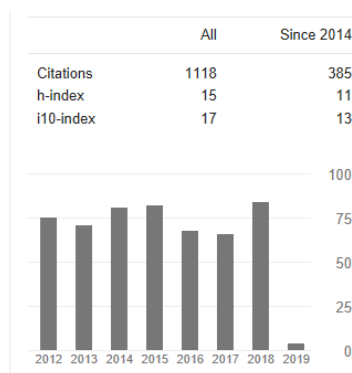
CITATIONS

In January 2019, there was a critical discussion in the leading regional newspaper *Kleine Zeitung* about the international standing and regional roles of the University of Graz. At the Centre for Systematic Musicology, we are publishing in high-profile international peer-review journals, writing mainly in the international *lingua franca* of our discipline. The social relevance of our research is demonstrated both locally and globally. The following graphs were generated automatically by Google Scholar.

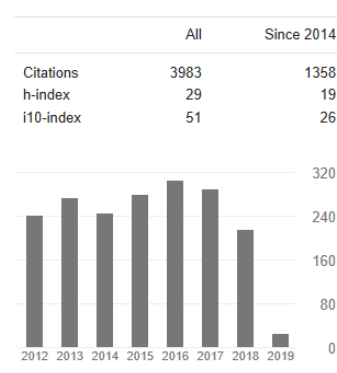
Andrea Schiavio



Annemarie Seither-Preisler



Richard Parncutt



SCIENCE TO PUBLIC

Annemarie Seither-Preisler

Supervision of linguistically based Austrian kindergarten program *Bakabu - Der Ohrwurm* to support German language acquisition by singing and rhythmic movement

TEACHING

Summer 2018

Richard Parncutt

Proseminar “Empirische Musikpsychologie” (2nd year BA)
Lecture series “Psychoacoustics and Music Cognition” (3rd year BA)
Research Seminar “Konversatorium” (3rd year BA; MA)
Literature study “Lektüre fachspezifischer Literatur” (BA)
Research presentations, student reports “Musikwissenschaft aktuell” (BA and MA)

Annemarie Seither-Preisler

Lecture series “Einführung in die Musikpsychologie” (1st year BA)
Tutorial “Musikpsychologische Datenanalyse” (3rd year BA)

Julie Delisle

Course “Musique de création et technologies” (Faculté de musique, Université de Montréal)

Winter 2018-19

Parncutt, Richard

Lecture series “Introduction to Systematic Musicology” (1st year BA)
Seminar “Music Psychology” (3rd year BA)
Research Seminar “Konversatorium” (3rd year BA; MA)
Literature study “Lektüre fachspezifischer Literatur” (BA)
Research presentations and student reports “Musikwissenschaft aktuell” (BA and MA)

Andrea Schiavio

Course “Psychology of Music Education” (MA, Univ. of Music and Performing Arts Graz)

