

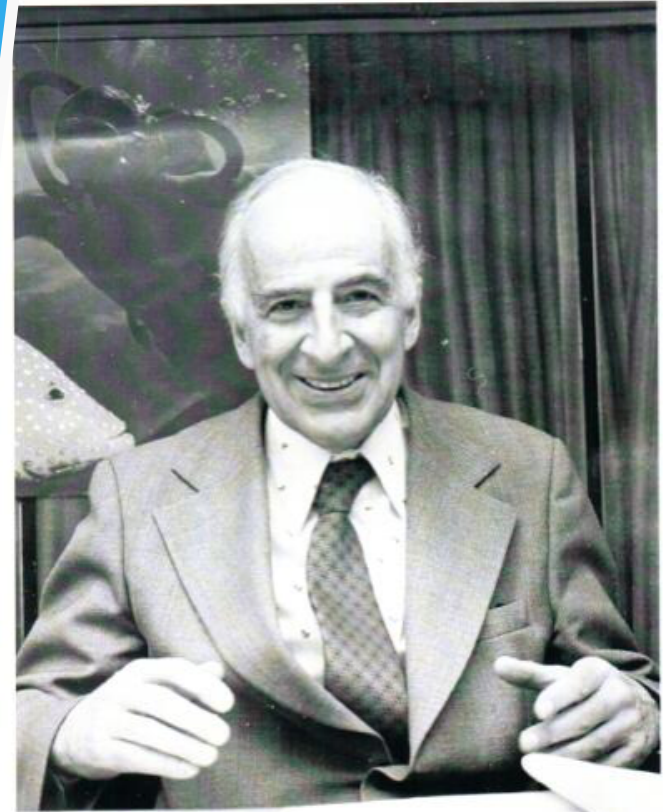
Report
to the JINR Scientific Council on the
award of the Bruno Pontecorvo Prize
for 2020

130th session of the JINR Scientific Council
23-24 September 2021

The International Bruno Pontecorvo Prize is awarded by the Joint Institute for Nuclear Research annually.

The prize was established in 1995 to commemorate Prof. Bruno Pontecorvo a pioneering neutrino physicist who worked for many decades at JINR

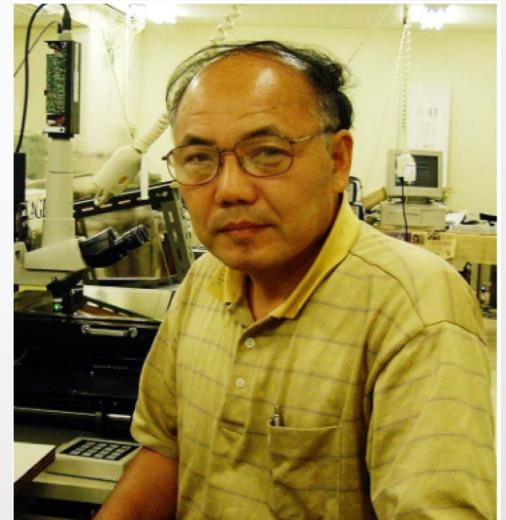
The International Jury: Samoil Bilenki (JINR), Luciano Maiani (Italy), Arthur McDonald (Canada), Alexander Olshevskiy (JINR, chairman), Yoichiro Suzuki (Japan)



Бруно Понтекорво

**Following the Jury's recommendation, the JINR
Scientific Council at its 129-th session has resolved
to award the Bruno Pontecorvo Prize
for 2020 to:**

Professor NIWA Kimio
(Nagoya University, Japan)



For the development of the high-resolution nuclear emulsion technique, which led to identification of the tau neutrino and direct observation of tau neutrino oscillations

We have informed Professor Kimio Niwa and his colleagues about this decision and congratulated him with this important scientific achievement.

An award ceremony and scientific report by Professor Niwa were scheduled for this (130-th) session, but unfortunately Niwa-san was not able to participate.

Nevertheless, let me just list some important steps of his work:

1972 – Niwa-san started to work on improvement of ECC technique for the balloon CR experiment of Kioshi Niu (X-particles)

1978 – E531 experiment at FNAL using ECC for charm production

1990 – CHORUS experiment at CERN with ECC technique to search for neutrino oscillations

1994 – DONUT experiment at FNAL discovered Nu_τ

2000 – OPERA at CNGS direct observation of oscillation to Nu_τ

Intrinsic resolution of ECC ~ 0.1 micron and automatic scanning $\sim 1\text{m}^2/\text{hour}$ allows using this technique in DM searches, gamma-telescopes, mu-radiography, etc.



Бруно Понтекорво



JOINT INSTITUTE FOR NUCLEAR RESEARCH

DIPLOMA

BY DECISION OF THE SCIENTIFIC COUNCIL
OF THE JOINT INSTITUTE FOR NUCLEAR RESEARCH

THE 2020 BRUNO PONTECORVO PRIZE

IS AWARDED TO

Professor
KIMIO NIWA

Nagoya University, Japan

for the development of the high-resolution nuclear emulsion technique, which led
to identification of the tau neutrino and direct observation of tau neutrino oscillations.

Chairman of the JINR Scientific Council,
Director of JINR

G. V. Trubnikov

Vice-Director of JINR

V. D. Kekelidze

Vice-Director of JINR

S. N. Dmitriev

Dubna
19 February 2021

We plan to send the diploma to Professor Niwa by post and convey again the warmest congratulations of Scientific council and best wishes for health and fruitful continuation of his scientific career.