

CENTRE FOR SYSTEMATIC MUSICOLOGY

The how and why of music



ANNUAL REPORT

2015

Richard Parncutt and Annemarie Seither-Preisler
Centre for Systematic Musicology
Merangasse 70
8010 Graz
Austria
+43 316 380 8162
sysmus@uni-graz.at
<http://sysmus.uni-graz.at>
Cover graphics:
Christian Tschinkel
© 2016

CENTRE FOR SYSTEMATIC MUSICOLOGY

ANNUAL REPORT 2015¹

HIGHLIGHTS

Richard Parncutt was appointed President of the European Society for the Cognitive Sciences of Music (2015-2018). ESCOM is the leading European academic society in the field of music psychology; it collaborates with European national societies including Deutsche Gesellschaft für Musikpsychologie and Society for Education, Music and Psychology Research (UK), and societies on other continents such as Society for Music Perception and Cognition (USA). In July 2018, the centre will host the largest international conference on music psychology: the 15th International Conference on Music Perception and Cognition (ICMPC), combined with the 10th Triennial Conference of ESCOM.

Peter Schneider from the University Hospital of Heidelberg (Department of Neurology, Neuroradiology Division, Biomagnetism Section) applied for a Heisenberg fellowship program ("Plasticity of the neuro-auditory network in musically trained adolescents") in collaboration with Centre member **Annemarie Seither-Preisler**. The project was approved by Deutsche Forschungsgemeinschaft (funding: EUR 560K). Schneider will visit our Centre regularly from 2016 to 2018 and contribute neuroscientific and musical expertise.

Erica Bisesi continued her 3.75-year FWF research project entitled "Expression, emotion and imagery in music performance". To strengthen the interdisciplinary foundations of her research, which already combines physics, psychology, music history, and music performance, she enrolled in a Master's program in the area of music theory and analysis, organized by the University of Calabria in collaboration with Gruppo Analisi e Teoria Musicale (GATM). The individual courses

¹ Previous annual reports covered the academic year from 1 October to 30 September. This report covers the calendar year from 1 January to 31 December.

address topics such as Schenkerian analysis, neo-Riemannian theories, set theory, storiography and semiotics.

Tatevik Shakhkulyan, a musicologist and expert on Armenian traditional music from Komitas State Conservatory in Yerevan and the National Academy of Sciences of Armenia, concluded her postdoctoral research at the centre on the structure and perception of traditional Armenian music, especially epic songs, collaborating with Richard Parncutt and Erica Bisesi.

Alfonso Meave, Professor of Musical Appreciation and Ear Training at Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM) and Professor of Music Theory and Ear Training at Escuela Nacional de Música of the Universidad Nacional Autónoma de México (UNAM), visited the centre for a postdoctoral research project on the theoretical and practical relevance of psychoacoustics for ear training, collaborating with Richard Parncutt.

Sabrina Sattmann continued her research as project assistant funded by Uni Graz (*Initiative Forschung*), concluding a series of psychoacoustical experiments in collaboration with Richard Parncutt and Annemarie Seither-Preisler on the perception of missing fundamentals in musical chords.

Student assistants **Lukas Auer**, **Valentin Grbic**, and **Daniel Reisinger** and contributed to research led by Richard Parncutt on the psychohistory of consonance and dissonance and the perception of pitch within musical chords, based on statistical analyses of a database of western polyphony.

Hande Sağlam continued her postdoctoral research on the role of music in Graz's Islamic community in a project entitled "Music, Religion and Integration", led by ethnomusicologist Gerd Grupe (University of Music and Performing Arts Graz) and Richard Parncutt, and funded by Land Steiermark.

Helena Dukic joined us as a doctoral student for a project entitled "Exploring the narrative nature of music: comparing descriptions of music heard during therapy with clients' statements". A practicing music therapist in Zagreb, Croatia, she holds a BA in Piano Pedagogy from the Music Academy in Zagreb, a BA with Honours in Music from the University of Cambridge, and an MA in Composing for Film from Kingston University, London UK.

Gerlinde Knaus joined us as office manager in October. Her qualifications in education, German literature, and gender research are complemented by her experience in research methods, journalism, and project management.

The successful evaluation of the centre in 2014 enabled us to move (in the summer break) from our previous location above the main entrance of the second floor of Wallgebäude to rooms on the ground floor that had previously been occupied by the Austrian Centre for Digital Humanities.



STAFF DURING 2015

Director

Richard Parncutt



Lecturer

Annemarie Seither-Preisler

FWF Postdoc Researcher

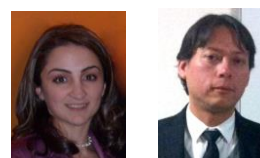
Erica Bisesi



Guest Postdoc Researcher

Tatevik Shakhkulyan (until March)

Alfonso Meave (June to August)



Student Assistants

Lukas Auer (since March)

Andreas Fuchs (until February)

Valentin Grbic (until January)

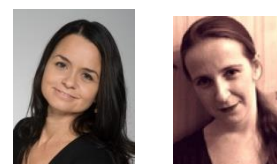
Daniel Reisinger



Project assistants

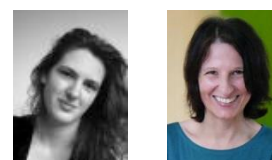
Sabrina Sattmann

Hande Sađlam



Doctoral student

Helena Dukic (from October)



Office Manager

Gerlinde Knaus (from October)

Advisory board

Andreas Dorschel, Department of Music Aesthetics, University of Music and Performing Arts Graz

Gerhard Eckel, Department of Electronic Music and Acoustics, Univ. of Music and Performing Arts Graz

RESEARCH PARTNERS AND COLLABORATIONS

Richard Parncutt

- Ewa Bogula (Frederic Chopin Institute, Warsaw, Poland)
- Zuzana Cenkerova (Slovak Academy of Sciences, Bratislava, Slovakia)
- Anders Friberg (Speech, Music and Hearing, KTH Stockholm, Sweden)
- Ali Cenk Gedik (Department of Musicology, Dokuz Eylul University, İzmir, Turkey)
- Jane Ginsborg (Royal Northern College of Music, Manchester, UK)
- Gerd Grupe (Department of Ethnomusicology, Univ. Music and Performing Arts, Graz)
- Graham Hair (Dept. of Contemporary Arts, Manchester Metropolitan University, UK)
- Susan Hallam (Institute of Education, University of London, UK)
- Gary McPherson (Faculty of Music, University of Melbourne, Australia)
- Stefan Reichmann (Department of Sociology, University of Graz, Austria)
- László Stachó (Department of Music Pedagogy, Liszt Academy, Budapest, Hungary)
- William Forde Thompson (Dept. of Psychology, Macquarie University, Sydney, Australia)
- Kathi Vogt, Visda Goudarzi (Dept Electronic Music, Univ. Music Performing Arts, Graz)
- SUN Yue (Shanghai Conservatory of Music, China)

Annemarie Seither-Preisler

- Jan Benner (Department of Radiology, University of Basel Hospital, Switzerland)
- Maria Blatow (Department of Radiology, University of Basel Hospital, Switzerland)
- Valdis Bernhofs (Latvian Academy of Music, Latvia)
- Monika Brunner (Ear, Nose and Throat Clinic, University Hospital Heidelberg, Germany)
- Dorte Engelmann (Department of Neurology, University Hospital Heidelberg, Germany)
- Heiner Gembris (Institute for Musical Aptitude Research, Univ. of Paderborn, Germany)
- Christine Gross (Department of Neurology, University Hospital Heidelberg, Germany)
- Wilfried Gruhn (Academy of Music, Freiburg, Germany)
- Gert Pfurtscheller (Institute for Biomedical Engineering, TU Graz; BioTechMed Graz)
- Susanne Reiterer (Centre for Language Learning and Teaching Research, Univ. Vienna)
- Peter Schneider (Department of Neurology, University Hospital Heidelberg, Germany)
- Andreas Schwerdtfeger (Institute of Psychology, University of Graz; BioTechMed Graz)
- Bettina Serrallach (Department of Neurology, University Hospital Heidelberg, Germany)
- Sabrina Turker (Department of Neurology, University Hospital Heidelberg and Max Planck Institute for Cognitive Neurosciences Leipzig, Germany)
- Martina Wengenroth (Dept. of Neuroradiology, University Hospital Lübeck, Germany)

Erica Bisesi

- Mario Baroni (Department of Music and Theatre, University of Bologna, Italy; GATM)
- Giuseppe Cabras (Department of Chemistry, Physics and Environment, Univ. Udine, Italy)
- Sylvain Caron (Faculty of Music, University of Montreal, Canada)
- Anders Friberg (Department of Speech, Music and Hearing, KTH, Stockholm, Sweden)
- Antonio Grande (Como Conservatory of Music, Italy)
- Dieter Kleinrath (University of Music and Performing Arts Graz, Austria)
- Jennifer MacRitchie (MARCS, University of Western Sydney, Australia)
- Marisa Michelini (Department of Chemistry, Physics and Environment, Univ. Udine, Italy)
- Simonetta Sargenti (Music Conservatories of Novara and Pesaro, Italy)
- David Temperley (Eastman School of Music, University of Rochester, NY, USA)

- Caroline Traube (Faculty of Music, University of Montreal, Canada).
- Luke Windsor (School of Music, University of Leeds, UK)
- Christian Utz (Department Music Theory, Univ. Music and Performing Arts Graz, Austria)
- Andreas Woyke (Department of Piano, Univ. Music and Performing Arts Graz, Austria)

FUNDED RESEARCH PROJECTS

Bisesi, Erica. *Expression, emotion and imagery in music performance.* Fonds zur Förderung der Wissenschaftlichen Forschung (FWF).

Höldrich, Robert (with Gottfried Kirchengast, Andrea Steiner, **Richard Parncutt**). *SysSon: A systematic procedure to develop sonifications.* FWF.

Grupe, Gerd; **Parncutt, Richard.** *Musik, Religion, Integration: MuslimInnen in der Steiermark.* Land Steiermark.

CONFERENCE ORGANIZATION

Sun, Yue & **Parncutt, Richard** (2015, November 27-29). *Conference on Interdisciplinary Musicology: Imagination in Music.* Shanghai, China: Shanghai Conservatory of Music.

PUBLICATIONS

Journal Articles

Cenkerová, Zuzana & Parncutt, Richard (2015). Style-dependency of melodic expectation: Changing the rules in real time. *Music Perception*, 33 (1), 110-128.

Contributions to Edited Books

Bisesi, Erica & Vicario, Giovanni Bruno (2015). The perception of an optimal tempo: The role of melodic event density. In A. Galmonte, & R. Actis-Grosso (Eds.), *Different psychological perspectives on cognitive processes: Current research trends in Alps-Adria region* (pp. 25-43). Cambridge, England: Cambridge Scholars Publishing.

Parncutt, Richard (2015). Prenatal development. In G. E. McPherson (Ed.), *The Child as Musician* (2nd ed., pp. 3-30). Oxford, England: Oxford University Press.

Parncutt, Richard (2015). Understanding major-minor tonality: Humanities meet sciences. In J. Ginsborg, A. Lamont, & S. Bramley (Eds.), *Proceedings of 9th Triennial Conference of the European Society for the Cognitive Sciences of Music* (pp. 631-640). Manchester, England: Royal Northern College of Music.

Seither-Preisler, Annemarie & Schneider, Peter (2015). Positive Effekte des Musizierens auf Wahrnehmung und Kognition aus neurowissenschaftlicher Perspektive, In G. Bernatzky & G. Kreutz (Eds.), *Musik in der Medizin – Chancen für Prävention, Therapie und Bildung* (pp. 375-394). Vienna, Austria: Springer-Verlag.

Schneider, Peter & **Seither-Preisler, Annemarie** (2015). Neurokognitive Korrelate von JeKi-bezogenen und außerschulischem Musizieren, In U. Kranefeld (Ed.), *Instrumentalunterricht in der Grundschule: Prozess- und Wirkungsanalyse zum Programm Jedem Kind ein Instrument* (pp. 19-39). Berlin, Germany: Bundesministerium für Bildung und Forschung (BMBF).

CONFERENCE PRESENTATIONS

Keynotes

Parncutt, Richard (2015, August 18). *Understanding major-minor tonality: Humanities meet sciences*. Keynote presented at 9th Triennial Conferences of the European Society for the Cognitive Sciences of Music, Royal Northern College of Music, Manchester, England.

Parncutt, Richard (2015, November 26). *Imagination in music: A challenge for humanities, sciences, and their interaction*. Keynote presented at Conference on Interdisciplinary Musicology, Shanghai Conservatory of Music, Shanghai, China.

Spoken Presentations

Bisesi, Erica (2015, November 21). *How does music expression depend on structure?* Paper presented at Annual Conference of the Austrian Society for Musicology (OGMW), Graz, Austria.

Bisesi, Erica (2015, February 14). *Sketching the piano music trajectory from Schubert and Liszt to expressionism in an emotion-based approach to music analysis*. Paper presented at London International Piano Symposium (LIPS), London, England.

Bisesi, Erica (2015, March 25). *Il percorso tonale da Schubert a Schoenberg: Un'analisi psicologica assistita dal computer*. Paper presented at "Quadrivium: La musica all'incrocio dei saperi" (XI Edition), Como, Italy.

Bisesi, Erica (2015, September 26). *In che modo l'espressività musicale dipende dalla struttura?* Paper presented at XII Convegno di Analisi e Teoria Musicale, Rimini, Italy.

Bisesi, Erica; Baroni, Mario; Parncutt, Richard (2015, October 14). *Historical changes in the emotions and free associations evoked by piano music: Schubert, Wagner, Liszt, Schoenberg*. Paper presented at 4th International Conference on Music and Emotion (ICME4), Geneva, Switzerland.

Bisesi, Erica; Parncutt, Richard (2015, August 21). *The relationship between immanent emotion and musical structure in classical piano scores*. Paper presented at 9th Triennial Conference of the European Society for the Cognitive Sciences of Music (ESCOM), Manchester, England.

Matschweiger, Eva (2015, September 18). *Music rehearsals and well-being*. Paper presented at International Conference of Students of Systematic Musicology (SysMus2015), Leipzig, Germany.

Meave, Alfonso; Parncutt, Richard (2015, October 27). *Entrenamiento auditivo sin referencia a las teorías tonales (Auditory training without reference to tonal theories)*. Paper presented at La educación auditiva y la teoría de la música en la actualidad (Ear training and music theory today), Coyoacán, Mexico.

Nikzat, Babak; **Parncutt, Richard** (2015, July 16-22). *Halāl or harām? The role of Islamic instructions concerning music in daily life of Muslim communities in diaspora: A case study of non-Austrian Muslim communities' musical life in Styria/Austria*. Paper presented at 43rd World Conference of the International Council For Traditional Music, Astana, Kazakhstan.

Parncutt, Richard (2015, January 23). *Influential climate denial: A massive human rights violation?* Paper presented at Conference on Denialism and Human Rights, Maastricht, Netherlands.

Parncutt, Richard (2015, April 14). *Urgeborgenheit and the origin of religious and musical emotion.* Paper presented at 2nd International Conference on Music and Consciousness, Oxford, England.

Parncutt, Richard (2015, October 3). *Die Psychohistorie von Konsonanz und Dissonanz: Rauigkeit, Harmonizität und Häufigkeitsverteilungen von Intervallkombinationen in einer Musiknotendatenbank.* Paper presented at 5. Jahrestagung der Carl Stumpf Gesellschaft, Wien, Austria.

Parncutt, Richard (2015, October 14). *Does sad music just press our empathy button?* Paper presented at 4th International Conference on Music and Emotion (ICME4), Geneva, Switzerland.

Parncutt, Richard (2015, October 23). *Implications for competition juries of music-psychological research on the evaluation of piano performance.* Paper presented at “The competition, or music put to the test: Piano competitions from a psychological, sociological, historical and aesthetic perspective”, Warsaw, Poland.

Sağlam, Hande; Parncutt, Richard (2015, July 19). *Is it music or not? Meaning and the function of music for Islamic people from Turkey in Styria/Austria.* Paper presented at 43rd World Conference of the International Council for Traditional Music (ICTM), Astana, Kazakhstan.

Sargenti Simonetta; **Bisesi, Erica** (2015, September 25). *Solo di Karlheinz Stockhausen: Una proposta per l'analisi della performance.* Paper presented at XII Convegno di Analisi e Teoria Musicale, Rimini, Italy.

Sattmann, Sabrina (2015, September 17). *Musical structure and chills in self-selected popular and classical music.* Paper presented at International Conference of Students of Systematic Musicology (SysMus2015), Leipzig, Germany.

Seither-Preisler, Annemarie (2015, June 18). *Neurologische Indikatoren musikalischer Begabung und musikalischen Lernens bei Grundschulkindern: Ergebnisse der JeKi-begleitenden Langzeitstudie AMseL.* Paper presented at “Musikalische Begabung erkennen und fördern”, Frankfurt am Main, Germany.

Seither-Preisler, Annemarie (2015, November 28). *Musical aptitude and expertise from a neurocognitive viewpoint.* Paper presented at 1st Alpine Chapter Symposium of the Organization for Human Brain Mapping (OHBM) & 15. Austrian fMRI Symposium, Vienna, Austria.

Shakhkulyan, Tatevik (2015, 11 November). *David of Sasoun: Melodic contours of the epic songs (in Armenian).* Paper presented at 10th Session of Young Art Historians. Yerevan, Armenia.

Posters

Matschweiger, Eva; Sattmann, Sabrina; Parncutt, Richard (2015, September). *Music rehearsals and well-being.* Poster presented at 31. Jahrestagung der Deutschen Gesellschaft für Musikpsychologie “Musik und Wohlbefinden”, Oldenburg, Germany.

Matschweiger, Eva; Sattmann, Sabrina; Parncutt, Richard (2015, October). *Music rehearsals and well-being*. Poster presented at 4th International Conference on Music and Emotion (ICME4), Geneva, Switzerland.

Piber, Barbara; **Parncutt, Richard**; Schneider, Peter; **Seither-Preisler, Annemarie** (2015, January). *Pitch perception as pattern recognition: Evidence from individual differences in brain oscillations*. Poster presented at 21st Annual Meeting of the Organization for Human Brain Mapping (HBM), Honolulu, Hawaii.

Sattmann, Sabrina; Parncutt, Richard (2015, October). *Musical structure, emotions, and associations during chill episodes in self-selected music*. Poster presented at 4th International Conference on Music and Emotion (ICME4), Geneva, Switzerland.

Vogt, K.; Rutz, H. H.; Goudarzi, V.; Höldrich, R.; Steiner, A. K.; Jury, M.; Walter, R.; **Parncutt, Richard** (2015, April). *SysSon: A Framework for Systematic Sonification Design*. Poster presented at European Geosciences Union General Assembly, Vienna, Austria.

OTHER RESEARCH PRESENTATIONS

Guest lectures by Centre Members

Bisesi, Erica (2015, March 26). *In che modo l'espressività musicale dipende dalla struttura?* Guest lecture at Casa della Musica, Como, Italy.

Bisesi, Erica (2015, May 29). *How does music expression depend on structure?* Guest lecture at International Laboratory for Brain, Music, and Sound Research (BRAMS), Montreal, Canada.

Bisesi, Erica (2015, June 5). *The tonal trajectory connecting Schubert, Wagner, Liszt and Schoenberg: A psychological, computer-based analysis*. Guest lecture at Université de Montréal, Montreal, Canada.

Parncutt, Richard (2015, December 1). *Psychoacoustics of pitch and tonality in Western music*. Guest lecture at Shanghai Conservatory of Music, Shanghai, China.

Parncutt, Richard (2015, December 1). *Can researchers help artists? Music performance research for music students*. Guest lecture at Shanghai Conservatory of Music, Shanghai, China.

Parncutt, Richard (2015, December 3). *Psychoacoustics of pitch and tonality in Western music*. Guest lecture at China Academy of Sciences, Institute of Psychology, Beijing, China.

Parncutt, Richard (2015, December 3). *Applications of music psychology research in music education and performance*. Guest lecture at China Conservatory of Music, Beijing, China.

Parncutt, Richard (2015, December 4). *Intercultural music psychology and cognitive ethnomusicology*. Guest lecture at China Conservatory of Music, Beijing, China.

Shakhkulyan, Tatevik (2015 April 21). *David of Sasoun: The singing fragments from the epic* (in Armenian). Guest lecture at Komitas Museum-Institute, Yerevan, Armenia.

Public Presentations by Centre Members

Bisesi, Erica (2015, September 25). *Relazione tra struttura musicale ed emozioni lungo il percorso tonale da Schubert a Wagner, ultimo Liszt e primo Schoenberg*. Paper presented at Convegno "Le emozioni e la percezione sensoriale", Gorizia, Italy.

Seither-Preisler, Annemarie (2015, May 12). *Der musikalische Mensch: Evolution, Biologie und Pädagogik musikalischer Begabung*. Book presentation at Zentrum für Weiterbildung, Uni Graz, Austria.

Seither-Preisler, Annemarie (2015, November 14). *Schnellere Gehirnentwicklung durch frühes Musizieren: Neue Chancen bei AD(H)S und Legasthenie*. Paper presented at "Achtung Forschung!", Graz, Austria.

Presentations at Uni Graz by Members and Guests of the Centre

Cenkerová, Zuzana (Bratislava, Slovakia). *Note-by-note melodic expectation: Hymns vs. rock*, 2015 April 28.

Dukic, Helena (Cambridge, England). *Emotional experiences in film and music narrative*, 2015 March 17.

Grupe, Gerd; **Parncutt, Richard; Sağlam, Hande**; Nikzat, Babak (Graz). *Music, Music, Religion, Integration: Muslims in Styria*. Presentation of research results; music and dance presentations by Muslim communities; podium discussion on the role, importance, and limits of music in Islam. University of Music and Performing Arts Graz (Ira-Malaniuk-Saal, Reiterkaserne), 2015 March 19.

Meave, Alfonso (Mexico). *Psychoacoustics and ear training*, 2015 June 9.

Parncutt, Richard; Sattmann, Sabrina. *Perception of missing fundamentals in musical chords*, 2015 June 9.

Polak, Rainer (Cologne, Germany). *"Swing timing" in Malian jembe drumming*, 2015 June 2.

Sattmann, Sabrina. *Musical structure, emotions, and associations during chill episodes in self-selected music*. 2015 November 24.

Schiavio, Andrea (Sheffield, England). *Music cognition as embodied, embedded, enactive and extended*, 2015 April 21.

Shakhkulyan, Tatevik (Yerevan, Armenia). *The tonal structure of Armenian epic song*, 2015 March 3.

Weth, Karim (Salzburg, Austria). *Measuring musical emotions in a continuous way via facial expressions*, 2015 January 13.

MEDIA REPORTS

2015 January 14. *Das Orchester der Neuronen: Instrumentalunterricht beeinflusst die Gehirnaktivität bei Kindern.* **Annemarie Seither-Preisler**. Medizin-Aspekte, online.

2015 September 1. *Was Hänschen lernt.* **Seither-Preisler, Annemarie**. dasgehirn.info (Editor: Eva Wolfangel), online.

2015 October 7. *City Science Talk: Wie Musik die Welt verändert.* Panel discussion with **Annemarie Seither-Preisler**. Austrian Radio ORF Ö1, Austria.

2015 October 8. *Macht Musizieren schlau?* Eva Wolfangel and **Annemarie Seither-Preisler**. Stuttgarter Zeitung, Germany.

2015 October 8. *Forschung: Musik als Mittel gegen Zappelphilipp.* Norbert Swoboda and **Annemarie Seither-Preisler**. Kleine Zeitung, Austria.

2015 October 14. *Wie Musik die Welt verändert.* Report on research by **Annemarie Seither-Preisler**. Salzburger Nachtstudio, Austrian Radio ORF Ö1, Austria.

THESES AND DISSERTATIONS

Ebner, Julia (2015). *Good vibrations: The multimodal perception of music in deaf culture* (Unpublished Bachelor's dissertation). University of Graz, Austria. Supervised by Richard Parncutt.

Zrilic, Mateja (2015). *Music and neuroplasticity in older age* (Unpublished Bachelor's dissertation). University of Graz, Austria. Supervised by Richard Parncutt.

TEACHING

Summer Semester 2015

Bisesi, Erica

Psychoacoustics and Music Cognition (3rd year)

Parncutt, Richard

Parncutt: Empirical Music Psychology (2nd year)

Research Seminar "Konversatorium" (3rd year & Masters)

Music Performance Research (Masters)

Seither-Preisler, Annemarie

Introduction to Music Psychology (1st year)

Music-Psychological Data Analysis (2nd year)

Winter Semester 2015-16

Parncutt, Richard

Introduction to Systematic Musicology (1st year)

Music Psychology (3rd year)

Music and Health (Masters)

Research Seminar "Konversatorium" (Masters)

The above courses involved two contact hours per week for one semester. Parncutt also taught or administered the following courses with fewer contact hours:

Orientation Module Musicology

Current Musicology (*Musikwissenschaft aktuell*)

Literature study

