

Committee on Education, Science, Culture, Human Rights and Petitions  
of the Senate of the Parliament of the Czech Republic

The Czech Academy of Sciences and Institute of Physics CAS

Frontiers of Quantum and Mesoscopic Thermodynamics Conferences

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Music Bridges International

## Public lecture by Dieter Vollhardt and concert

An event in honour of Bedřich Velický  
and his life-long work in science

Main Hall of the Wallenstein Palace

Wednesday, April 25, 2018, 17:00

17:00 – 17:30	Music introduction Opening address
17:30 – 18:20	Dieter Vollhardt: “What is a scientific theory?”
18:20 – 18:30	Discussion
18:30 – 18:45	Break
18:45 – 20:00	Concert

### Music introduction

P.J. Vejvanovský (1639 – 1693)

A. Corelli (1653 – 1713)

M. Kejmar (trumpet)

J. Kšica (piano)

Sonata in G minor

Sonata, I. Grave, II. Allegro



**SENATE**  
PARLIAMENT OF THE CZECH REPUBLIC

# What is a scientific theory?

**Dieter Vollhardt**

*Center for Electronic Correlations and Magnetism  
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In the natural sciences, and especially in physics, a theory is much more than a guess: it is a coherent framework of postulates based on experimental evidence, which can explain observations and predict new effects. In my lecture, I will speak about the nature of scientific theories, with a focus on theories in physics. I will discuss their power and explain why, for example, Einstein's theory of relativity is of great importance even in everyday life. I will then concentrate on the unusual properties of systems made of many interacting constituents. In such "many-particle systems" unexpected and complex phenomena can emerge, ranging from stop-and-go traffic on a road all the way to magnetism in a material. While the cars involved in a traffic jam are classical objects, magnetism arises from the interaction between electrons, which are quantum particles. To understand how large-scale phenomena such as magnetism or superconductivity can originate from the microscopic quantum level, simplified models of the many-body state have to be introduced. I will explain this important step by discussing typical approximations used to study the properties of matter.

## Dieter Vollhardt

Dieter Vollhardt is a theoretical physicist working at the University of Augsburg, Germany. He studied physics at the University of Hamburg (1971-1976), carried out research at the University of Southern California in Los Angeles, USA (1976-1979), and received his doctoral degree from the University of Hamburg in 1979. After that he worked as a Research Associate, and from 1984 to 1987 as a Heisenberg-Fellow of the German Science Foundation (DFG), at the Max Planck Institute for Physics and Astrophysics (Heisenberg Institute) in Munich. In 1987 he was appointed Director at the Institute of Theoretical Physics at the RWTH Aachen University. From 1996 on Dieter Vollhardt held the Chair in Theoretical Physics on Electronic Correlations and Magnetism at the Institute of Physics of the University of Augsburg. As of April 2017 he is Professor Emeritus.

Dieter Vollhardt's current areas of research are the theory of electronic correlations and magnetism. He received several scientific awards and prizes, including the Europhysics Prize of the European Physical Society (2006), the Max Planck Medal of the German Physical Society (2010), and the Ernst Mach Honorary Medal der Academy of Sciences of the Czech Republic (2011). Dieter Vollhardt is a member of the Bavarian Academy of Sciences and Humanities.

## Program of the concert

**A. Dvořák** (1841 – 1904)

Y. Waldman (violin)

T. Víšek (piano)

**M. Ravel** (1875 – 1937)

Y. Waldman (violin)

T. Víšek (piano)

**E. Bloch** (1880 – 1959)

Y. Waldman (violin)

T. Víšek (piano)

**E. Bozza** (1905 – 1991)

I. Séquardt (English horn)

L. Séquardtová (oboe)

**J. Ježek** (1906 – 1942)

T. Víšek (piano)

**Z. Lukáš** (1928 – 2007)

Ars Instrumentalis Pragensis

**J.D. Zelenka** (1679 – 1745)

Ars Instrumentalis Pragensis

**A. Dvořák** (1841 – 1904)

T. Víšek (piano)

**J. Brahms** (1833 – 1897)

Y. Waldman (violin)

T. Víšek (piano)

**B. Bartók** (1881 – 1945)

Y. Waldman (violin)

T. Víšek (piano)

**Sonatina, op. 100 in G major**

II. Larghetto, IV. Finale - Allegro

**Kaddish**

**Nigun from Ba'al Shem Suite**

**Shepherds of Provence - four duets  
for oboe and English horn op. 43**

I. Provencal pastorale, II. Song of the  
Provencal mountains, III. Under the  
stars, IV. The rural festival

**Bagatelle No. 8** (Tempo di polka)

**Bagatelle No. 10** (Allegro vivace)

**Ricordo**

Quintet for two oboes, bassoon, double  
bass and harpsichord op. 296

**Trio Sonata No. 5 in F major ZWV 181**

I. Allegro, II. Adagio, III. Allegro

**Waltz in G minor, op. 54, No. 5**

**Hungarian Dance no. 1**

**Romanian Folk Dances**

I. Stick Dance, II. Sash Dance, III. In  
One Spot, IV. Dance from Bucsum, V.  
Romanian Polka, VI. Fast Dance



The Czech Academy  
of Sciences

# Performers

## **Luboš Hucek (bassoon)**

He regularly performs with The Prague Symphony Orchestra. He first aroused considerable public recognition in 1981 when he won The International Prague Spring Festival at the age of 24 when he was already bassoonist of the Film Symphony Orchestra and The National Theatre Orchestra. He has played as a soloist with renowned orchestras at concerts in many countries of the world.

## **Miroslav Kejmar (trumpet, flugelhorn)**

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.

## **Josef Kšica (harpsichord)**

He studied organ at the Conservatory in Brno and at the Academy of Performing Arts in Prague in the class of Professors Milan Šlechta and Jiřina Pokorná. In addition, he studied composition with Professor Jan Duchoň. After many years of practicing as an organist and a singer of Czech leading choirs (Prague Philharmonic Choir, Prague Chamber Choir) Mr. Kšica became the choirmaster in St. Vitus Cathedral in Prague. Beside these activities, he performs old Czech as well as world sacred music, occasionally in new premieres. He also cooperated with the specialist on Bach music, Professor H. Rilling. As an organist Mr. Kšica has been performing at concerts in his country and abroad. He has also been increasingly seen on the stage as a conductor. Aside

from his interpretation achievements, Josef Kšica is a well-known scholar and editor for many European archives. Ars Instrumentalis Pragensis, in particular, is grateful to him for his continued broadening of their repertoire.

### **Pavel Nejtek (double-bass)**

He is the double bass player with The Czech Philharmonic Orchestra who has been in great demand as a chamber orchestra player. He regularly performs with The Stamic Quartet, The Panocha Quartet and Apollon Quartet.

### **Liběna Séquardtová (oboe)**

She studied at the Conservatory in Prague (under Professor F.X. Thuri) and graduated from the Prague Academy of Music Arts as a student of J. Mihule. She took part in a number of national and international competitions. The climax of her competition carrier is the win in the 38th year of the International Competition of the Prague Spring Festival in 1986. She is at present the solo oboist of the Prague Symphony Orchestra. She also devotes herself to chamber play, and appears regularly as solo oboist at concerts in her country and abroad with leading orchestras (among others with the Czech Philharmonic Orchestra and the Royal Liverpool Philharmonic).

### **Ivan Séquardt (oboe, English horn)**

He is a much appreciated English horn player who has been in great demand. He became a member of The Czech Philharmonic Orchestra in 1979. Since 1991 he has been performing with the same orchestra as a solo oboist and, as such, has recorded a number of CDs (Martinů, Mozart, Bach). As a soloist he has performed with The Czech Philharmonic Orchestra, The Prague Symphony Orchestra, Solistes Européens Luxembourg, to name a few.

### **Tomáš Víšek (piano)**

He developed a 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 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, Japan, and has made several recordings for radio and television and on CDs. Tomáš Víšek won numerous prizes at international competitions. 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” and “Grand Prize Virtuoso”, in 2016 the 1st prize at the “International Master Competition for Music Teachers” in Warsaw. 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.

### **Yuval Waldman (violin)**

Violinist and conductor Yuval Waldman has been described as “brilliant” (Musical America) and “spectacular” (The New York Times). Born in Russia, Waldman played his first public performance at the age of 8. He studied violin with Isaac Stern, Ivan Galamian, Joseph Gingold, Rene Benedetti, Lorand Fenyves and took part in Master classes with Joseph Szigeti, Nathan Millstein, Henryk Szeryng, Zino Francescatti. Raphael Kubelik, Jorge Mester, Leonard Bernstein, William Vaccano were his teachers of conducting.

Yuval Waldman made his New York debut on the International Series at Carnegie Hall, Jeunesse Musicales. He is a versatile performer who has earned acclaim both for his playing of the standard repertory and for his thoughtful and stylish interpretations of Baroque music. He has also championed rarely performed nineteenth century masterpieces and commissioned or premiered works by contemporary American and Israeli composers. Yuval Waldman has appeared as a violin soloist with dozens of prominent orchestras in the United States, Canada, Europe and Israel and given recitals at Carnegie Hall, Lincoln Center, The Kennedy Center, Wigmore Hall in London and Concertgebouw in Amsterdam. He has performed with such artists as Isaac Stern, Pinchas Zuckerman, Jean-Pierre Rampal, Maureen Forrester and Henrik Szering. He is the first violinist in the acclaimed Kinor String Quartet and a winner of the America-Israel Cultural Foundation Prize and the Distinguished First Prize at the Conservatory of Geneva. He has recorded on the Angel, Newport Classics, Omega Classical, CRI, Musique International and Musical Heritage Society labels. His career as a conductor includes performances and recordings with several of the orchestras listed above, as well as the New American Chamber Orchestra, the Midatlantic Chamber Orchestra; the Philadelphia Chamber Orchestra and the Cologne Opera. He celebrated the fiftieth anniversary of the founding of Israel in Moscow and conducted the memorial concert on the steps of Congress on September 11, 2002. He was the founding music director of the Madeira Bach Festival, the Jefferson Music Festival in Washington D.C., the Opus Berkshire Festival in Massachusetts and the Benedictine Millennium Festival in Rome. He has served as director of the World Bank Mozart Festival and the Midatlantic Chamber Orchestra. In 2005, Maestro Waldman founded Music Bridges International, Inc., ([www.musicbridgesinternational.com](http://www.musicbridgesinternational.com)), to foster cross-cultural music exchange programs that feature the music of different countries.

## Ars Instrumentalis Pragensis

The ensemble has gained great international recognition ever since it came into existence in 1987. It consists of five instrumental players: Luboš Hucek (bassoon), Josef Kšica (organ, harpsichord, piano), Pavel Nejtek (double-bass), Liběna Séquardtová (oboe), Ivan Séquardt (oboe, horn) each of whom is the top representative in his/her field. All of them have played with many internationally known ensembles and they have been awarded prizes from competitions at home and abroad. The ensemble has been concentrating, apart from German, Italian, French and English Baroque compositions, on Czech Baroque instrumental music dominated by the works of the “Czech Bach” Jan Dismas Zelenka, whose great instrumental cycle of six trio sonatas was recorded by the ensemble in 1994. Ars Instrumentalis Pragensis was highly praised for its interpretation of these Zelenka’s sonatas. The ensemble won the First prize and a gold medal at the international competition in Osaka, Japan.

