

Program of the International Symposium on Performance Science 2021

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and

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International Symposium on Performance Science

27 | 30 October 2021 Montréal | Canada

Convened by
Schulich School of Music
McGill University

Centre for Performance Science Royal College of Music | Imperial College London

in collaboration with

Centre for Interdisciplinary Research in Music Media and Technology (CIRMMT)

www.performancescience.org

Program of the International Symposium on Performance Science 2021

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Peer-review. Structured abstract submissions for the *Program of ISPS 2021* were invited for paper and poster presentations on research exploring the theme *Performance Health and Wellbeing*. Each submission was reviewed by three members of the Scientific Committee according to its quality and originality. Submissions were reviewed subsequently by the editors prior to acceptance.

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Cover design by Christopher Tomlin

Welcome to ISPS 2021

The Schulich School of Music is delighted to host the eighth International Symposium on Performance Science: ISPS 2021.

This year's theme, *Performance Health and Wellbeing*, aligns perfectly with the Schulich School of Music's strategic objective to integrate its strengths in research and music performance—in collaboration with colleagues from across McGill University—to create a multidisciplinary, team-based approach to training students, using the development and application of research-informed strategies to enhance performance skills and healthy learning.

The theme resonates as well with the extraordinary times we are experiencing as a society, where the value of health and wellbeing has been highlighted through the global pandemic. Questions about how to ensure healthy performance practices in a wide range of fields will be explored in the Symposium through a remarkable collection of keynote addresses and interdisciplinary sessions. The conditions under which people perform are very often different from those in which they learn. How can the gap be bridged between the training and performing environments? What are the current best practices in 21st-century performance education? What needs to be developed? What can we learn about health and wellbeing from different performance fields and research results?

On behalf of the Schulich School of Music, McGill University, our partners at the Royal College of Music, Imperial College London, the Centre for Interdisciplinary Research in Music Media and Technology (CIRMMT) and the ISPS 2021 scientific committee, I warmly welcome you to the Symposium and wish you an exciting and creative exchange of ideas with hope to progress on these important questions for the future of our society.

Brenda Ravenscroft, Dean / Doyenne Schulich School of Music of McGill University École de musique Schulich de l'Université McGill

Scientific committee

Aaron Williamon, *co-chair* Royal College of Music, London (UK)

> Isabelle Cossette, *co-chair* McGill University (Canada)

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Laura Stambaugh Georgia Southern University (USA)

Caroline Traube University of Montreal (Canada)

Marcelo Wanderley McGill University (Canada)

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Reference time zones

Times in selected cities of ISPS 2021 delegates are provided below, with reference to local times in Montréal (Coordinated Universal Time, UTC -4) and taking into account daylight savings time, as of 27-30 October 2021.

UTC	City	Montréal ±hours	08:00 27 Oct	12:00 27 Oct	16:00 27 Oct	20:00 27 Oct
			01:00	05:00	09:00	13:00
+13	Auckland	+17 hours	28 Oct	28 Oct	28 Oct	28 Oct
			23:00	03:00	07:00	11:00
+11	Canberra, Melbourne, Sydney	+15 hours	27 Oct	28 Oct	28 Oct	28 Oct
	n : 1	1	22:00	02:00	06:00	10:00
+10	Brisbane	+14 hours	28 Oct	28 Oct	28 Oct	28 Oct
+9	Kyoto, Tokyo	+13 hours	21:00 27 Oct	01:00 28 Oct	05:00 28 Oct	09:00 28 Oct
+8	Beijing, Hong Kong, Perth, Shanghai, Singapore	+12 hours	20:00 27 Oct	00:00 28 Oct	04:00 28 Oct	08:00 28 Oct
+3	Helsinki, Istanbul, Jerusalem, Moscow	+7 hours	15:00 27 Oct	19:00 27 Oct	23:00 27 Oct	03:00 28 Oct
+2	Berlin, Cairo, Oslo, Paris, Rome, Stockholm, Vienna, Zurich	+6 hours	14:00 27 Oct	18:00 27 Oct	22:00 27 Oct	02:00 28 Oct
+1	Lisbon, London	+5 hours	13:00 27 Oct	17:00 27 Oct	21:00 27 Oct	01:00 28 Oct
+0	Reykjavík	+4 hours	12:00 27 Oct	16:00 27 Oct	20:00 27 Oct	00:00 28 Oct
-3	Buenos Aires, Halifax, Rio de Janeiro, São Paolo	+1 hours	09:00 27 Oct	13:00 27 Oct	17:00 27 Oct	21:00 27 Oct
-4	Atlanta, Boston, Montréal, New York, Toronto, Washington	+o hours	08:00 27 Oct	12:00 27 Oct	16:00 27 Oct	20:00 27 Oct
-5	Bogota, Chicago, Mexico City, Nashville, Winnipeg	-1 hours	07:00 27 Oct	11:00 27 Oct	15:00 27 Oct	19:00 27 Oct
-6	Calgary, Edmonton, Denver, Salt Lake City	-2 hours	06:00 27 Oct	10:00 27 Oct	14:00 27 Oct	18:00 27 Oct
-7	Los Angeles, San Diego, San Francisco, Seattle, Vancouver	-3 hours	05:00 27 Oct	09:00 27 Oct	13:00 27 Oct	17:00 27 Oct
-10	Honolulu	-6 hours	02:00 27 Oct	06:00 27 Oct	10:00 27 Oct	14:00 27 Oct

See also

World clock

www.timeanddate.com/worldclock/full.html

Time zone converter

www.timeanddate.com/worldclock/converter.html

Quick reference timetable

The schedule reflects local time in

Montréal, Quebec, Canada Coordinated Universal Time (UTC) -4

Wednesday, 27 October 2021

	TAY 1	rma (011)	**************************************	
16:00-16:30	Welcome to ISPS 2021	UTC+11 07:00 (28th)	UTC+2 22:00 (27 th)	UTC-7 13:00 (27 th)
16:30-17:30	Keynote address	UTC+11 07:30 (28th)	UTC+2 22:30 (27 th)	UTC-7 13:30 (27 th)
	Megan Popovic			
	The duelling Ws: A paradox of winn	ing and/or wellbeing i	in professional hockey	7
17:30-18:00	Break	UTC+11 08:30 (28th)	UTC+2 23:30 (27 th)	UTC-7 14:30 (27 th)
	Kumospace			
18:00-19:30	Thematic sessions	UTC+11 09:00 (28th)	UTC+2 00:00 (28th)	UTC-7 15:00 (27 th)
	The arts and health			Stream A
	Capturing performance			Stream B
	The learning performer			Stream C
	Symposium: Reimagining performa	nce with immersive re	eality technologies	Stream D
19:30-20:00	Break	UTC+11 10:30 (28th)	UTC+2 01:30 (28th)	UTC-7 16:30 (27 th)
	Kumospace			
20:00-21:00	Performance	UTC+11 11:00 (28th)	UTC+2 02:00 (28th)	UTC-7 17:00 (27 th)
	Circus meets Music @ Schulich			

Thursday, 28 October 2021

08:00-09:30	Thematic sessions	UTC+11 23:00 (28th)	UTC+2 14:00 (28th)	UTC-7 05:00 (28th)	
	The arts and health			Stream A	
	Capturing performance			Stream B	
	The learning performer			Stream C	
	Symposium: The impact of Covid-19 on arts professionals Stream				
09:30-10:00	Break	UTC+11 00:30 (29 th)	UTC+2 15:30 (28th)	UTC-7 06:30 (28th)	
	Kumospace				
10:00-11:30	Thematic sessions	UTC+11 01:00 (29 th)	UTC+2 16:00 (28th)	UTC-7 07:00 (28th)	
	The arts and health			Stream A	
	Capturing performance			Stream B	
	The learning performer			Stream C	
	Symposium (cont.): The impact of C	ovid-19 on arts profes	sionals	Stream D	
11:30-12:00	Keynote Q&A	UTC+11 02:30 (29 th)	UTC+2 17:30 (28th)	UTC-7 08:30 (28th)	
	with Megan Popovic				
12:00-13:00	Lunch break	UTC+11 03:00 (29 th)	UTC+2 18:00 (28th)	UTC-7 09:00 (28th)	
	Kumospace				
13:00-14:30	Poster session 1	UTC+11 04:00 (29 th)	UTC+2 19:00 (28th)	UTC-7 10:00 (28th)	

14:30-16:00	Thematic sessions	UTC+11 05:30 (29 th)	UTC+2 20:30 (28th)	UTC-7 11:30 (28th)
	The arts and health			Stream A
	Capturing performance			Stream B
	The learning performer			Stream C
	Symposium: The impact of Covid-19	on music education a	nd sport	Stream D
16:00-16:30	Break	UTC+11 07:00 (29 th)	UTC+2 22:00 (28th)	UTC-7 13:00 (28th)
	Kumospace			
16:30-17:30	Keynote address	UTC+11 07:30 (29 th)	UTC+2 22:30 (28th)	UTC-7 13:30 (28th)
	Nadia Azar (University of Windsor)			
	Injury prevention considerations for	drum set performanc	e	
17:30-18:00	Break	UTC+11 08:30 (29 th)	UTC+2 23:30 (28th)	UTC-7 14:30 (28th)
	Kumospace			
18:00-19:30	Thematic sessions	UTC+11 09:00 (29 th)	UTC+2 00:00 (29 th)	UTC-7 15:00 (28th)
	Capturing performance			Stream B
	The learning performer			Stream C
	The learning performer			Stream D
19:30-20:30	Roundtable 1	UTC+11 10:30 (29 th)	UTC+2 01:30 (29 th)	UTC-7 16:30 (28th)
	Applying performance science in music education: Are current settings, policies, and practices fostering wellbeing?			

Friday, 29 October 2021

				,
08:00-09:30	Thematic sessions	UTC+11 23:00 (29 th)	UTC+2 14:00 (29 th)	UTC-7 05:00 (29 th)
	The arts and health			Stream A
	Capturing performance			Stream B
	The learning performer			Stream C
	Symposium: Training musicians in p	psychological flexibilit	y	Stream D
09:30-10:00	Keynote Q&A	UTC+11 00:30 (30 th)	UTC+2 15:30 (29 th)	UTC-7 06:30 (29 th)
	with Nadia Azar (University of Wind	lsor)		
10:00-11:30	Thematic sessions	UTC+11 01:00 (30th)	UTC+2 16:00 (29 th)	UTC-7 07:00 (29 th)
	The arts and health			Stream A
	Capturing performance			Stream B
	The learning performer			Stream C
	The arts and health			Stream D
11:30-13:30	Lunch break	UTC+11 02:30 (30 th)	UTC+2 17:30 (29 th)	UTC-7 08:30 (29th)
	Kumospace			
13:30-14:30	Graduate award paper	UTC+11 04:30 (30 th)	UTC+2 19:30 (29 th)	UTC-7 10:30 (29 th)
	Tuula Jääskeläinen (University of th	ne Arts Helsinki)		
	Music students' workload, stress, an	d coping in higher edu	ıcation: Evidence-bas	ed policymaking
14:30-16:00	Thematic sessions	UTC+11 05:30 (30 th)	UTC+2 20:30 (29 th)	UTC-7 11:30 (29 th)
	The arts and health			Stream A
	Capturing performance			Stream B
	The learning performer			Stream C
	The learning performer			Stream D

16:00-16:30	Break	UTC+11 07:00 (30 th)	UTC+2 22:00 (29 th)	UTC-7 13:00 (29 th)	
	Kumospace				
16:30-17:30	Keynote address	UTC+11 07:30 (30 th)	UTC+2 22:30 (29 th)	UTC-7 13:30 (29 th)	
	Gerald Fried (McGill University) Acquiring expertise in surgery: From simulation to artificial intelligence				
17:30-18:00	Break	UTC+11 08:30 (30th)	UTC+2 23:30 (29 th)	UTC-7 14:30 (29 th)	
	Kumospace				
18:00-19:30	Poster session 2	UTC+11 09:00 (30 th)	UTC+2 00:00 (30th)	UTC-7 15:00 (29 th)	
19:30-20:30	Roundtable 2	UTC+11 10:30 (30th)	UTC+2 01:30 (30 th)	UTC-7 16:30 (29 th)	
	Lessons learned from a career leading, managing, and studying circus arts:				
	A discussion about inclusion, divers	ity, resilience, and cre	ativity		

Saturday, 30 October 2021

08:00-09:00	Keynote address	UTC+11 23:00 (30th)	UTC+2 14:00 (30th)	UTC-7 05:00 (30th)			
	Margaret Osborne (University of M Windows to wellbeing: Insights from		science				
09:00-09:30	Break	UTC+11 00:00 (31st)	UTC+2 15:00 (30th)	UTC-7 06:00 (30th)			
	Kumospace						
09:30-11:00	Thematic sessions	UTC+11 00:30 (31st)	UTC+2 15:30 (30 th)	UTC-7 06:30 (30 th)			
	The arts and health Capturing performance The learning performer Symposium: Transdisciplinary appr	roaches to optimize pe	rformance in circus a	Stream A Stream B Stream C t Stream D			
11:00-11:30	Keynote Q&A with Gerald Fried (McGill Universit	UTC+11 02:00 (31 st)	UTC+2 17:00 (30 th)	UTC-7 08:00 (30 th)			
11:30-13:00	Thematic sessions	UTC+11 02:30 (31st)	UTC+2 17:30 (30 th)	UTC-7 08:30 (30 th)			
	The arts and health Capturing performance The learning performer Symposium (cont.): Transdisciplina	ary approaches to optin	nize performance in c	Stream A Stream B Stream C ircus art Stream D			
13:00-14:00	Lunch break Kumospace	UTC+11 04:00 (31st)	UTC+2 19:00 (30 th)	UTC-7 10:00 (30 th)			
14:00-15:30	Poster session 3	UTC+11 05:00 (31st)	UTC+2 20:00 (30 th)	UTC-7 11:00 (30 th)			
15:30-16:00	Keynote Q&A with Margaret Osborne (University	UTC+11 08:00 (31st) of Melbourne)	UTC+2 23:00 (30 th)	UTC-7 14:00 (30 th)			
16:00-16:30	Closing remarks	UTC+11 08:30 (31st)	UTC+2 23:30 (30 th)	UTC-7 14:30 (30 th)			

Wednesday, 27 October 2021

Montréal	Melbourne/Sydney	Berlin	n/Paris I	os Angeles/Vancouver
16:00-16:30	UTC+11 07:00 (28 th	UTC+2 2:	2:00 (27 th)	UTC-7 13:00 (27 th)
		WELCOME ?	ΓΟ ISPS 2021	
		Four	waves	
16:30-17:30	UTC+11 07:30 (28th	UTC+2 2:	2:30 (27 th)	UTC-7 13:30 (27 th)
		KEYNOTE	ADDRESS	
		Megan	Popovic	
	A par	The due	lling Ws: vellbeing in professional l	nockey
		Che	air:	
		Colin I	Lawson	
		Four	waves	
17:30-18:00	UTC+11 08:30 (28 th	UTC+2 2	3:30 (27 th)	UTC-7 14:30 (27 th)
		BRI	EAK	
		Kumo	ospace	
18:00-19:30	UTC+11 09:00 (28th	UTC+2 00	0:00 (28 th)	UTC-7 15:00 (27 th)
	THEMATIC SESSION	THEMATIC SESSION	THEMATIC SESSION	SYMPOSIUM
	The arts and health	Capturing performance	The learning performer	Reimagining performance with immersive reality technologies
	Chair: Aaron Williamon	Chair: Caroline Palmer	Chair: Fernando Gualda	Chair: Isabelle Cossette
	Stream A	Stream B	Stream C	Stream D
	Ackermann et al. An integrated interdisciplinary approach to managing complex embouchure dysfunction in brass players	Verdugo et al. Dynamic posture and range of motion of expert pianists' while performing digital and chord tasks	Parsons et al. Promoting wellbeing through focus of attention in self-directed practice	Cochrane et al. Design principles for immersive reality to enhance creativity and performance through transdisciplinary collaboration
	Macdonald et al. One size fits none: What oboists' injuries can tell us about managing musicians' health	Tsimiklis et al. Perception of touch variation in piano keys	Blackwell et al. A PRISMA review of research on feedback in music education and music psychology	Glasser et al. Reimagining the performance experience through the establishment of a virtual performance hall
	<u>Walker et al.</u> The social impact of 1:1 concerts in Australia	Turner et al. A case comparison of three pianists: Examining trunk and hand coordination in piano performance	Mazzarolo et al. What is the most effective strategy for coping with music performance anxiety? A review of the literature	Osborne et al. Exploring opportunities for musician's health and performance enhancement using VR simulation training

19:30-20:00	UTC+11 10:30 (28th)	UTC+2 01:30 (28 th)	UTC-7 16:30 (27 th)
			SYMPOSIUM (cont.)
		BREAK	Stream D
	Then	Open discussion Themed discussion Kumospace	
20:00-21:00	Robert Coo	UTC+2 02:00 (28th) PERFORMANCE RCUS MEETS MUSIC @ SCHULIC Artists: okson (Cyr Wheel), Santiago Rivera ost (Contortion), and Jean-Michel P	(Juggling),
		Fourwaves	

Thursday, 28 October 2021

Montréal	Melbourne/Sydney	Berlin	/Paris Lo	os Angeles/Vancouver
08:00-09:30	UTC+11 23:00 (28 th	UTC+2 14	4:00 (28 th)	UTC-7 05:00 (28th)
	THEMATIC SESSION	THEMATIC SESSION	THEMATIC SESSION	SYMPOSIUM
	The arts and health	Capturing performance	The learning performer	The impact of Covid-19 on arts professionals
	Chair: Isabelle Cossette	Chair: Gary Scavone	Chair: Frédéric Marin	Chair: Rosie Perkins
	Stream A	Stream B	Stream C	Stream D
	Altenmüller et al. Thirty years of treating musicians with dystonia: Light at the end of the tunnel	Stambaugh A motion capture study of the development of woodwind motor skills	MacRitchie et al. Assistive technologies for people living with dementia to engage with the arts	Spiro et al. Snapshots of work and wellbeing of arts professionals in the UK during Covid-19
	Detari et al. Towards a holistic understanding of musician's focal dystonia	Türk-Espitalier et al. The effect of expiratory muscle strength training on the performance of trumpet players	Lam OccuPain: Rethinking occupational pain for performing artists	Shaughnessy et al. The future of the cultural workforce: Exploring the value of the arts in a post-Covid-19 world
	Loria et al. Music-based rehabilitation improves paretic limb control in chronic stroke	Traser et al. Comparative study of respiratory kinematics during phonation of female and male singers using dynamic MRI	Bacon Accessible scores: What ergonomic design can teach us about contemporary music	Waddell et al. Changes in technology use to engage with the arts among the UK public and arts professionals in lockdown
09:30-10:00	UTC+11 00:30 (29 th	UTC+2 15	5:30 (28 th)	UTC-7 06:30 (28th)
		BRI	EAK	
		Kumo	ospace	
10:00-11:30	UTC+11 01:00 (29 th	UTC+2 16	5:00 (28 th)	UTC-7 07:00 (28 th)
	THEMATIC SESSION	THEMATIC SESSION	THEMATIC SESSION	SYMPOSIUM
	The arts and health	Capturing performance	The learning performer	(cont.)
	Chair: Tânia Lisboa	<i>Chair:</i> Laura Stambaugh	<i>Chair:</i> Isabelle Héroux	Chair: Rosie Perkins
	Stream A	Stream B	Stream C	Stream D
	Guptill et al. Development and validation of the musicians' health literacy tool MHL Q19	Röijezon et al. A methodological framework for multimodal and multidisciplinary study of the role of posture and gesture in music performance	Zammit et al. Optimizing performance: Pre- performance routines in professional classical instrumentalists	Altenmüller et al. Studying music during the Coronavirus pandemic: Conditions of studying and health- related challenges

10:00-11:30	UTC+11 01:00 (29 ^t	UTC+2 16	5:00 (28 th)	UTC-7 07:00 (28th)
	THEMATIC SESSION	THEMATIC SESSION	THEMATIC SESSION	SYMPOSIUM
	(cont.)	(cont.)	(cont.)	(cont.)
	Stream A	Stream B	Stream C	Stream D
	<u>Cilingir et al.</u> Microorganism found in brass instruments	Liley Strength and the symbolic universe: Cultural values, occupational health, and piano technique pedagogy	Passarotto et al. Measuring improvements in music performance through a new multi-perspective assessment protocol	Cohen et al. Follow-up study of the impact of Covid-19 on the lives of freelance orchestral musicians: A year on
	Boissinot et al. Effect of hearing protection use on pianists' performance and experience	Allingham et al. Effects of attentional focus on violin tone production: Physiological, physical, and acoustical outcomes	Acquilino et al. Current state and future directions of technologies for music instrument pedagogy	Cartwright et al. An assessment of dancers participating in a competitive ecosystem while facing restrictions imposed by Covid-19
11:30-12:00	UTC+11 02:30 (29 ^t	UTC+2 17	7:30 (28 th)	UTC-7 08:30 (28th)
		KEYNO	TE Q&A	
		Megan	Popovic	
		Four	waves	
12:00-13:00	UTC+11 03:00 (29 ^t	h) UTC+2 18	3:00 (28th)	UTC-7 09:00 (28th)
		LUNCH	BREAK	
		Kumo	ospace	
13:00-14:30	UTC+11 04:00 (29 ^t			UTC-7 10:00 (28 th)
			SESSION 1	
			waves	
	Dall I and all I a			
		uence of genetic predispos		usician's dystonia
	Enright Act	ive music and young adult	wellbeing	
		etude for post-pandemic p ming instrumental technic	_	e COVID-19 pandemic on
		dence for non-neutral upp elopment of playing-relate	_	
		ticipatory singing and the iety: An (inter)-(re)-(action	-	uildren in a (post) COVID
		lluating music students' ex ing the coronavirus pande		n-oriented seminars
		ummers' trunk and upper l ocity cymbal crashes	imb muscle activation pro	ofiles during high-

13:00-14:30	UTC+11 04:00 (29 th	UTC+2 19	9:00 (28 th)	UTC-7 10:00 (28 th)		
		POSTER S	SESSION 1			
		(co	nt.)			
		nges in botulinum toxin t tinuous long-term treatme	reatment of musician's dy ent	stonia during		
	Marin et al. TiSI	MoC: Ecological timpani r	mallets motion capture			
	Spahn et al. Mer	Mental health and behavior of music students during the coronavirus pandemi				
		assing fatigue-induced ch amic assistive support	anges in violinists' upper-	limb biomechanics with		
14:30-16:00	UTC+11 05:30 (29 th	UTC+2 20	0:30 (28 th)	UTC-7 11:30 (28th)		
	THEMATIC SESSION	THEMATIC SESSION	THEMATIC SESSION	<u>SYMPOSIUM</u>		
	The arts and health	Capturing performance	The learning performer	The impact of Covid-19 on music education and sport		
	Chair:	Chair:	Chair:	Chair:		
	Isabelle Héroux	Caroline Traube	Caroline Palmer	Andrea Creech		
	Stream A	Stream B	Stream C	Stream D		
	Mornell <i>et al.</i> Attitudes, aspirations, and identities of music students in 2021	Loria et al. Assessing mallet endpoint accuracy in four mallet marimba performance	Bishop Musical togetherness: The social and artistic rewards of ensemble playing	Schiavio Reshaping musical creativity and peer- interaction during the Covid-19 lockdown		
	Lubert et al. Psychological interventions to enhance self-efficacy and performance under pressure in the performing arts	Marci et al. Effects of handedness on percussionists' sticking strategy	<u>Güsewell <i>et al.</i></u> musicdrops@work	Biasutti Teaching music online during the Covid-19 lockdown: Teachers' views		
	Matei How do conservatoire musicians see their health and wellbeing? A qualitative study based in Romania	Fernandes Santos et al. Ancillary gestures and learning process in music performance	Sienkiewicz Comfortable enough for discomfort: The crafting and theoretical impact of psychological safety in musical ensembles	Antonini Philippe Interpersonal relationships during Covid-19 lockdown: Which impact in music and sport		
16:00-16:30	UTC+11 07:00 (29 th	UTC+2 2:	2:00 (28 th)	UTC-7 13:00 (28th)		
		BRI	EAK			
		Kumo	ospace			

16:30-17:30	UTC+11 07:30 (29 th)) UTC+2 2:	2:30 (28 th)	UTC-7 13:30 (28 th)			
		KEYNOTE					
	Nadia Azar (University of Windsor)						
		n considerations performance					
		Chair: Fabrice Marandola					
		Four	waves				
17:30-18:00	UTC+11 08:30 (29 th)) UTC+2 2;	3:30 (28 th)	UTC-7 14:30 (28th)			
		BRI	EAK				
		Kumo	ospace				
18:00-19:30	UTC+11 09:00 (29 th) UTC+2 00	0:00 (29 th)	UTC-7 15:00 (28th)			
		THEMATIC SESSION	THEMATIC SESSION	THEMATIC SESSION			
		Capturing performance	The learning performer	The learning performer			
		<i>Chair:</i> Shannon Wright	Chair: Véronique Richard	Chair: Bronwen Ackermann			
	Stream A	Stream B	Stream C	Stream D			
		Goubault et al. Prediction of effort perception using inertial sensors during the repetition of measure 119 of Franz Liszt's Ballade No. 2	Simmons et al. Music practice as vehicle of personal agency, efficacy, and wellbeing	Cesar Alves et al. Domains of the expert teacher's competency in music performance			
		Lipke-Perry et al. Performance variability and expressivity "norms" in great pianists performing selections from Bach's WTC, Book I	Antunes Flores et al. Divergent thinking and piano performance: Fostering both creativity and wellbeing	Héroux et al. Do you think of a sunrise while playing a crescendo?			
		Shoda Pianists' physiological synchrony in a public performance of a four- hand repertoire: A case study of Ravel's "Rapsodie Espagnole"	Balgue et al. Experiences of everyday flow and their impact on wellbeing	dos Santos Silva et al. Daily practice among music major undergraduate students: Learning strategies and self- regulated learning			

19:30-20:30	UTC+11 10:30 (29 th)	UTC+2 01:30 (29th)	UTC-7 16:30 (28th)			
		ROUNDTABLE 1				
	=	Clinics of Canada), Gilles Comea University), and Margaret Osborne				
	***	Applying performance science in music education: Are current settings, policies, and practices fostering wellbeing?				
		<i>Chair:</i> Aaron Williamon				
		Fourwaves				

Friday, 29 October 2021

Melbourne/Sydney	Berlin	/Paris Lo	os Angeles/Vancouver
UTC+11 23:00 (29 th) UTC+2 14	4:00 (29 th)	UTC-7 05:00 (29 th)
THEMATIC SESSION	THEMATIC SESSION	THEMATIC SESSION	<u>SYMPOSIUM</u>
The arts and health	Capturing performance	The learning performer	Training musicians in psychological flexibility
<i>Chair:</i> Krzysztof Dąbrowski	<i>Chair:</i> George Waddell	<i>Chair:</i> Neta Spiro	Chair: Véronique Richard
Stream A	Stream B	Stream C	Stream D
Detari et al. An intervention study exploring the impact of "Timani" on self-efficacy, performance, and performance-related problems in students in Norway	Sidiropoulos et al. Sound, motion, and the brain: Movement improvisation and brain activity in artistic dialogue	Harley et al. A directed content analysis of attention distribution during string quartet performance	Juncos et al. A review of acceptance and commitment therapy as a psychotherapeutic intervention
Christensen Health and wellness in music education: The cycle of achievement culture	Nusseck et al. Analysis of correlations between body movements and acoustic parameters in clarinet playing	Bairnsfather <u>et al.</u> Investigating the relationship between childhood musical practice and pitch- naming ability	Osborne et al. Comparing general measures as a predictor of outcomes within music performance and practice
Panebianco et al. Health education for music students in South Africa: Design and evaluation	D'Amario et al. Judging togetherness in professional duo performances: Eye-gaze behavior and sound intensity effects	Madden et al. Regulating emotions to support the pursuit of musical practice goals	Mahony et al. Acceptance and commitment coaching as a non-clinical intervention for MPA in university settings
UTC+11 00:30 (30 th		5:30 (29 th)	UTC-7 06:30 (29 th)
	KEYNO	TE Q&A	
	Nadia Azar (Univ	ersity of Windsor)	
	Four	waves	
UTC+11 01:00 (30th) UTC+2 16	5:00 (29 th)	UTC-7 07:00 (29 th)
THEMATIC SESSION	THEMATIC SESSION	THEMATIC SESSION	THEMATIC SESSION
The arts and health	Capturing performance	The learning performer	The arts and health
Chair: Caitlin Shaughnessy	Chair: Gary Scavone	<i>Chair:</i> George Waddell	Chair: Neta Spiro
Stream A	Stream B	Stream C	Stream D
Rose et al. Hard work and hopefulness: Music students' health and wellbeing as they enter specialized higher	Tan et al. Temporospatial alterations in mallet and elbow movements underly motor learning in four-mallet marimba	Pelletier Just beat it: A novel musical test battery to quantify rhythmic integrity, sight-reading accuracy, and musical	Ranaweera et al. Professional musicians' health and wellbeing: The leisure perspective
	THEMATIC SESSION The arts and health Chair: Krzysztof Dąbrowski Stream A Detari et al. An intervention study exploring the impact of "Timani" on self-efficacy, performance, and performance-related problems in students in Norway Christensen Health and wellness in music education: The cycle of achievement culture Panebianco et al. Health education for music students in South Africa: Design and evaluation UTC+11 00:30 (30th THEMATIC SESSION The arts and health Chair: Caitlin Shaughnessy Stream A Rose et al. Hard work and hopefulness: Music students' health and wellbeing as they enter	THEMATIC SESSION The arts and health Chair: Krzysztof Dąbrowski Stream A Detari et al. An intervention study exploring the impact of "Timani" on selfefficacy, performance, and performance-related problems in students in Norway Christensen Health and wellness in music education: The cycle of achievement culture Panebianco et al. Health education for music students in South Africa: Design and evaluation THEMATIC SESSION The arts and health Chair: George Waddell Sound, motion, and the brain: Movement improvisation and brain activity in artistic dialogue Nusseck et al. Analysis of correlations between body movements and acoustic parameters in clarinet playing D'Amario et al. Judging togetherness in professional duo performances: Eye-gaze behavior and sound intensity effects UTC+11 00:30 (30th) UTC+2 15 KEYNO Nadia Azar (Universional duo performance chair: Caitlin Shaughnessy Stream A Stream B THEMATIC SESSION Capturing performance Chair: Caitlin Shaughnessy Stream A Stream B The arts and hopefulness: Music students' health and wellbeing as they enter specialized higher Temporospatial alterations in mallet and elbow movements underly motor learning in four-mallet marimba	THEMATIC SESSION The arts and health Chair: Krzysztof Dąbrowski Stream A Detari et al. An intervention study exploring the impact of "Timani" on self-efficacy, performance, and performance, related problems in students in Norway Christensen Health and wellness in music education: The cycle of achievement culture Panebianco et al. Health education for music students in South Africa: Design and evaluation THEMATIC SESSION THEMATIC SESSION THEMATIC SESSION The arts and health Chair: Capturing performer Chair: George Waddell Sidiropoulos et al. Sound, motion, and the brain: Movement improvisation and brain activity in artistic dialogue Sidiropoulos et al. An intervention study exploring the impact of "Timani" on self-efficacy, performance, and et villaging active to improvisation and brain activity in artistic dialogue Nusseck et al. Analysis of correlations between body movements and acoustic parameters in clarinet playing D'Amario et al. Judging togetherness in professional duo performances: Eye-gaze behavior and sound intensity effects UTC+11 00:30 (30th) UTC+2 15:30 (29th) KEYNOTE Q&A Nadia Azar (University of Windsor) Fourwaves UTC+11 01:00 (30th) THEMATIC SESSION The arts and health Chair: Caitlin Shaughnessy Stream A Stream B Stream C THEMATIC SESSION The arts and health Chair: Caitlin Shaughnessy Stream A Stream B Stream C Temporospatial alterations in mallet and elbow movements underly motor learning in four-mallet marimba alterations in mallet and elbow movements underly motor learning in four-mallet marimba and countries and the performance integrity, sight-reading in feur-mallet marimba

10:00-11:30	UTC+11 01:00 (30th	UTC+2 16	5:00 (29 th)	UTC-7 07:00 (29 th)	
	THEMATIC SESSION (cont.) Stream A	THEMATIC SESSION (cont.) Stream B	THEMATIC SESSION (cont.) Stream C	THEMATIC SESSION (cont.) Stream D	
	Altenmüller et al. Health status of music students in 2002 and in 2017-19: Evaluation of a comprehensive health and prevention program for students in a German music university	Pranjić et al. Limb velocity variability determines mallet accuracy in marimba performance	Borges et al. The stimuli generated by binaural and non-binaural recording methods in the perception of music performance	de los Santos et al. The awakening of vocal (tele)practice in difficult times	
	de Cañete García et al. A study investigating how students' engagement influences wellbeing effects with the self-determination theory as mediating theoretical approach	<u>Dabrowski et al.</u> Significance of morphology of sesamoid bones in keyboard musicians	Höppner et al. Increased precision of spatial representation in musicians	Wright <i>et al</i> . Chronotype and daily music performance	
11:30-13:30	UTC+11 02:30 (30 th			UTC-7 08:30 (29th)	
		LUNCH Kumo			
13:30-14:30	UTC+11 04:30 (30 th			UTC-7 10:30 (29 th)	
		GRADUATE A	WARD PAPER		
]	Tuula Jääskeläinen (Unive	ersity of the Arts Helsinki)	
	Music s	tudents' workload, stress Evidence-based		ıcation:	
	Th	e ISPS 2021 Graduate Ai	ward Paper is sponsored	by	
	frontiers				
	Chair: Brenda Ravenscroft				
		Four	waves		

14:30-16:00	UTC+11 05:30 (30 th)) UTC+2 20	0:30 (29 th)	UTC-7 11:30 (29 th)			
	THEMATIC SESSION	THEMATIC SESSION	THEMATIC SESSION	THEMATIC SESSION			
	The arts and health	Capturing performance	The learning performer	The learning performer			
	<i>Chair:</i> Krzysztof Dąbrowski	Chair: Christine Guptill	Chair: Fernando Gualda	Chair: Andrea Creech			
	Stream A	Stream B	Stream C	Stream D			
	Ascenso et al. A "creative industry"?: Classical musicians' basic psychological needs at work	Jones et al. Measuring and modelling performed accents in Western art music melodies	<u>Heuser</u> Music learning: A representational hypothesis	Paolantonio et al. Group music making with residents in nursing homes: Investigating the experience of higher education music students			
	Morgan Common cents: The experiences of low- income students in high-profile conservatoires	Bedoya et al. Towards a set of conventions for representing and annotating musical prosody	Peistaraite et al. Empowered musicians: Emotional agility in the complex occupational lives of musicians	Chappell et al. The aesthetic, artistic, and creative contributions of dance for health and wellbeing across the lifecourse: A systematic review			
	MacKie et al. Factors contributing to a healthier teacher/student relationship within one-to-one piano tuition	Pedrosa Choro idiomatic characteristics in the Choro-Waltz for solo bassoon by Francisco Mignone	López-Íñiguez Performing musicians as lifelong learners: A policy window to strengthen professionalism in higher music education	Barbeau et al. A leap of faith: Online music-making in community concert bands			
16:00-16:30	UTC+11 07:00 (30 th) UTC+2 2:	2:00 (29 th)	UTC-7 13:00 (29 th)			
	,						
			EAK ospace				
16:30-17:30	UTC+11 07:30 (30 th)		2:30 (29 th)	UTC-7 13:30 (29 th)			
	KEYNOTE ADDRESS Gerald Fried (McGill University)						
	Acquiring expertise in surgery: From simulation to artificial intelligence						
	Chair: Isabelle Cossette						
	Fourwaves						
17:30-18:00	UTC+11 08:30 (30 th) UTC+2 2	3:30 (29 th)	UTC-7 14:30 (29 th)			
		BR	EAK				
			ospace				

18:00-19:30	UTC+11 09:0	o (30th)	UTC+2 00:00 (30 th)	UTC-7 15:00 (29 th)			
			POSTER SESSION 2				
	<u>Asakura</u>		re and enjoyable training program for ied with their bodily movements	the elderly: Singing songs			
	Bertacco et al.	tacco et al. Musicians facing the pandemic: Mental health, wellbeing, and					
	Canazza et al.	The magne	The magnetic urtext: Restoration as music interpretation				
	Forbes et al.	The impac	t of exposure to vocal performances o	n singing self-concept			
	<u>Funakoshi et al.</u>	Analysis o	f music elements and feelings for each	n movie scene			
	<u>Hanrahan</u>	Sing their experience	words: Student-based imagery for an	inclusive applied voice			
	<u>Hashida et al.</u>	A study of viewpoints	phrase structure perception of listeni	ng with audio and visual			
	<u>Lin</u>	Ars combinatoria in George Rochberg's Caprice Variations for Solo Violin (1970)					
	<u>Matherne</u>		ng wellbeing and participation in Flor te PERMA framework	orida New Horizons ensembles			
	McDonald et al.	Colors of t	he music: Emotional enhancement of ing	music performance through			
	Xiong	A perform Puck	ance history of tempo and timing in C	Claude Debussy's La danse de			
	<u>Yamasaki et al.</u>	Purposes of	of collective performance activities and	d the promotion of wellbeing			
	Yuxiang	Influence of	of harmonic loudness on piano timbre	e preference			
19:30-20:30	UTC+11 10:3	o (30th)	UTC+2 01:30 (30 th)	UTC-7 16:30 (29 th)			
			ROUNDTABLE 2				
	Pat	rice Aubertir	n (CRITAC), Dean Kriellaars (Univers and Bernard Petiot (Cirque du Soleil)	-			
			om a career leading, managing, and s about inclusion, diversity, resilience,				
			<i>Chair:</i> Véronique Richard (CRITAC)				
			Fourwaves				

Saturday, 30 October 2021

Montréal	Melbourne/Sydney	Berlin	/Paris	Los Angeles/Vancouver				
08:00-09:00	UTC+11 23:00 (30 th	UTC+11 23:00 (30 th) UTC+2 14:00 (30 th)		UTC-7 05:00 (30th)				
	KEYNOTE ADDRESS							
	Margaret Osborne (University of Melbourne)							
	Windows to wellbeing:							
			performance science					
		Che	air:					
		Aaron W	illiamon					
		Four	waves					
09:00-09:30	UTC+11 00:00 (31st) UTC+2 15	5:00 (30 th)	UTC-7 06:00 (30th)				
		BRI	EAK					
		Kumo	ospace					
09:30-11:00	UTC+11 00:30 (31st) UTC+2 15	5:30 (30 th)	UTC-7 06:30 (30th)				
	THEMATIC SESSION	THEMATIC SESSION	THEMATIC SESSION	SYMPOSIUM				
	The arts	Capturing	The learning	Transdisciplinary				
	and health	performance	performer	approaches to				
				optimize performance				
				in circus art				
	Chair:	Chair:	Chair:	Chair:				
	Krzysztof Dąbrowski	Fabrice Marandola	Laura Stambaugh	Terry Clark				
	Stream A	Stream B	Stream C	Stream D				
	<u>Barros et al.</u>	Morihara et al.	<u>Wopereis</u>	Richard et al.				
	Mapping music	The effect of sharing	Revealing the	A holistic and				
	performance anxiety in	time and space on	knowledge of musical	integrative model of				
	Portuguese higher	heart-rate synchrony	experts on	creative potential				
	education institutions	during dyadic drum	improvisational					
		interactions	expertise					
	<u>Chang-Arana</u>	Yang	<u>Kinghorn et al.</u>	Cossin <i>et al</i> .				
	"Will they notice?" A	Musical performance	Strategies for music	An innovative				
	pilot study on the	style of Viennese waltz:	memorization: Effects					
	perception of music	A case study of the Blue	of contextual	perspective				
	performance anxiety	Danube by Johann	interference during					
		Strauss II	practice					
	<u>Logan et al.</u>	Morrison et al.	Domingues et al.	<u>Dupéré</u>				
	Integrative approach to	Relationship of	Musical performance					
	the management and	auditory and visual	improvement and	perspective				
	treatment of MPA in	information examined	training: Strategies and	d				
	the university music	using preference	reflections					
	school setting	between temporally						
		offset paired music						
		performances						

11:00-11:30	UTC+11 02:00 ((31 st)	UTC+2 17	7:00 (30 th)	UTC-7 08:00 (30th)			
		KEYNOTE Q&A						
			Gerald Fried (M	cGill University)				
			Four	waves				
11:30-13:00	UTC+11 02:30 ((31 st)	UTC+2 17	7:30 (30 th)	UTC-7 08:30 (30th)			
	THEMATIC SESSIO	<u>N</u>	THEMATIC SESSION	THEMATIC SESSION	SYMPOSIUM			
	The arts and health		Capturing performance	The learning performer	(cont.)			
	Chair: Aaron Williamon		<i>Chair:</i> John MacMaster	Chair: George Waddell	Chair: Terry Clark			
	Stream A		Stream B	Stream C	Stream D			
	Magrin-Chagnolleau Artistic workshops with patients of a day psychiatric hospital in France		Marchand Knight <i>et al.</i> Effects of bulimia nervosa on the voice	Sekar "An audience member's a performer too": Towards a theory of aliveness	Théberge <i>et al.</i> A social innovative perspective			
	Lisboa et al. How music support families affected by ZIKA virus in Brazi	v il	Johnson The effects of drama on the singing voice: A study of acoustics in singing with emotions in both a rehearsed and unrehearsed setting	Pras et al. Production as performance in Bamako recording studios (Mali)	Stuckey et al. An embodied circus model			
	<u>Schutz</u> Musical insights to improve healthcare technology		Smith et al. Interpersonal practices in individualized voice teaching		Discussion			
13:00-14:00	UTC+11 04:00 (31st) UTC+2 19:00 (30th) UTC-7 10:00 (30th)							
	LUNCH BREAK							
	Kumospace							
14:00-15:30	UTC+11 05:00 (31st) UTC+2 20:00 (30th) UTC-7 11:00 (30th)							
	POSTER SESSION 3							
	Fourwaves							
	Boaventura et al.	technique						
	Brasil <i>et al.</i> On the cornerstone of belief: Parallels and implications of the human co- for musical performance							
	dos Santos Voice lessons using Alexander Technique: Thoughts on research limitations an Monteiro Palmeira possible solutions							
	<u>Draginda et al.</u> A Riemannian approach to performance expression							
	Kosirnik <i>et al.</i> Self-compassion and the performer's environment: A winning combo for wellbeing in the performing arts and artistic sports							

14:00-15:30	UTC+11 05:00 (31st)		UTC+2 20:00 (30 th)	UTC-7 11:00 (30th)	
			POSTER SESSION 3		
			(cont.)		
	<u>Lam</u>		and resilience in musicians: An exploration of the use of coping es and the development of psychological resilience		
	Leshem et al.	Musical collaborations during Covid-19: How remote music making process affects jazz musicians' experience, communication, social dynamics, and musical decisions?			
	Louven et al.		th Web: Continuous real-time rating of n s with connected mobile devices	nusic, videos, and live	
	Munday et al.	_	tive investigation into the negotiation of ra singers	performance challenges by	
	Nestorova et al.	<u>et al.</u> Analysis and interpretation of complex vibrato patterns: A novel parametric approach to genre-specific performance			
	Scholle et al.		tters to win? A qualitative interview studer-songwriter slam	ly about the evaluation criteria	
	<u>Tardif</u>		aching practices effects on students' mus room wellbeing in an elementary school	-	
15:30-16:00	UTC+11 08:0	o (31st)	UTC+2 23:00 (30 th)	UTC-7 14:00 (30th)	
			KEYNOTE Q&A		
		M	argaret Osborne (University of Melbour	ne)	
			Fourwaves		
16:00-16:30	UTC+11 08:3	o (31st)	UTC+2 23:30 (30 th)	UTC-7 14:30 (30th)	
		CLOSING REMARKS			
	Fourwaves				

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The Schulich School of Music of McGill University embodies the highest international standards of excellence in professional training and research in an inclusive and inspiring environment. Renowned for its orchestral, wind, percussion, contemporary music, choral, opera, jazz, chamber, and early music ensembles, the Schulich School of Music presents more than 700 concerts and events each year. A leadership position in sound recording and music technology provides unique possibilities for collaboration with the larger musical community. Canada's largest music school, founded in 1904, is home to over 800 students, who are drawn here by our faculty of more than 200 distinguished professors, extensive variety of performance opportunities, and programs in disciplinary and interdisciplinary research, in applied performance science and pedagogy as well as technology.

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Centre for Performance Science Royal College of Music | Imperial College London

The CPS is an ambitious collaboration of the Royal College of Music and Imperial College London aimed at tackling major challenges of performance across a wide array of domains, from the arts, business, and sports to medicine, engineering, and natural sciences. Our vision is that by understanding how skilled performers meet the distinctive challenges of their work, often under intense stress and public scrutiny, performance will serve both as a source of inspiration and a rich resource for research.

www.PerformanceScience.ac.uk

Centre for Interdisciplinary Research in Music Media and Technology (CIRMMT)

CIRMMT is a multi-disciplinary research group that seeks to develop innovative approaches to the scientific study of music media and technology, to promote the application of newer technologies in science and the creative arts, and to provide an advanced research training environment. The CIRMMT community is interested in research that spans a wide range of topics from the creation of music in the composer's or performer's mind, the performance of music, its recording and/or transmission, and the reception of music by the listener. CIRMMT members also work in areas such as the science of performance and the ways in which senses, such as vision, touch and hearing, and haptics interact with music and sound.

CIRMMT is hosted at the Schulich School of Music, McGill University. It unites researchers and their students from several Quebec institutions: McGill University, l'Université de Montréal, l'Université de Sherbrooke, l'École de technologie supérieure, Concordia University, UQAM, INRS, and Marianopolis College.

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