

12th ECNDT
GOTHENBURG•SWEDEN•2018



*For its 10th anniversary, Academia NDT
International invites you to attend the European
Research Day (June 13th, Room E1)*



Sicherheit in Technik und Chemie

European Research Day of Academia International **ECNDT 2018, Gothenburg June 11th – 15th, 2018**

THE GALILEO GALILEI AWARD TO PROF. DR. JOACHIM FRANK

Uwe EWERT

Academia NDT International

***BAM Bundesanstalt für Materialforschung
und -prüfung, Berlin, Germany***

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The Galileo Galilei Award



crystalinks.com



pics-about-space.com,
<http://www.livescience.com/images/i/000/018/312/i02/jupiter-110722-02.jpg?1311614523>

Galileo Galilei achter zijn telescoop
Posted in Filosofie, Sterrenkunde, Wetenschap and tagged Galilei, Jupiter, Manen, Planeten, Starwalk, Ster, Sterrenkunde, telescoop on 21 februari 2015. 7 reacties, aardewijn.wordpress.com.

Titelseite von Il Saggiatore, Kupferstich von Francesco Villamena, 1623
Galileo Galilei -
http://moro.imss.fi.it/lettura/LetturaWEB.DLL?AZIONE=IMG&TESTO=E_Z&P ARAM=06-199-tit.jpg; Original uploader was David J Wilson at en.wikipedia

**Donated by the president of Academia NDT International,
Giuseppe Nardoni**

for Achievements in Science which Move the World

Focused to Non Destructive Techniques

The Galileo Galilei Award

Awarded to Prof. Joachim Frank for

Achievements in Cryo Electron Microscopy of Biological Molecules with high Resolution and Single-Particle Reconstruction



Photo: B. Winkowski © Columbia University Medical Center

Joachim Frank

Born: 12 September 1940, Siegen, Germany

Affiliation at the time of the award:
Columbia University, New York, NY, USA

The Nobel Prize in Chemistry 2017

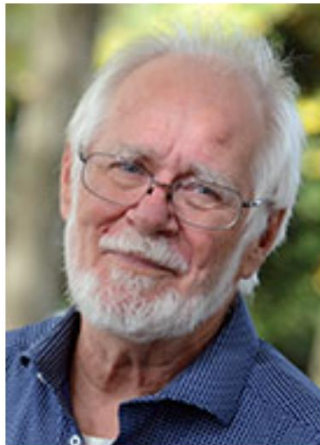


Photo: Félix Imhof © UNIL
[CC BY-SA 4.0]

Jacques Dubochet

Prize share: 1/3

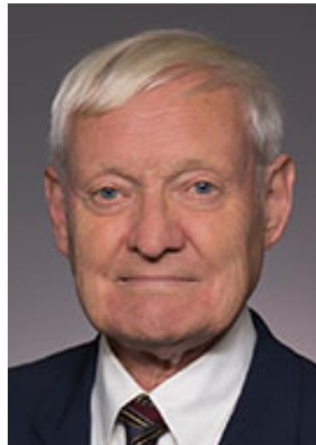


Photo: B. Winkowski ©
Columbia University
Medical Center

Joachim Frank

Prize share: 1/3



Photo: MRC Laboratory of
Molecular Biology

Richard Henderson

Prize share: 1/3

The Nobel Prize in Chemistry 2017 was awarded to Jacques Dubochet, Joachim Frank and Richard Henderson *"for developing cryo-electron microscopy for the high-resolution structure determination of biomolecules in solution"*.

The Galileo Galilei Award

Felix Parra/The Bridgeman Art Library/Getty Images



Explanation of the heliocentric solar system by Galileo

“Mathematics is the alphabet with which God has written the universe.” - Galileo

Single-Particle Reconstruction requires Good microscopic equipment AND sophisticated algebraic reconstruction algorithms.

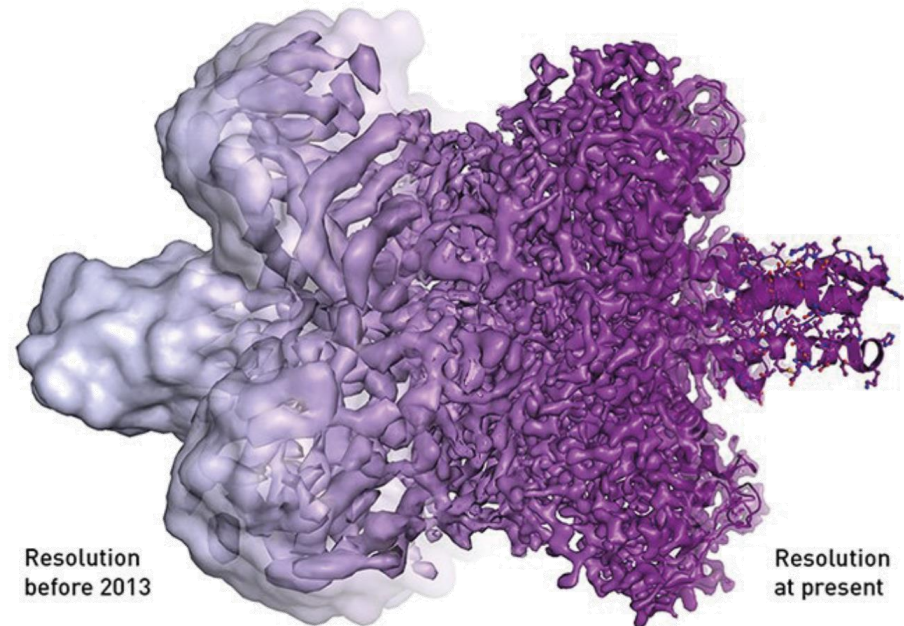
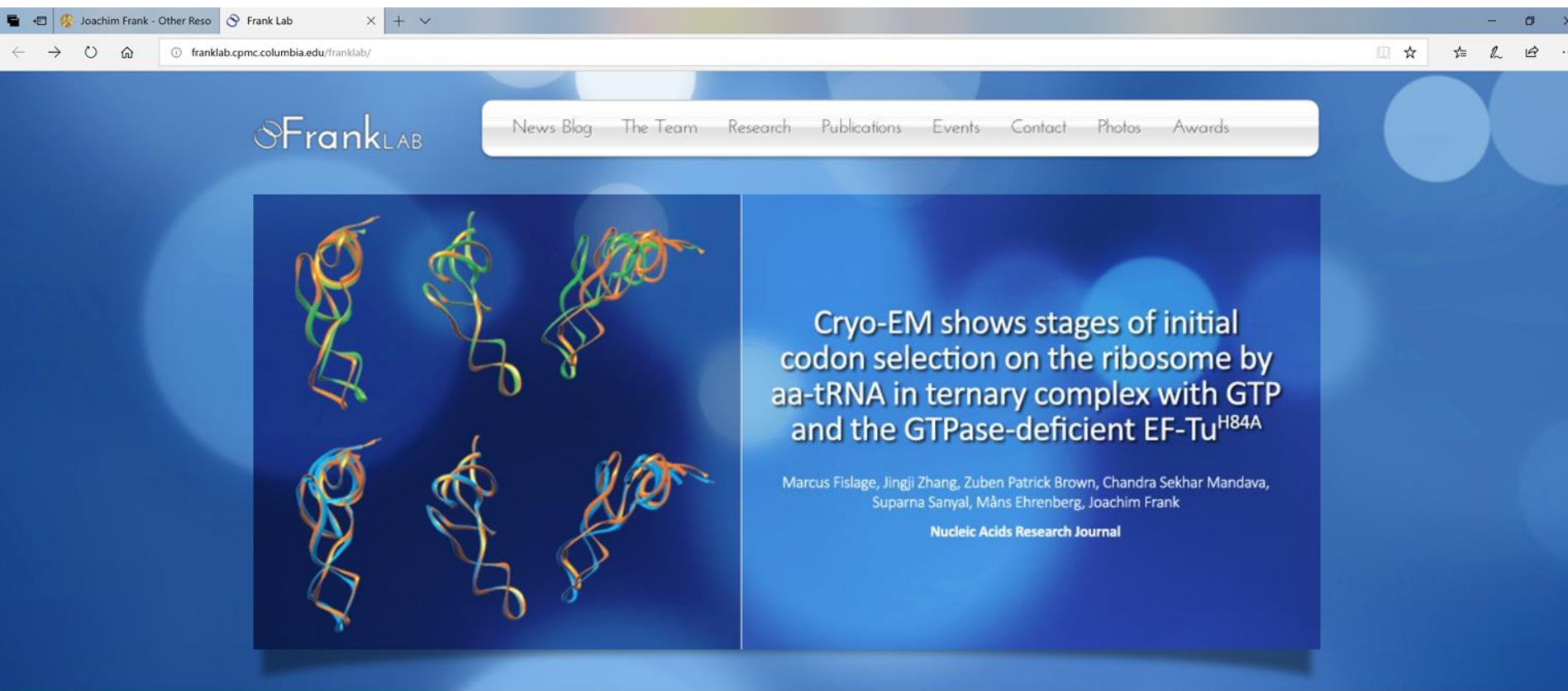


Illustration: ©Martin Högborn/The Royal Swedish Academy of Sciences

The Galileo Galilei Award



Achievements in Cryo Electron Microscopy of Biological Molecules with high Resolution and Single-Particle Reconstruction



<http://franklab.cpmc.columbia.edu/franklab/>

Welcome to Frank Lab

We investigate the mechanism of translation on the ribosome by using cryo-electron microscopy and single-particle reconstruction.

CURRICULUM VITAE



- **Born:** 9/12/40
- **Birthplace:** Weidenau/Sieg, Germany
- **Nationality:** German; US Immigration Visa 1975; since 1997 US Citizen.
- **Education:**
 - Universität Freiburg, Freiburg im Breisgau, Germany 1960-1963
 - Universität München, Germany 1963-1967, Technische Hochschule München (Technical University of Munich) 1967-1970
- **Degrees:**
 - **Diplom** (equivalent to **Masters**), University of Munich, Germany 1967
 - **Dr. rer. nat. (equ. to Ph.D.)**, Technical University of Munich, Germany 1970
- Several **Awards** including the famous “**Franklin Medal for Life Science**”, see also the video under - <https://www.fi.edu/laureates/joachim-frank>

➤ Employment

- **1994-present** Lab Chief, Laboratory for Computational Biology and Molecular Imaging.
- **1997-present** Research Professor, New York University, Department of Cell Biology.
- **1998-present** Howard Hughes Medical Institute Investigator.
- **2003-2008** Senior Lecturer, Department of Biochemistry and Molecular Biophysics, Columbia University.
- **2008-present** Professor, Department of Biochemistry and Molecular Biophysics, College of Physicians and Surgeons, Columbia University
- **2008-present** Professor, Department of Biological Sciences, College of Arts and Sciences, Columbia University

The Galileo Galilei Award

Awarded to Prof. Joachim Frank for

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Photo: B. Winkowski © Columbia University Medical Center

“Galileo Galilei looked to the sky to study the macrosystem; the static sun, the rotating earth.

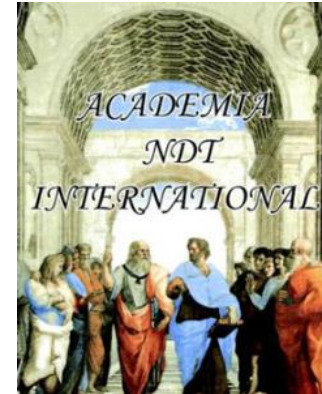
You, Joachim, have focused your research to the nano system. After many years of theoretical and experimental tests you have brought to light the hidden secrets of the biological molecule.

This achievements will have enormous impact on improving the health of people and will take us further along the road combatting the devastating illnesses that affect mankind today.”

G. Nardoni, President of Academia NDT International

Academia NDT International Council for Organization

www.academia-ndt.org



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