ANNOUNCEMENT

Singapore Science Centre
&
Swiss House Singapore
&
Singapore Mathematical Society

cordially invite you and your students to

A Public Lecture

on Thursday, 20 September 2007 at 4:00pm
to be held in
The Maxwell Auditorium
Singapore Science Centre

with

Prof Gerhard Wanner
University of Geneva

on

From Euler's Discoveries in Trigonometry to Fourier Analysis, MP3, and JPEG

Please see below for more information.

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Attendance is free of charge but pre-registration is required.
Reservations are accepted on a first-come-first-served basis due to limited seating.
Please make your reservations online through
http://www.science.edu.sg/ssc/CafeMain.htm
or via e-mail (kt_pang@science.edu.sg) on or before
18 September 2007 by 4pm.

From Euler's Discoveries in Trigonometry to Fourier Analysis, MP3, and JPEG

This talk retraces the discovery of Euler's famous formula, ***cos*** x + ***i sin*** x = ***e***^{ix} in his early work on differential equations. But it was not only this formula, which was one of Euler's masterpieces, but also the creation of the trigonometric functions, ***cos*** x and ***i sin*** x themselves. We then describe important consequences of this theory for mathematics, physics and today's civilization (Basel problem, theory of sound and electromagnetic waves, Fourier transform, FFT, JPEG und MP3), without which no radio, no television, no digital camera or no CD-player would work.

Gerhard Wanner

… is the President of Section VII of the Swiss Academy of Natural Sciences, former Head of the Department of Mathematics, University of Geneva, and former President of the Swiss Mathematical Society. His important research are on numerical analysis, differential equations, and the computation of Constrained Mechanical Systems. He is a co-recipient of the 2003 Peter Henrici Prize for "broad and extended original contributions to applied analysis and numerical analysis, and/or exposition appropriate for applied mathematics and scientific computing". He is the co-author of highly influential books (often described as the "bibles" of their fields), such as *Solving Differential Equations*.
http://www.unige.ch/~wanner/
http://www.cirs-tm.org/researchers/researchers.php?id=343
https://www.siam.org/news/news.php?id=382

An exhibition on the life and amazing works of Leonhard Euler is displayed on the second level overlooking the Atrium of the Science Centre. This exhibition is generously brought to Singapore and the Science Centre by Swiss House Singapore and has been open since April 2007.

Experiencing Mathematics
… is an exhibition conceived first and foremost for young people, their parents and their teachers. The exhibition invites you to approach mathematics in a playful and interactive way. It is initiated by **UNESCO** and designed by Centre•Sciences, (CCSTI Centre region, Orléans, France) in collaboration with Tokai University (Tokyo, Japan) and the Ateneo, Manila University (Philippines). It is brought to the Singapore Science Centre through the generosity of Swiss House Singapore. This exhibition opens on 18 July 2007 and will remain at the Science Centre until October 2007.
http://www.mathex.org/

The Swiss House Singapore
… is a platform of the Swiss Embassy. Its objective is to foster partnerships between Switzerland and Southeast Asia in the field of Education, Research and Innovation. It operates in synergy with academic, governmental and economic networks, and provides partnering opportunities by organizing innovative events, and providing a knowledge network to its users.
info@swisshouse.org.sg www.swisshouse.org.sg

Singapore Mathematical Society
… is the national body representing the interests of the mathematical community in Singapore. It is a constituent body of the Singapore National Academy of Science SMS organizes the annual Singapore Mathematical Olympiad and the Singapore Mathematics Project Festival, and supports the Singapore International Mathematical Olympiad. The Society also supports international mathematical conferences held in Singapore, and engages in outreach activities such as public lectures and workshops.
http://sms.math.nus.edu.sg/