

Conference Frontiers of Quantum and Mesoscopic Thermodynamics 2024

Public Lecture of John C. Mather with Concert

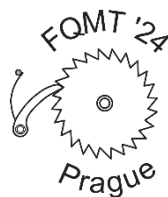
Main Hall of the Pyramida Hotel
Thursday July 25, 2024

18:30 – 18:45	Music introduction
	Opening address
18:45 – 19:45	John C. Mather: “Discoveries with the James Webb Space Telescope”
19:45 – 20:00	Discussion
20:00 – 20:30	Break
20:30 – 22:00	Concert

Music Introduction

G. F. Handel (1685 - 1759):
M. Kejmar (trumpet)
P. Kšica (piano)

Suite D Dur, HWV 341,
March



<https://fqmt.fzu.cz/24/>

Discoveries with the James Webb Space Telescope

John C. Mather

NASA GSFC, Greenbelt, Maryland, USA

The James Webb Space Telescope was launched on Dec. 25, 2021, and commissioning was completed in early July 2022. With its 6.5 m golden eye, and cameras and spectrometers covering 0.6 to 28 μm , Webb is already producing magnificent images and surprises about galaxies, active galactic nuclei, star-forming regions, and planets. It extends the scientific discoveries of the great Hubble, and ties the most distant galaxies to their origin story from the fluctuations of the cosmic microwave background radiation. Scientists are hunting for some of the first objects that formed after the Big Bang, the first black holes (primordial or formed in galaxies), and beginning to observe the growth of galaxies, the formation of stars and planetary systems, individual exoplanets through coronagraphy and transit spectroscopy, and all objects in the Solar System from Mars on out. It could observe a 1 cm² bumblebee at the Earth-Moon distance, in reflected sunlight and thermal emission. I will show how we built the Webb, why we study infrared, and the most exciting current discoveries. Webb is a joint project of NASA with the European and Canadian space agencies.

John C. Mather

Dr. John C. Mather is a Senior Astrophysicist and was the Senior Project Scientist for the James Webb Space Telescope (JWST) at NASA's Goddard Space Flight Center (GSFC). Since the project start in 1995 until 2023, he led the JWST science teams. As a postdoctoral fellow at NASA's Goddard Institute for Space Studies he led the proposal efforts for the Cosmic Background Explorer (74-76), and came to GSFC to be the Study Scientist (76-88), Project Scientist (88-98), and the Principal Investigator for the Far IR Absolute Spectrophotometer (FIRAS) on COBE. With the COBE team, he showed that the cosmic microwave background radiation has a blackbody spectrum within 50 parts per million, confirming the expanding universe model to extraordinary accuracy. The COBE team also made the first map of the hot and cold spots in the background radiation (anisotropy), the spots which nucleated the formation of galaxies. Dr. Mather received the Nobel Prize in Physics (2006) with George Smoot, for the COBE work.

Program of the concert

A. Corelli (1653 - 1713)

M. Kejmar (trumpet)

P. Kšica (piano)

Concert in F

V. J. K. Tomášek (1774 - 1850)

T. Víšek (piano)

Dithyramb No. 2 in E major

F. Liszt (1811 - 1886)

T. Víšek (piano)

Hussiten-Lied (concert paraphrase)

B. Smetana (1824 - 1884)

T. Víšek (piano)

Festival of Czech Peasants

A. Dvořák (1841 - 1904)

T. Víšek (piano)

Humoresque No. 5 in A minor, op. 101

A. Dvořák (1841 - 1904)

M. Kejmar (trumpet)

P. Kšica (piano)

My Mother Taught Me

G. Rossini (1792 - 1868)

P.-J. Kšica (bass)

T. Víšek (piano)

Largo al factotum

Aria from opera The Barber of Seville

J. Haydn (1732 - 1809)

A. Bager (oboe)

K. Janovská (oboe)

J. Thuri (English horn)

London Trio No. 1

Allegro moderato, Andante, Finale-Vivace

C. Gounod (1818 - 1893)

P.-J. Kšica (bass)

T. Víšek (piano)

Valentin's Aria

from opera Faust

E. Bozza (1905 - 1991)

A. Bager (oboe)

J. Thuri (English horn)

Shepherds from Provence, op. 43

E. W. Korngold (1897 - 1957)

P.-J. Kšica (bass)

T. Víšek (piano)

Pierrot's aria

from opera The Dead City

G. Gershwin (1898 - 1937)

P.-J. Kšica (bass)

T. Víšek (piano)

Aria Got Plenty o' Nuttin'

from opera Porgy & Bess

A. Dvořák (1841 - 1904)

M. Kejmar (trumpet)

P. Kšica (piano)

Largo from New World Symphony

Performers

Adam Bager (oboe)

Adam Bager studied Philosophy and Psychology at Oxford University, founded an IT services company in Prague in 1992, and has studied and played the oboe seriously from the age of ten. In his semi-retirement playing music has become paramount, and over the last five years he has studied with Czech oboist Jan Thuri, and attended masterclasses with Nicholas Daniel and Jean-Louis Capezalli.

Kristýna Janovská (oboe)

She started playing the recorder at the age of six. During her studies at grammar school, she started playing the oboe under the guidance of Bedřich Hejsek. She won the 1st prize in the national competition of the elementary music schools in solo play and in chamber play. She is now a student at the Prague Conservatory in the class of Jan Thuri. Last year, she won the 2nd prize and the Special Jury Prize for the performance of the work Dialog at the Pro Bohemia competition. She occasionally plays oboe or English horn with the Student Philharmonic.

Miroslav Kejmar (trumpet)

Miroslav Kejmar graduated from The Prague Conservatory after studies with Professor Junek. He then studied in the class of Professor Václav Pařík at The Prague Academy of Arts. Already during his studies at The Academy of Arts in Prague, he played in various orchestras, e.g. in the Film Symphony Orchestra and the Czech Philharmonic Orchestra. Apart from guest appearing with several chamber brass ensembles, he works on a permanent basis with the Prague Brass Soloists, of which is a founding member. His career as a soloist is equally wide-ranging. He is well known to audiences in many European countries, as well as Japan. Apart from classical music, he is also interested in dance, jazz and popular music. For about three years he played in the orchestra involved in the famous musical, Jesus Christ Superstar. He was a member of the Karel Vlach orchestra. Miroslav Kejmar was, over thirty years, the first trumpeter of the Czech Philharmonic Orchestra, and played many years with the "Ten of the Best" ensemble, the famous international group of trumpeters. He nowadays plays frequently as a soloist; he is a member of the Prague Brass Soloists and Czech Philharmonic Brass ensembles.

Pavel-Josef Kšica (bass)

Pavel-Josef Kšica was born into a musical family in Prague and has been playing the piano since childhood. In 2015, he began to delve into choral singing, and a year later, solo singing. After graduating from high school, he was accepted to the Prague Conservatory, where he studied singing under the guidance of Prof. Jiří Kubík. He continued his vocal education in the Convivium courses, focusing on Baroque repertoire under the direction of the prominent English early music expert, James Gray. In 2022, he was accepted to the Academy of Performing Arts in Prague - HAMU, where he continues his studies with Prof. Martin Bárta. He regularly performs concerts on

various occasions. Since 2016, he has sung the solo bass part in the Czech Christmas Mass by J. J. Ryba every year. In 2018, he conducted a 160-member student ensemble in five successful performances of the same work. Additionally, in 2018 and 2019, he portrayed leading roles in H. Purcell's *The Tempest* (Neptune) and G. F. Handel's *Acis and Galatea* (Polyphemus) at the International Early Music Courses in Spálené Poříčí. In 2019, he was a guest performer at a Baroque opera concert as part of the Early Music Day festival in Wexford, Ireland. During the summer of 2021, he performed the role of Jinoch of Athens in Bohuslav Martinů's opera *Ariadne*, as part of the Smetana's Litomyšl festival. He also portrayed the role of Il Conte in W. A. Mozart's *Le nozze di Figaro* as part of HAMU's opera studio performances. In recent years he has been heard as a cantor of singing during major ceremonies in St. Vitus Cathedral in Prague. He is dedicated to the song repertoire, particularly the works of G. Mahler and F. Schubert. He has performed Schubert's *Winterreise* four times in 2024. Together with pianist Filip Martinka, he was awarded the Gustav Mahler Prize for their interpretation of Mahler's *Kindertotenlieder* during the song academy IPASA.

Přemysl Kšica (piano)

Přemysl Kšica graduated from the Prague Conservatory (organ, the class of Professor Popelka). He continued his studies of organ at the Academy of Music Arts in Prague and Staatliche Hochschule für Musik und Darstellende Kunst in Stuttgart with Professor Ludger Lohmann. He studied also organ improvisation with Professors Jaroslav Vodrážka, Jaroslav Tůma and Johannes Mayr. Přemysl Kšica won numerous prizes in Czech and international organ competitions. He plays regularly in Prague churches, especially in the Church of Our Lady of the Snow. He has been performing at many concerts in his country and abroad.

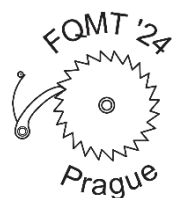
Jan Thuri (oboe)

A leading Czech oboist Jan Thuri was born into a family of musician in Praha in 1975. He came in contact with art at an early age through playing violin and piano. He has been playing oboe since the age of thirteen. When he graduated from the Prague Conservatory in the class of his father František Xaver Thuri, he crowned his studies at the Utrecht College of Music with Ernest Rombout and at the Ostrava University with Dušan Foltýn. He also took part in a few excellent courses with Jean-Louis Capezzali, Maurice Bourgue, Han de Vries, Jérôme Guichard and Jacques Tys. During his studies he won many awards in international competitions (Czech Republic, France, Great Britain). Jan Thuri is a sought-after solo and chamber music player. He co-operates with the foremost local and foreign orchestras. As a soloist, Jan Thuri has played in virtually all countries of Europe, in the USA, Japan and Korea. He records for the radio stations Czech Radio, Radio France and the British BBC where he recorded the Richard Strauss oboe concerto in D-Major in live broadcast. In 2002 he founded the chamber orchestra "Thuri Ensemble" and he plays actively with them at home and abroad. Besides that he is a member of several chamber orchestras, primarily ensembles specialising in the baroque style music, he is also a member of wind trio "Trio DuBois". In the exceptionally rich repertoire of Jan Thuri there are compositions of all styles and periods including contemporary and also avant-garde ones. The artist is often sought-after for the premiere interpretation of compositions of famous Czech and foreign contemporary composers. Jan Thuri has made a number of outstanding

recordings for EMI, Virgo and Thuri Records. One of the most important pieces of work of Jan Thuri in the recent period of time is a collected recording of his father's concertos for oboe and orchestra. Since 2004 Jan Thuri has held oboe and chamber music classes at the Prague State Conservatory and performs master-classes in Europe and Asia (Japan, Korea). Jan Thuri is often invited to take part in juries for international competitions (Chieri, Wroclaw, and Prague).

Tomáš Víšek (piano)

Tomáš Víšek developed his carrier as a solo pianist after graduating from the Prague Conservatory (Professors V. Kameníková and Z. Kožina), and from the Academy of Music Arts in the class of Professors J. Páleníček and Z. Jílek. He has established his reputation performing both famous and lesser-known repertoire, some of which being undeservedly neglected. He has toured throughout the world including Austria, Holland, Switzerland, France, Italy, Egypt, Japan, USA, and has made recordings for radio and television and on CDs. Tomáš Víšek won numerous prizes in international competitions (Hradec Králové, Vienna, Ragusa, Paris), in 2013 he won the 1st prize and CMF Prix at the "Concours Musical de France" in Paris, in 2015 the 1st prize at the competitions „Music Without Limits“ (Druskininkai) and „Grand Prize Virtuoso“ (video-competition), in 2016 and 2023 he won the 1st prize at the „International Master Competition for Music Teachers“ in Warsaw, in 2021 the 1st Prize at the "Golden Classical Music Awards" (with the performance at the Carnegie Hall), in 2022 1st Prize at the "Grand Prize Virtuoso" (with the performance at the Concertgebouw) and in 2024 the Silver Medal at the "Global Music Awards". His solo recital in the Prague Spring Festival in 1997 and the further performances there in 2002, 2003, 2006, and 2014 were met with high acclaim, as were his interpretation of Gershwin's Rhapsody in Blue in the sold out Rudolfinum concert hall in Prague.



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