Karolinska Institutet is one of the world's foremost medical universities. Our vision is to advance knowledge about life and strive towards better health for all. As a university, KI is Sweden's single largest centre of medical academic research and offers the country's widest range of medical courses and programmes. Since 1901 the Nobel Assembly at Karolinska Institutet has selected the Nobel laureates in Physiology or Medicine.



Brain and Culture

Symposium Program 2019







Program

- 9:00 9:15 Welcome, Anders Gustafsson, KI Vice President for Research
- 9:15 9:25 Balettakademien, dance
- 9:25 10:15 Robert Zatorre: Music and the reward system: function and dysfunction
- 10:15 10:25 Balettakademien, dance
- 10:25 10:55 Coffee
- 10:55 11:45 Charles Spence: Gastrophysics- the new science of the table

--- Lunch ----

- **13:00 13:50** Yulia Kovas: Gene-environment interplay in education and achievement
- 13:50 14:00 Sofia Karlsson, song
- **14:00 14:50** Dean Simonton: Origins of genius creativity in science and the arts
- 14:50 15:00 Sofia Karlsson, song
- 15:00 15:30 Coffee
- 15:30 16:20 Panel Discussion: Featuring the speakers with Helena Wessman and Fredrik Ullén
- 16:20 16:30 Sofia Karlsson, song

Moderator: Gunnar Bjursell Organisation: Gunnar Bjursell, Ingemar Ernberg, Fredrik Ullén

Brain and Culture Symposium 2019

Speakers and Artists



Sofia Karlsson

International artist, folk music singer and four-time Grammy award winner - Sofia Karlsson attended the folk music department of the Royal College of Music in Stockholm. From 1998 to 2002 she was a full-time member in Swedish folk music act *Groupa*, and in 2002 she released her debut solo album *Folk songs*. In 2005 she made her public breakthrough with her second album *Svarta ballader* (Black ballads). The album contains her interpretations of the Swedish poet Dan Andersson, and was in the charts for more than a year. The album has to date sold 60,000 copies, and was awarded with both Swedish and Danish Grammys.

After touring the country for two years, she released her third album *Visor från vinden* (Songs from the loft) with its collection of classical songs sung in Swedish, but written by poets and musicians such as Baudelaire, Dan Andersson, Marianne Flodin, Mikael Wiehe, Alf Hambe, Inger Hagerup, Carl Michael Bellman, Peps Persson, and Evert Taube. The album also contains Lars Forssell's free version of Boris Vian's "Le Déserteur".



Professor Robert Zatorre

Robert Zatorre is a cognitive neuroscientist whose laboratory studies the neural substrate for auditory cognition, with special emphasis on two complex and characteristically human abilities: speech and music. He and his collaborators have published over 280 scientific papers on topics including pitch perception, auditory imagery, absolute pitch, perception of auditory space, and the role of the mesolimbic reward circuitry in mediating musical pleasure. His research spans all aspects of human auditory processing, from studying the functional and structural properties of auditory cortices, to how these properties differ between the hemispheres, and how they change with training or sensory loss. His lab makes use of functional and structural MRI, MEG and EEG, and brain stimulation techniques, together with cognitive and psychophysical measures. In 2006 he became the founding co-director of the international laboratory for Brain, Music, and Sound research (BRAMS), a unique multi-university consortium with state-ofthe art facilities dedicated to the cognitive neuroscience of music. In 2011 he was awarded the IPSEN foundation prize in neuronal plasticity. In 2013, he won the Knowles prize in hearing research from Northwestern University, and in 2017 he was elected to the Royal Society of Canada.



Balettakademien

Since its foundation, Balettakademien in Stockholm has developed into one of Scandinavia's largest dance schools. Over the years, Balettakademien has played an important role in developing dance in Sweden.

Balettakademien was founded in Stockholm in 1957. Until then dance education and training in Sweden was strictly limited to classical ballet at the Royal Opera. Balettakademien's ambition was to offer more options in professional dance education and training including Ballet, Contemporary Dance, Jazz Dance and other dance forms.

Today one important program is *danshälsa* -Dance for Health at Balettakademien. *Danshälsa* is an initiative to strengthen the role dance can play in health and well-being. Dance for Health is a venture to spread the health-giving effects of dance and to reach groups in society that fall outside of our norms of who can dance, who can be seen in society and on stage, and how body and movement contribute to health. Dance for Health offers dance for people with different neurological diagnoses such as Parkinson, MS and stroke, as well as dance for senior citizens and dance connecting different cultures. Photo: Häkan Larsson



Professor Charles Spence

Professor of Experimental Psychology; Head of the Crossmodal Research Laboratory, Department of Experimental Psychology; Fellow of Somerville College, Oxford University. Professor Charles Spence is a world-famous experimental psychologist with a specialization in neuroscience-inspired multisensory design. He has worked with many of the world's largest companies across the globe since establishing the Crossmodal Research Laboratory (CRL) at the Department of Experimental Psychology, Oxford University in 1997. Prof. Spence has published over 900 academic articles and edited or authored, 12 books including, in 2014, the Prose prize-winning "The perfect meal", and the recent international bestseller "Gastrophysics: The new science of eating" (2017; Penguin Viking) - winner of the 2019 Le Grand Prix de la Culture Gastronomique from Académie Internationale de la Gastronomie. Much of Prof. Spence's work focuses on the design of enhanced multisensory food and drink experiences, through collaborations with chefs, baristas, mixologists, chocolatiers, perfumiers, and the food and beverage, and flavour and fragrance industries. Prof. Spence has worked extensively in the world of multisensory experiential wine and has also worked extensively on the question of how technology will transform our dining/drinking experiences in the future.



Yulia Kovas

Professor of Genetics and Psychology, Goldsmiths, University of London. Yulia Kovas is Professor of Genetics and Psychology at Goldsmiths; Honorary Professor at Moscow State University; visiting Professor at University of Sussex, New York University in London, Tomsk State University and Higher School of Economics. She directs InLab: codirects the International Centre for Research in Human Development; leads research into mathematical development in the Twins Early Development Study (TEDS); directs the Russian School Twin Registry (RSTR); leads projects IDEAS (Individual Differences in Education and Achievement) at Educational Centre for gifted adolescents Sirius and PLIS - Prospective Longitudinal Interdisciplinary Study of families with children conceived naturally and by IVF.

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Dean Keith Simonton

Dean Keith Simonton is a Distinguished Professor Emeritus of Psychology at UC-Davis. He is particularly interested in the study of human intelligence, creativity, greatness, and the psychology of science. He obtained his M.A at Harvard in 1973, and his PhD in 1975. He is a fellow of the American Association for the Advancement of Science and a fellow of the American Psychological Association. He has over 570 publications, including 14 books. One of his books, The Origins of Genius, received the William James Book Award. One of his findings was that the 10 years' experience of deliberate practice is not a rule, but an average with significant variation around the mean. He found that the people who achieved the greatest lifetime productivity and highest levels of eminence required the least amount of time to achieve expertise. He also found that while too much expertise can hurt one's chances of greatness, the downsides of overtraining in one domain can be ameliorated by the acquisition of expertise among numerous different domains. He also found that an association of creativity with psychopathic traits was more apparent in artists than in scientists.