

<b>Institution:</b> University of Surrey		
<b>Unit of Assessment:</b> 33 Music, Drama, Dance, Performing Arts, Film and Screen Studies		
<b>Title of case study:</b> International Guitar Research Centre: Innovations in 21st century guitar theory and practice		
<b>Period when the underpinning research was undertaken:</b> 2000-2020		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b>	<b>Role(s) (e.g. job title):</b>	<b>Period(s) employed by submitting HEI:</b>
Professor Stephen Goss	Professor of Music, Director of the International Guitar Research Centre (IGRC)	1999-present
Dr Milton Mermikides	Reader in Music, Deputy Director of the IGRC	2010-present
<b>Period when the claimed impact occurred:</b> August 2013 – December 2020		
<b>Is this case study continued from a case study submitted in 2014? Y</b> It is related to the Acoustic Resonance in Contemporary Guitar Writing Impact Case Study which was submitted to REF2014. The 2014 ICS focussed on Goss's innovative approach to writing for the guitar in solo, chamber, and orchestral settings using a range of newly developed extended techniques. The link to the current ICS is partial and outlined and contextualised below in 'underpinning research'.		
<b>1. Summary of the impact</b> (indicative maximum 100 words)  Despite the ubiquity and universal popularity of the guitar, its myriad disciplines have largely operated in myopic isolation with minimal cultural exchange, shared knowledge and symbiotic collaboration. In contrast and in response, the complementary research of Goss and Mermikides is characterised by a wide stylistic pluralism, a radical redrafting of convention, and a rich diversity of creative and analytical approaches. Through their establishment of the International Guitar Research Centre (IGRC) – which now represents a vast and growing proportion of the world's leading guitarists, researchers, and composers – their vision has transformed the 'Guitarscape' (Dawes, 2016) both inside and outside the academy, forged new musical practices, integrating previously disparate guitar cultures (Bennett, 2001) and through recordings, scores, broadcasts, performances and pedagogy has enabled game-changing advances to the practice, culture and public engagement of this universal instrument.		
<b>2. Underpinning research</b> (indicative maximum 500 words)  Goss and Mermikides are composer-guitarist-academics with complementary skill sets and expertise. They both embrace wide unprejudiced stylistic pluralism, interdisciplinarity, practice-informed research; and a vision in the potential of international collaboration and cultural exchange to develop significantly the repertoire, practice and knowledge of the instrument; and extend its influence beyond its domain.  Their underpinning research may be categorised into five interlocking categories.  <b>2.1 Acoustic Resonance.</b> Goss's wide knowledge and experience of historical and contemporary guitar practice, and collaboration with many of the world's leading practitioners have shaped novel contemporary compositional, extended techniques and notational approaches for the guitar.		

These have greatly expanded the contemporary repertoire for the instrument which are now adopted by practitioner and composers internationally [3.1, 3.3, 3.4, 3.6].

**2.2 Models of biological rhythm.** Mermikides's *Bloodlines* (2004) is an 'auto-biological' guitar piece created by the systematic translation of his blood cell populations during his leukaemia treatment. This technology-assisted approach supplants the Western notation 'grid' with a biological continuity. In so doing fundamental principles of rhythmic expression are revealed [3.7], as well as extensive opportunities for novel compositional practice [3.2]. Such models are actively employed by Mermikides as analytical, pedagogical and compositional resources across a wide range of genres.

**2.3 The guitar as concerto and chamber music instrument.** Since 2008, Goss has worked with many of the world's leading orchestras, and through the use of amplification has repositioned the classical guitar as a **concerto** instrument [3.3]. He has also worked with many of the world's leading performers developing the role of the guitar in mixed chamber ensembles. This research has greatly expanded the instrument's limited concerto and ensemble repertoire [3.4].

**2.4 Models of improvisation.** Initially conceived to analyse and inform jazz guitar improvisation Mermikides's *M-Space* (multi-dimensional musical space) model developed into a supporting mechanism for many improvisational forms, electro-acoustic composition and performance. This *liminalism* of musical practice within and beyond nominal stylistic boundaries pervades the ethos of IGRC and its resulting outputs [3.5].

**2.5 Stylistic and interdisciplinary pluralism.** Mermikides and Goss collectively represent interests, influences and expertise in the music of the Western canon, jazz and popular styles, electronic music, ethnomusicology and collaborate widely within and beyond their respective fields. They have produced outputs with a wide range of musicians, scientists, software developers and institutions including Dame Evelyn Glennie, Sir Andrew Lloyd Webber, Nicola Benedetti CBE, Brian Eno, Peter Zinovieff, Pat Martino, Mikhail Pletnev, Professor Morten Kringelbach (Music in the Brain Institute), Ableton, Royal Society of Medicine, Royal Physiological Society, Royal Academy of Music, Royal College of Music and the Smithsonian Institute [3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7].

This underpinning research – through the vehicle of International Guitar Research Centre – forms the supporting mechanisms with which the independent silos of global guitar styles are now being bridged and extended beyond the guitar domain. The impact of which is documented below in the context of new events, presentations, compositions, analytical approaches, collaborations and pedagogical resources otherwise unimaginable in the preceding 'Guitarscape'.

### 3. References to the research (indicative maximum of six references)

Since 2000, Goss has published over 100 compositions for a wide range of orchestral, instrumental vocal forces. His music has been recorded on more than 80 CDs (EMI, Decca, Telarc, Virgin Classics, Naxos and Deutsche Grammophon). He is considered 'one of the guitar's finest living composers' (International Record Review). Mermikides has had radical new works exhibited in international venues (including the Smithsonian Institute, Design Museum, Science Museum, TEDx). His analytical work is published by Oxford University Press, Cambridge University Press, Soundboard Scholar, Routledge; featured in the Guardian, Times Higher Education and presented in keynote presentations in a range of scientific and artistic disciplines. Selected examples of Goss and Mermikides's underpinning research are listed below:

**[3.1] Goss, S. *Cinema Paradiso*** for solo guitar (Doberman, 2017) Commissioned by Guitar CoOp (São Paulo, Brazil) for Zoran Dukić. See also, Kyzer, D '*Beyond Nothingness: A Broader Nihilism in "Cinema Paradiso" by Stephen Goss*' (University of North Texas, 2019), Mourinho, R '*Interpretative technical aspects in Stephen Goss's solo guitar works*' (University of Évora,

2020), and Ballam-Cross, P 'Counterpoint and Performance of Guitar Music – Historical and Contemporary Case Studies' (University of Queensland, 2019). [Declared REF2021]

**[3.2] Mermikides, M. *Hidden Music*** an ongoing portfolio of inter-disciplinary musical works exploring the systematic translation of biological data and models into musical compositions and analytical models. Exhibited and broadcast internationally. [Declared REF2014, REF2021]

**[3.3] Goss, S. *Guitar Concerto*** for guitar and orchestra (Doberman, 2014). Recorded by John Williams OBE – guitar, the Royal Philharmonic Orchestra, Paul Daniel CBE – conductor (JCW5, 2014). One of an ongoing series of 8 concerti involving the guitar or other chordophones. [Declared REF2014, REF2021]

**[3.4] Goss, S. *The Book of Songs*** for tenor and guitar (Doberman, 2014). Recorded by Ian Bostridge CBE and Xuefei Yang (Globe Music, 2014). [Declared REF2021]

**[3.5] Mermikides, M. *Liminal Works*** A portfolio of compositions, theoretical writings and technologies unified by their use of *liminalism* – the blurring of style, perception, acoustic and electronic domains and conventionally distinct musical practices. Central to the portfolio is Mermikides's concept of *M-Space* (Oxford University Press, 2017). [Declared REF2021]

**[3.6] Goss, S. *Theorbo Concerto*** for theorbo and strings (Doberman, 2018). Recorded by Matthew Wadsworth and the Scottish Chamber Orchestra (Deux-Elles, 2019). [Declared REF2021]

**[3.7] Mermikides, M. *Rhythmic Expression*** A portfolio of papers, presentations, compositions and technological devices investigating the field of micro-rhythmic expression, a fundamental but incompletely articulated musical component. In particular, it explores rhythmic concepts and traits that are inadequately captured by the linear, onset-focused and gridded paradigm of standard music notation and terminology. [Declared REF2021]

#### 4. Details of the impact (indicative maximum 750 words)

The impact delivered by the underpinning research takes four broad forms:

**4.1 New compositions** – performances, recordings, broadcasts, streaming.

**4.2 Public facing events** – in partnership with established festivals and symposia.

**4.3 Impact via media** – broadsheet newspaper and magazine articles, radio and TV features.

**4.4 Pedagogical impact** – through international foundations and educational organisations.

The main beneficiary groups are:

i) Public audience [see 4.1, 4.2, 4.3]

ii) Professional and amateur practitioners (guitarists and composers) [see 4.1, 4.2, 4.3, 4.4]

iii) Students and teachers [see 4.1, 4.2, 4.3, 4.4]

Through the work of the IGRC, the network of contemporary guitar communities is more deeply integrated. It has a broader and richer repertoire, a more highly developed intercultural understanding, and it utilises more interconnected modes of practice. The research undertaken by Goss and Mermikides has changed the way the guitar is played, written for, written about and its impact on wider musical practice.

##### 4.1 New compositions

Goss has composed music for many of the world's most important classical guitarists (John Williams OBE [3.3], David Russell (2015), Xuefei Yang [3.4], Zoran Dukić [3.1]). His music has had a significant cultural impact by expanding the repertoire through idiomatic and stylistic innovations [2.1, 2.3, 2.5], thereby enriching the audience experience and stimulating performers, composers, audiences, critics, and writers to debate, dialogue, and commentary. Through Goss's ground-breaking works for Matthew Wadsworth '*the theorbo is catapulted into the present, reinventing itself with a range of extended techniques and soloistic effects it never knew it was*

*capable of.* (BBC Music Magazine, 4/19). Goss's music receives between 500 and 800 professional performances every year. Performances have taken place in most major concert venues of the world: Carnegie Hall, New York (17/4/19, 6/11/15); Royal Festival Hall, London (11/6/14); Concertgebouw, Amsterdam (24/9/19); Tchaikovsky Hall, Moscow (20/3/17, 27/3/15, 26/9/14); National Centre for Performing Arts, Beijing (5/7/14). The total sales of recordings of his music are in excess of half a million and his music has been streamed over a million times during the impact period. Mermikides's *Bloodlines* was broadcast on BBC Radio 4's Midweek to an estimated audience of 7 million listeners [5.8], bringing to a mainstream audience the results and process of his research practice. Several of Mermikides's works were broadcast on Dame Evelyn Glennie's *Rhythm of Life* two-part series [5.6] and his sonifications of sleep were featured on BBC Radio Scotland and BBC Radio 4's Inside Science [5.9]. Work with Sir Andrew Lloyd Webber on *Stephen Ward* (ITV, Deutsche Grammophon 2013) brought Goss's research to a wide mainstream TV audience. In an interview for Soundboard John Williams said '*I was really knocked out by Steve [Goss]'s Guitar Concerto <...> a whole lot of things that I think are quite original. I don't know of any guitar concerto which is as consistently successful on all fronts.*' [5.4]

#### 4.2 Public facing events

The IGRC has partnered with festivals and arts organisations to co-host a number of public-facing events. The Altamira Hong Kong International Guitar Symposium (2016, 2017, 2018, 2019), 21<sup>st</sup> Century Guitar (Canada, 2019 & Portugal, 2020); Dublin Guitar Symposium (2019); London Guitar Festival (every year since 2014); Altamira Shenzhen Fuge Guitar Week (China, 2019). These events have provided a platform and encouraged performance, compositional activity and culture in a wide range of global guitar styles and artists. [2.5]

#### 4.3 Impact via public media

Goss's work [3.1, 3.3, 3.4, 3.6] has been written about in BBC Music Magazine [5.1] and Gramophone Magazine [5.2] and has been reviewed in The Independent, The Financial Times (16/9/2016), International Record Review, Soundboard, and Classical Music Magazine. Four of Goss's albums were 'Editor's Choice' in Gramophone Magazine (3/19, 3/15). Goss has been a regular guest on BBC Radio 3's In Tune programme where his music has been featured several times [5.3] (9/8/18, 21/10/14, 10/6/14). He has been interviewed by Soundboard Magazine [5.5], Classical Guitar Magazine, and on various podcasts, and radio shows (for example BBC World Service, 'World Update' and 'The Forum').

Mermikides has been interviewed and his work [2.2, 2.4, 2.5] featured in the Guardian, BBC Radio 4 Midweek [5.8], by Evelyn Glennie on BBC Radio 4 [5.9] and on BBC Inside Science, where his *M-Space* mapping of sleep cadences was described as '*not just radio friendly and eminently listenable, but I think also a great tool for diagnosis*' by Oxford Professor of neuroscience Professor Morten Kringelbach [5.9]. This work was also brought to public attention in the *Designing Time* exhibition in the Design Museum London, a residency at the Frank Mohr Institute and the *Everything We Do is Music* TEDx presentation [5.10] – TEDx talks channel (27.6M subscribers). At the end of the talk, it was revealed that the audience had unwittingly created a new piece of music generated by the mapping of their choice of seats to a virtual fretboard.

#### 4.4 Pedagogical impact

The underpinning research at the IGRC has had a significant impact on the teaching of the guitar. Through the IGRC's partnership with the Guitar Foundation of America (GFA), Goss and Mermikides are involved in the GFA's pedagogical and mentoring programmes. Goss has made several films for the California-based educational platform – Tonebase – which explored the pedagogical implications of the latest innovations in guitar technique developed at the IGRC. Goss's teaching at festivals, and through residencies, has impacted guitarists of all levels, particularly teachers who use Goss's research as part of their daily work. Due to their cutting-edge technical demands [2.1] and amalgamation of several contrasting guitar styles [2.5], Goss's compositions have featured on examination syllabuses and in final recitals at many of the major music schools throughout the world, for example: The Julliard School, Yale University, Central Beijing Conservatory, Royal Academy of Music (London). They have been set as test pieces in all

the major international guitar competitions, including: GFA (2016), Pittaluga (2019), London (2014), and Changsha (2020) International Guitar Competitions.

Mermikides's rhythmic and improvisational research [2.2, 2.5] is used actively as a supporting mechanism to pedagogical practice in the general guitar playing community. This includes the Breaking 4/4 Workshop as part of Ableton's Educational Tour and the first known in-depth and evidence-based pedagogical material in a major mainstream guitar magazine *Art of Timing* in Guitar Techniques Magazine where a reader described it as '*tantamount to being an encyclopaedia on timing, feeling and groove, and something perhaps we should all keep close for reference.*' [5.7]

#### 5. Sources to corroborate the impact (indicative maximum of 10 references)

[5.1] BBC Music Magazine article, May 2019 (PDF)

[5.2] Gramophone Magazine article, February 2019 (PDF)

[5.3] BBC Radio 3, *In Tune*, 9 August 2018 (MP3 file)

[5.4] John Williams interview, Soundboard, Winter 2015 (PDF)

[5.5] Stephen Goss interview, Soundboard, Fall 2015 (PDF)

[5.6] BBC Radio 4, Evelyn Glennie interview, *The Rhythm of Life*, August 2018. Available at <https://www.bbc.co.uk/programmes/b0bgfqx7> (MP3 file available from HEI)

[5.7] Guitar Techniques Magazine, *Art of Timing*, November 2017 (PDF)

[5.8] BBC Radio 4, *Midweek*, October 2015. Available at <https://www.bbc.co.uk/programmes/b06kdrfd> (MP3 file available from HEI)

[5.9] BBC Radio 4, *Inside Science*, March 2019. Available at <https://www.bbc.co.uk/programmes/m0003jr9> (MP3 file available from HEI)

[5.10] TEDx, *Everything we do is Music*, April 2016. Available at <https://www.youtube.com/watch?v=sS9ys09BkGE> (MP4 file available from HEI)

#### Individual users and beneficiaries who will corroborate our impact claims (contact details available):

John Williams OBE – guitarist

Professor Martha Masters – President of the Guitar Foundation of America

Professor Adrian Walter – Principal of the Hong Kong Academy for Performing Arts

Tom Kerstens – CEO of the International Guitar Foundation

Hanson Yao – CEO of the Altamira Foundation