

Public Lectures of Philippe Grangier and Allen Hermann with Jazz Concert

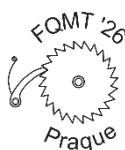
Main Hall of the Pyramida Hotel

Tuesday July 28, 2026

18:15 – 18:30	Opening address
18:30 – 19:20	Philippe Grangier: Quantum Mechanics: from Fundamental Principles to Technological Revolutions
19:20 – 19:30	Discussion
19:30 – 19:45	Break
19:45 – 20:35	Bob Montgomery and Allen M. Hermann: How Jazz Musicians Use Improvisation in Communicating with Each Other and with the Audience
20:35 – 20:45	Discussion
20:45 – 21:00	Break
21:00 – 22:00	Jazz Concert

Jazz Concert - Al Hermann and his guests

Trombone:	Al (Allen) Hermann
Trumpet:	Miroslav Hloucal
Double bass:	František Uhlíř
Piano:	Stanislav Mácha
Drums:	Martin Šulc
Special guest:	Tomáš Víšek (piano)



Quantum Mechanics: from Fundamental Principles to Technological Revolutions

Philippe Grangier

Institut d'Optique / CNRS, Université Paris-Saclay, Palaiseau, France

In this talk I will present experimental properties of quantum light, as an illustration of the fundamental rules of quantum mechanics: superposition, interferences, and entanglement. Emphasis will be given to experimental tests of Bell's inequalities, that lead to the 2022 Nobel Prize in physics attributed to Aspect, Clauser and Zeilinger. This result opened the way to Quantum Technologies, and as an example I will present and discuss quantum simulators based on arrays of interacting trapped single atoms.

Philippe Grangier

Professor Philippe Grangier is a French physicist specializing in quantum optics and the fundamentals of quantum mechanics. He is the Director of Research at CNRS, working at the Laboratoire Charles Fabry at the Institut d'Optique in Palaiseau.

Grangier's work has focused on how to generate, measure and utilize single photons and entangled states under controlled laboratory conditions – resources that are key to quantum communication and computing. Philippe Grangier was among the group of researchers who, together with Alain Aspect, conducted the seminal experiments of the early 1980s, in which correlations between photons were investigated and tests of Bell's inequality were performed. These experiments led to the 2022 Nobel Prize in Physics (awarded to Alain Aspect, John F. Clauser and Anton Zeilinger for their experiments on photon entanglement, tests of Bell's inequality and pioneering research into quantum information). The results obtained were not only of theoretical and philosophical significance but also became the starting point for practical applications: quantum cryptography, quantum teleportation and photonic quantum networks.

Philippe Grangier is regarded as one of the key contributors to the experimental entanglement research. He has carried out a wide range of experiments, including quantum non-demolition measurements, quantum cryptography, the production of single photons and optical Schrödinger cats, and the manipulation of single trapped atoms. He has coordinated many national and European projects, assisting the European Commission in many scientific and logistical aspects of quantum technologies.

How Jazz Musicians Use Improvisation in Communicating with Each Other and with the Audience

Bob Montgomery and Allen M. Hermann

University of Colorado, Boulder, Colorado, USA

This presentation explores how jazz musicians use improvisation to communicate with each other and with the audience. Unlike orchestral music, which is written in advance, jazz improvisation involves creating music spontaneously. The presenters demonstrate this process through short solos supported by a rhythm section consisting of piano, bass, and drums. Soloists create melodies that fit the chords and rhythm being played, forming a musical “story” that listeners can follow and remember.

The presentation also explains how musicians choose notes that sound consistent with the musical background, introducing basic ideas of Western scales and chords. Audience members are invited to participate by singing melodies that fit the music heard from the rhythm section, allowing them to experience musical improvisation firsthand.

As the session progresses, the musicians perform longer and more complex improvisations to demonstrate musical conversation and interaction. The presenters also show how jazz musicians use hand signals and brief verbal cues to guide performances and strengthen communication during improvisation. Overall, the presentation highlights improvisation as a creative and interactive form of communication between musicians and audiences.

Bob Montgomery

Bob is an internationally recognized performing artist who has appeared throughout Europe, Australia, Canada, China, Mexico, Japan, Great Britain and the United States. He has performed in back-up orchestras for many great artists (from Clark Terry to Sammy Davis Jr., Tony Bennett, Nancy Wilson and more). Bob has received many educational awards. In 2007 he was inducted into the Garden City, KS (his hometown) Hall of Fame.

Allen M. Hermann

Allen M. Hermann is Professor Emeritus of Department of Physics, University of Colorado, and a Fellow of the American Physical Society. He has contributed to basic research on transport properties of solids, and applied research. His research in this field culminated in the invention and development of a solid-state battery widely used in cardiac pacemakers. For his co-discovery of thallium-based high temperature superconducting materials he was elected, by superconductivity community, as person of the 1989 year. Allen (called Al in music circles) is also outstanding jazz player and teacher. He has played with many famous jazz orchestras and vocalists (including e.g. Ella Fitzgerald).

Performers

Al (Allen) Hermann

Al was born and raised in New Orleans where he backed such luminaries as Ella Fitzgerald, Tony Bennett, Julie London, and Peggy Lee. He has sided with the Woody Herman Orchestra, Lionel Hampton, Wild Bill Davidson, Doc Cheatham, Ellis Marsalis, Warren Vache, Dave Grusin, Eddie Daniels, Dave Pietro, Arturo Sandoval, and many others.

He has featured on 20 CD's. His CD "The Jazz Trombone", on the Sea Breeze (Los Angeles) label, featuring Al and the renowned trombonist Carl Fontana, received critical acclaim worldwide.

Al was Professor Adjunct of Jazz Trombone at the University of Colorado in Boulder, CO, and is currently Professor of Physics Emeritus at the University of Colorado-Boulder.

He has received many accolades:

"Nobody gets around the horn better than Al Hermann", **Carl Fontana**.

"The trombonist I most enjoy since Rosolino. He plays the wheels off the trombone", **Fred Wesley**.

"Dazzled when I heard him", **Joe Alessi**, Principal Trombonist, New York Philharmonic.

"One of the best trombonists on the planet", **Bill Watrous**.

"A Master Jazz Trombonist", **Ellis Marsalis**.

"A Premier Jazz Trombonist who plays with absolute authority", **Dr. Herb Wong**, past president of IAJE.

"Virtuoso Trombonist", **Jazz Workshop Australia**.

"One of America's foremost physicists, and an even better trombonist", **President Bill Clinton**.

Al plays his signature trombone mouthpiece (Willie's, Yamanashi, Japan) exclusively.

Miroslav Hloucal

Miroslav Hloucal is a leading Czech jazz trumpeter, composer, and educator. A graduate of the Jaroslav Ježek Conservatory, he is widely regarded as one of the most respected figures on the contemporary domestic jazz scene. He leads his own projects, the Miroslav Hloucal Quartet and Quintet, with which he has won accolades in international competitions. As a highly sought-after studio and live musician, he is a permanent member of the Gustav Brom Radio Big Band and Milan Svoboda's Prague Big Band. He has collaborated with Czech legends like Emil Viklický and Roman Pokorný, and internationally has shared the stage with jazz greats such as Benny Golson and Hiram Bullock. His playing style seamlessly combines technical virtuosity with modern jazz and genre versatility.

František Uhlíř

Who would not know the great Czech bassists Jiří "George" Mráz and Miroslav Vitouš, who achieved recognition and international fame not only in the USA? František Uhlíř, belonging to the same generation, is certainly the most prominent jazz musician on the Czech jazz scene today. František is a graduate of the Brno Conservatory. For many years he was a member of Karel Velebný's SHQ group, Barock Jazz Q and the formations of pianist Emil Viklický. The list of his numerous activities also includes cooperation with various international groups and soloists (East – West Connection, Europlane Orchestra, Czech – Norwegian Band, D. Weckl, B. Moses, S. Costanzo, J. Newman, T. Curson, B. Bailey, L. Blackbourn, P. Wilson, P. Woods, R. Cole, S. Nistico, S. Hamilton, S. Robinson, A. Hermann, B. Montgomery, D. Goykovich, S. Gut, C. Stötter, F. Ambrosetti, S. Schlegel, P. Catherine, S. Houben, B. Castelluci, W. Haffner, W. Lackerschmied, A. Riel, P. Mikkelsen, B. Dennerlein, J. Siedl, F. Ambrosetti, D. Jurkovic, R. Magris, E. Köhldorfer). In 2024, František Uhlíř received the prestigious Czech Gustav Brom Jazz Award.

Stanislav Mácha

Stanislav is a renowned pianist who has collaborated with star personalities of the domestic and international jazz scene (Dan Bárta, Robert Balzar, Piotr Baron, John Abercrombie, Craig Handy, Nicolas Simion and many others). He is currently actively performing and lecturing.

Martin Šulc

Martin Šulc, a native of Liberec, studied classical music at the Teplice Conservatory and jazz at the Berklee College of Music in Boston. He is a precise instrumentalist whose captivating dynamics of playing support and enhance the playing of other musicians. Among them are the most prominent soloists and personalities of the jazz scene of several generations from the Czech Republic (George Mráz, M. Svoboda Q, Karel Růžička, Najponk), from Europe (Claudio Roditi, Gianni Basso, Bruno De Filippi, Osian Roberts) and from the USA (Bill Hardman, Jim Pepper, Don Friedman, Eb Davis, Hal Galper, Hod O'Brien, Brian Charette, Chuck Wansley, Pat Bianchi) and others. He is a pillar of the Czech jazz scene not only as a percussionist, co-owner and dramaturge of the jazz club U Malého Glenu in Prague, organizer of the Czech Jazz Workshop in Prague, but also as a teacher at the jazz department of the Conservatory and VOŠ Jaroslav Ježka. With the Najponk Trio group, they won the prestigious Anděl award in 2000.

Tomáš Víšek (piano)

Tomáš Víšek developed his career 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" and the 1st prize at the “World’s Best Musicians Competition”. 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.

