



ACCADEMIA
NAZIONALE
DEI LINCEI



SAPIENZA
UNIVERSITÀ DI ROMA



Bruno Touschek Memorial Symposium

1921-2021

2-3-4 December 2021

The organization of the Symposium, which will celebrate 100 years since the birth of Bruno Touschek, is on its way. In this second bulletin, we update the information sent one month ago.

Venue

The Symposium will be held in three different locations, corresponding to the institutions where Touschek gave major scientific contributions:

December 2nd: [Physics Department at Rome Sapienza University](#)

December 3rd: [INFN Frascati National Laboratories](#)

December 4th: [Accademia Nazionale dei Lincei](#)

On December 2nd, the Symposium will take place in the Guglielmo Marconi building, Aula Amaldi, on the first floor. Please notice that only Green Pass holders are allowed to enter the building, and that controls will occur at the registration desk, on the first floor landing, before accessing the lecture hall.

On December 3rd, the Symposium will take place in the Bruno Touschek Auditorium, High Energy Building (n. 36). Entrance to the Frascati Laboratories will be open at the downhill gate, near the Tor Vergata Railroad station, with Green Pass control.

On December 4th, the Symposium will be held at the Accademia Nazionale dei Lincei, Palazzo Corsini, Via della Lungara, 10, Roma. Green Pass control will occur at the main entrance on the ground floor.

Website and registration attendance

Attendance to the Symposium will be on mixed mode, in presence and on-line. If you wish to attend, please register at the web site of the Symposium:

<https://agenda.infn.it/event/27709/>

and indicate whether you will participate in person or by remote. Information on how to

connect will be sent to registered participants a few days before the Symposium. Registration will be closed on November 28th. For registration beyond this date, please contact the organizers. Information on how to reach the Symposium location on each given day can be found at the event web site or on the web page of the different institutions.

Information for speakers

Please notice that allotted times include 5' for discussion.

On November 30th a rehearsal will take place to check Zoom connectivity. Speakers will be notified by e-mail of the time and meeting data.

Speakers are kindly requested to upload a pdf version of their contribution on the day before their talk, at the latest. Information about the upload will be separately sent.

We attach the Symposium program and look forward to your participation either in presence or in streaming.

For contacts and any further information, write us to

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The Symposium Organizing Committee

Luisa Bonolis – Max Planck Institute for the History of Science, Berlin

Fabio Bossi – INFN Laboratori Nazionali di Frascati

Ilaria Bonincontro – Accademia Nazionale dei Lincei, Rome

Pierluigi Campana – Giunta Esecutiva INFN

Maria Cristina D'Amato – INFN Laboratori Nazionali di Frascati

Daniele del Re – Sapienza Università, Rome

Giovanni Gallavotti – Sapienza Università, Rome

Stefano Giagu – Sapienza Università, Rome

Paola Gianotti – INFN Laboratori Nazionali di Frascati

Gianni Iona-Lasinio – Sapienza Università, Rome

Luciano Maiani – Sapienza Università, Rome

Paolo Mataloni – Sapienza Università, Rome

Sonia Mozzillo – INFN Sezione di Roma

Aleandro Nisati – INFN Sezione di Roma

Giulia Pancheri – INFN Laboratori Nazionali di Frascati

Giorgio Parisi – Accademia Nazionale dei Lincei, Rome

Luca Silvestrini – INFN Sezione di Roma

BRUNO TOUSCHEK 100 YEARS

2-4 December, 2021

PROGRAMME

(allotted times include 5 minute-discussion)

2 December: Dipartimento di Fisica, Sapienza

08:30-09:00 Registration and Green Pass control

Morning Session 09:00-13:00

Chair Paolo Mataloni

- 09:00-10:00 **Welcome**
Shahram Rahatlou, Direttore Dipartimento di Fisica
Antonio Zoccoli, Presidente INFN
Aleandro Nisati, Direttore Sezione INFN di Roma
Georg Schnetzer, Direttore Forum Austriaco di Cultura Roma
Francis Touschek
- 10:00-10:30 **Bruno Touschek (1921-1978)**
Luisa Bonolis, 30'
- 10:30-11:00 **Ada at Orsay**
Jacques Haissinski, 30' (Zoom)
- 11:00-11:30 **Touschek and Statistical Mechanics**
Giancarlo Rossi, 30'
- 11:30-11:50 **Coffee Break**
- 11:50-12:30 **The Era of Colliders**
Carlo Rubbia, 40'
- 12:30-13:00 **ADONE, Asymptotic Freedom, QCD**
Giorgio Parisi, 30'
- 13:00-15:00 **Shows** (posters, photos, movies) and **Lunch Break**

Afternoon Session 15:00-18:30

Chair Marcella Diemoz

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|-------------|--|
| 15:00-15:30 | Standard Theory and Theoretical Physics in Roma Luciano Maiani, 30' |
| 15:30-16:10 | Physics with LEP Ugo Amaldi, 40' (Zoom) |
| 16:10-16:30 | Coffee Break |
| 16:30-17:00 | From the hadronic string to quantum gravity...and back Gabriele Veneziano, 30' |
| 17:00-17:30 | QCD and Super Computers Guido Martinelli, 30' |
| 17:30-18:30 | Recollections and Discussion |

3 December: Laboratori Nazionali di Frascati

09:00-09:45 Registration and Green Pass control

Morning Session 09:45 -11:30

Chair Giulia Pancheri

09:45-10:00 **Welcome**

Fabio Bossi, Direttore INFN-Laboratori Nazionali di Frascati

10:00-10:30 **Physics at Frascati with Ada and Adone**

Mario Greco, 30'

10:30-11:00 **Accelerators at LNF. From Ada to Eupraxia**

Andrea Ghigo, 30'

11:00-11:30 **Accelerator Physics at Orsay**

Achille Stocchi, 30'

11:30-12:00 **Coffee break**

Morning Session 12:00 -13:20

Chair Pierluigi Campana

12:00-12:40 **High gradient acceleration**

Ralph Assmann, 40'

12:40-13:20 **Technical challenges for the future colliders**

Lucio Rossi, 40'

13:20-14:45 **Lunch break** (LNF canteen, starting 13:30)

Afternoon session 14:45-16:30

Chair Alessandro Gallo

14:45-15:25 **Muon collider**

Daniel Schulte, 40' (Zoom)

15:25-16:05 **High brilliance synchrotron radiation machines**

Pantaleo Raimondi, 40'

16:05-17:00 **Naming Ceremony of the LNF Visitor Center**

with Francis Touschek, 20'

17:00-17:45 **Visitor Centre guided tours**

17:45-18:00 **Public audience reception**

18:00-19:00 **Public Event**, Antonio Zoccoli, Presidente INFN

4 December: Accademia Nazionale dei Lincei, Roma

09:00-09:30 Registration and Green Pass control

Morning Session 09:30-12:30

Chair Giovanni Gallavotti

09:30-10:10

Welcome

Roberto Antonelli, President of Accademia dei Lincei
Giorgio Parisi, Vice President of Accademia dei Lincei
Francis Tauschek

10:10-10:40

Bruno Touschek (1921-1978)

Giulia Pancheri, 30'

10:40-11:10

The Making of Adone

Claudio Pellegrini, 30' (Zoom)

11:10-11:30

Coffee Break

11:30-12:00

Spontaneous Symmetry Breaking in Particle Physics

Giovanni Jona-Lasinio, 30'

12:00-12:30

String Theory

Paolo Di Vecchia, 30' (Zoom)

12:30-14:00

Shows (posters, photos, movies) and Lunch Break (catering)

Afternoon Session 14:00-18:50

Chair Giovanni Jona-Lasinio

14:00-14:40

Multimessenger Astronomy

Marica Branchesi, 40'

14:40-15:10

Knowledge and Technology Transfer from HEP

Manuela Cirilli, 30'

15:10-15:30

Coffee Break

The Future of High Energy Physics 15:30-18:30

15:30-16:10

High Energy Physics and the European Strategy

Gian Giudice, 40'

16:10-16:50

Circular Collider in China

Yifang Wang, 40' (Zoom)

16:50-17:30

High Energy Linear Colliders

Steinar Stapnes, 40'

- 17:30-18:10 **High Energy Neutrinos**
Sergio Bertolucci, 40'
- 18:10-18:30 **Discussion, 20'**
- 18:30-18:50 **Recollections and Concluding Remarks by Luciano Maiani**