

Highlights in Heavy-Ion Physics

Symposium in Honour of Nikola Cindro



RB

INSTITUT
FRANÇAIS

FSI

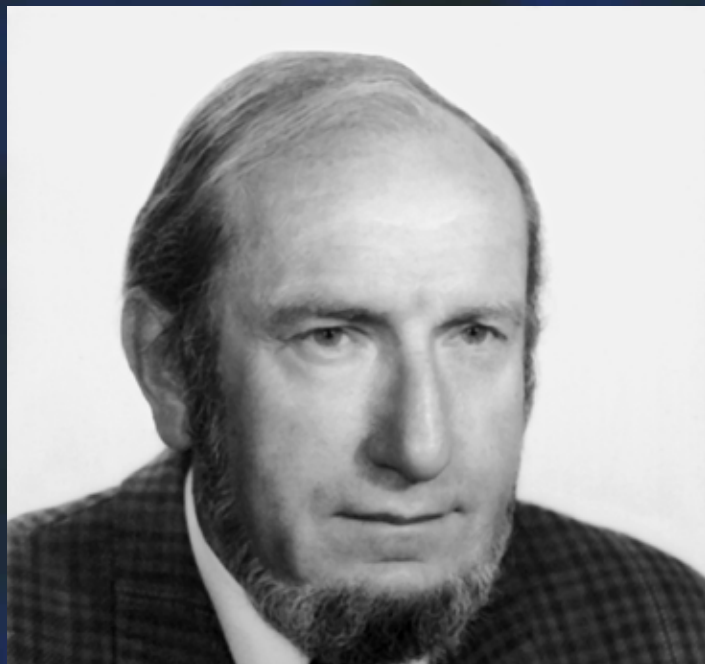
FRANCO-ITALIAN
INSTITUTE FOR ADVANCED STUDIES

Ruder Bošković



Institute - 1950

Nikola Cindro



Split, 31.8.1931 – Zagreb, 25.3.2001

- ◆ *Scientist*
- ◆ *Teacher & mentor*
- ◆ *Man of culture*
- ◆ *Nikola & Split*
- ◆ *Symposium*

Ruder Bošković



Institute - 1950

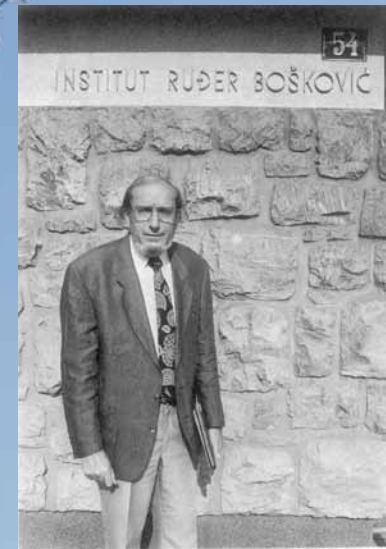
Scientist

Ruđer Bošković



Institute - 1950

@ Ruđer Bošković Institute 1954 – 1996

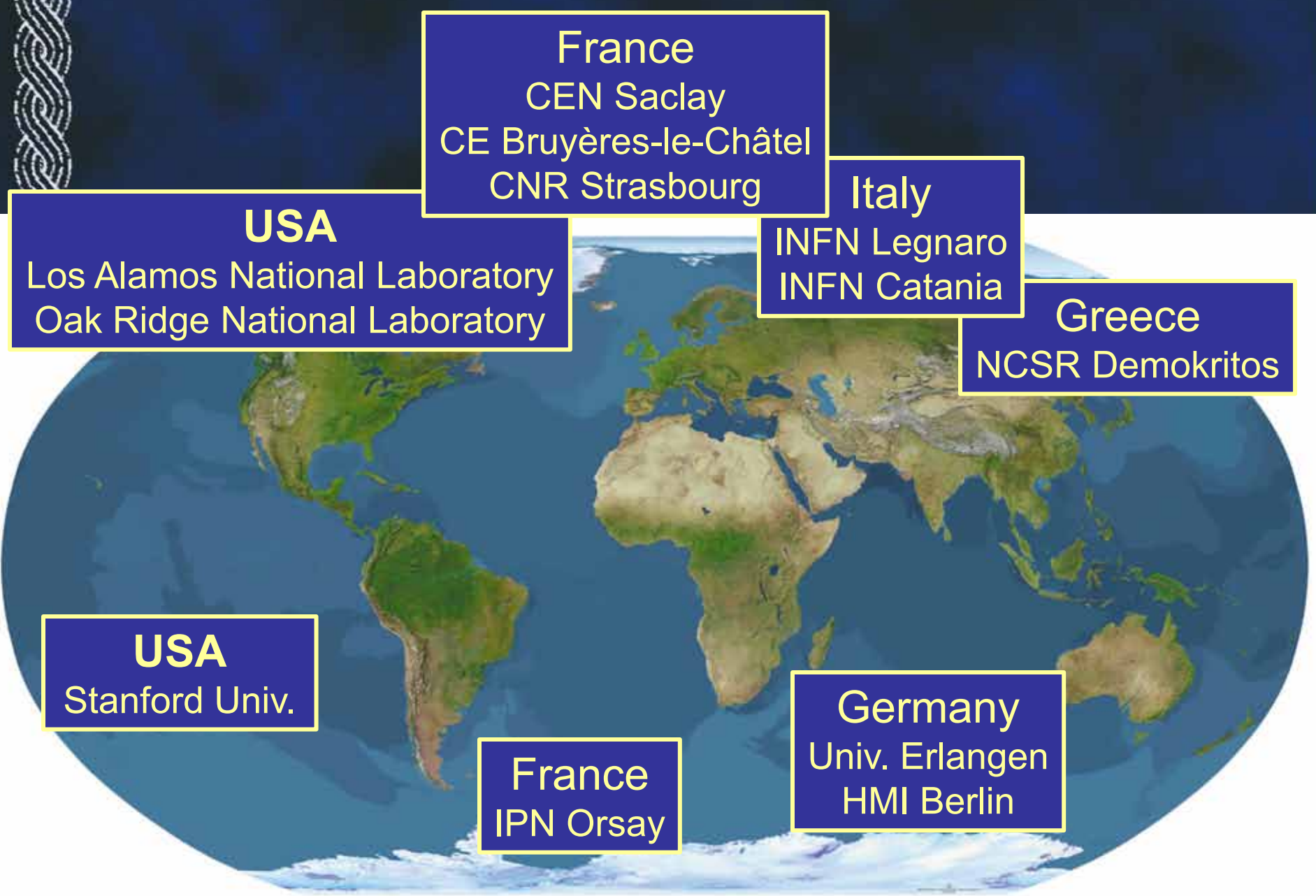


- ✦ **Ph.D. work at MIT, Cambridge, MA with Herman Feshbach – Opt. Model analysis**
- ✦ **Fast neutron induced reactions**
- ✦ **Isobaric analog states**
- ✦ **Pre-equilibrium emission**
- ✦ **Heavy-ion reactions at tandem energies**
 - ✦ **Pre-equilibrium emission**
 - ✦ **Nuclear molecular phenomena**
 - ✦ **Intermediate width structures**



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France
CEN Saclay
CE Bruyères-le-Châtel
CNR Strasbourg

Italy
INFN Legnaro
INFN Catania

Greece
NCSR Demokritos

USA
Los Alamos National Laboratory
Oak Ridge National Laboratory

USA
Stanford Univ.

France
IPN Orsay

Germany
Univ. Erlangen
HMI Berlin



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 - ◆ Pre-equilibrium emission
 - ◆ Nuclear molecular phenomena
 - ◆ Intermediate width structures
- ◆ HIR@relativistic energies – Nuclear EoS
 - ◆ Entropy production
 - ◆ Flow, ...



- ✦ **Author & co-author of more than 150 scientific papers**
- ✦ **Invited speaker at international general and topical nuclear physics conferences**
- ✦ **Member of editorial & advisory boards of several scientific journals**
- ✦ **etc. ...**
- ✦ **Organiser of a dozen of international conferences**

– Series of Adriatic conferences



International conferences organized or initiated by Nikola Cindro

- ✦ Europhysics Study Conference on *Intermediate Processes in Nuclear Reactions*, Plitvice Lakes, 1972
- ✦ 1st Adriatic International Conference on Nuclear Physics, *Nuclear Molecular Phenomena*, Hvar, 1977
- ✦ 2nd Adriatic International Conference on Nuclear Physics, *Structure of Light Nuclei*, Hvar, 1978
- ✦ 3rd Adriatic International Conference on Nuclear Physics, *Statistical Properties of Nuclei*, Hvar, 1979
- ✦ 4th Adriatic Europhysics Study Conference on the *Dynamics of Heavy-Ion Collisions*, Hvar, 1981
- ✦ 5th Adriatic International Conference on Nuclear Physics, *Fundamental Problems in Heavy-Ion Collisions*, Hvar, 1984
- ✦ 6th Adriatic Conference on Nuclear Physics, *Frontiers of Heavy-ion Physics*, Dubrovnik, 1987
- ✦ 7th Adriatic International Conference on Nuclear Physics, *Heavy-Ion Physics Today and Tomorrow*, Islands of Brioni, 1991
- ✦ 7th International Conference on *Clustering Aspects of Nuclear Structure and Dynamics*, Rab, 1999



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- 

Teacher & mentor

Ruđer Bošković



Institute - 1950

- ✦ Professor at graduate and postgraduate studies of University of Zagreb and University of Split
- ✦ Lecturer at international and national summer schools
- ✦ Mentor of graduate and postgraduate students
- ✦ Author of well recognized textbooks on general physics for students of technical faculties



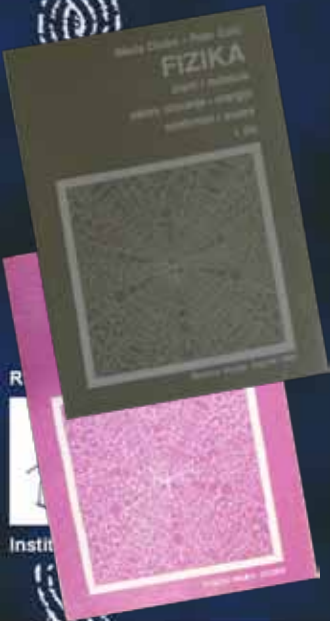
Ruđer Bošković



Institute - 1950



- **Professor at graduate and postgraduate studies of University of Zagreb and University of Split**
- **Lecturer at international and national summer schools**
- **Mentor of graduate and postgraduate students**
- **Author of well recognized textbooks on general physics for students of technical faculties**
- **Author of textbooks for secondary schools**
- **...**



Personality & style in relations with students

- ✦ **Clarity, precision and simplicity in presenting physical ideas**
- ✦ **Care for his students**
 - creating opportunities
- ✦ **Support to young colleagues in Croatia and abroad, but also quite straight in relations with those who he found “incorrect” to him.**
- ✦ **Establishing relation with numerous foreign research institutions**
- ✦ ...

Ruđer Bošković



Institute - 1950

Man of culture

Ruđer Bošković



Institute - 1950



Un esprit de finesse

A polyglot, an amateur of history and arts

Ruder Bošković



Institute - 1950

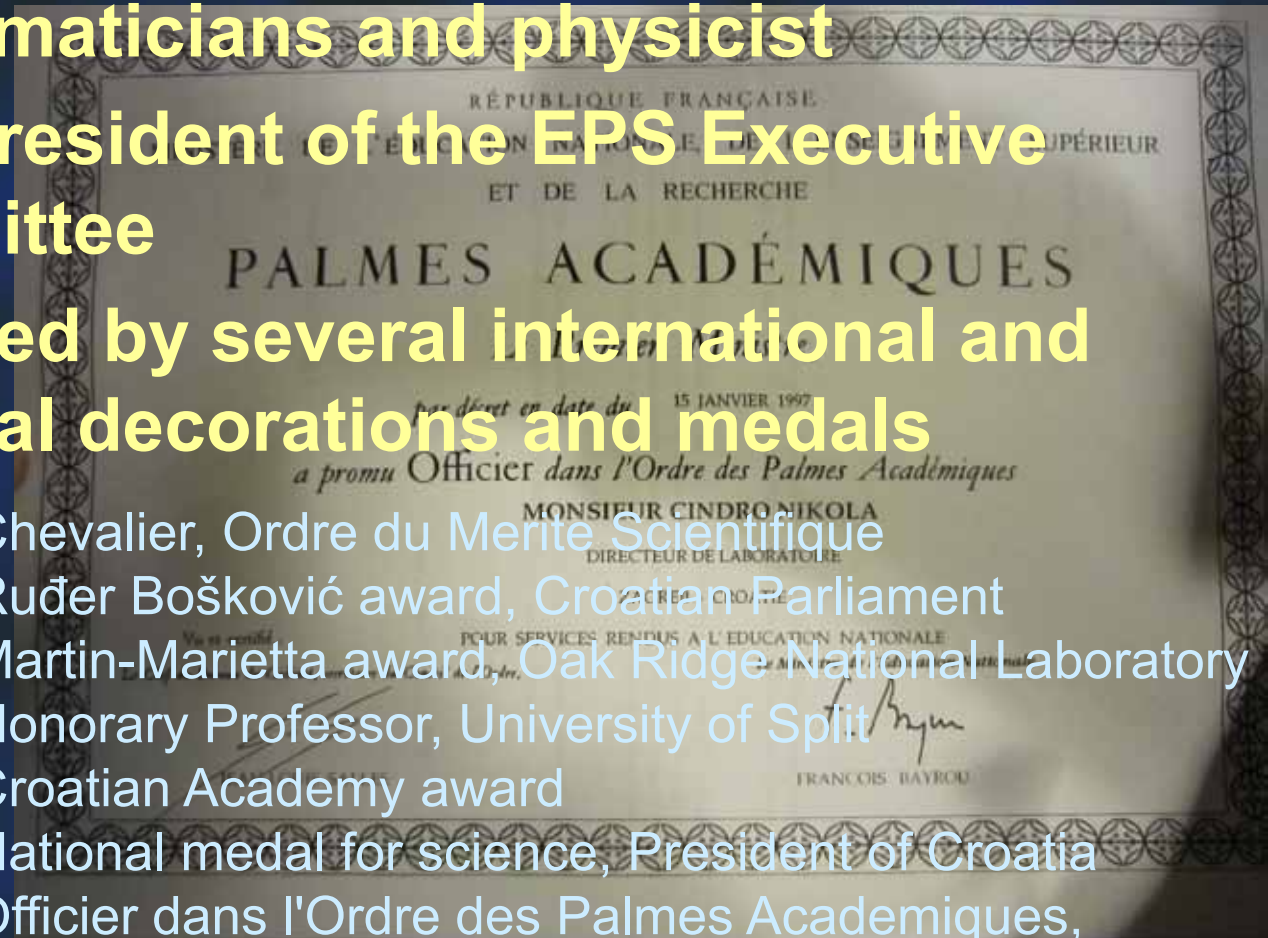
- ✦ **RBI representative to the EPS Executive Committee**
- ✦ **President of Croatian Society of mathematicians and physicist**
- ✦ **Vice-president of the EPS Executive Committee**

Ruđer Bošković



Institute - 1950

- **RBI representative to the EPS Executive Committee**
- **President of Croatian Society of mathematicians and physicist**
- **Vice-president of the EPS Executive Committee**
- **Awarded by several international and national decorations and medals**



- 1967 - Chevalier, Ordre du Merite Scientifique
- 1990 - Ruđer Bošković award, Croatian Parliament
- 1992 - Martin-Marietta award, Oak Ridge National Laboratory
- 1992 - Honorary Professor, University of Split
- 1995 - Croatian Academy award
- 1996 - National medal for science, President of Croatia
- 1997 - Officier dans l'Ordre des Palmes Academiques, French prime minister



- **RBI representative to the Committee**
- **President of Croatian Society of mathematicians**
- **Vice-president of the Committee**
- **Awarded by several national decorations**



and



- ◆ **RBI representative to the Committee**

- ◆ **President of Croatian Society of mathematicians**

- ◆ **Vice-president of the Committee**

- ◆ **Awarded by several international decorations**

- ◆ **One of founders of the Croatian aristocracy association**

- ◆ **Strong personality with style & fine manners, a great patriot**

- ◆ ...



and



Coat of arm displayed at the entrance of his family estate at the outskirts of Split



Nikola & Split



Yasuhisa Abe, Kyoto, 2009



Ruđer Bošković



Institute - 1950



Cindro palace

**Palača Cindro
The Cindro Palace**

Biserica palača u četiri krila koje zatvaraju centralni pravokutni dvorište građena je u 17. st. za staru spliskú plemićku obitelj Cindro. Na prvom i drugom katu prema ulici nalaze se velika izložava s obnovoopremljenim izložbenim prostorima, među kojima se nalaze barokna palačana, barokni fontani i renesansni brojni predmeti i predmeti iz renesansne i barokne umjetnosti.

This Baroque palace with four wings that enclose the central rectangular court was built in the 17th century for the old Splitt patrician family of Cindro. Looking out to the street on the first and second floor there are large rooms with restored wooden ceilings. Among the Baroque palaces of Splitt, in the courtyard of the palace, and in its spatial organization, it comes closest to the Venetian tradition.



Diocletian palace

- ✦ **First teacher of physics at technical faculty of University of Split**
- ✦ **Physics teaching at University of Split is nowadays very well established and Cindro's role in it is non-negligible.**
- ✦ **Several research groups and teams are active in Split, two on items of nuclear physics**

Ruđer Bošković



Institute - 1950

Symposium

Highlights in Heavy-Ion Physics A Symposium in Honour of Nikola Čindro

September 22-24, 2011
Split, Croatia
Milesi palace

- nuclear structure
- nuclear dynamics
- nuclear matter
- clustering phenomena
- nuclear phases from low to ultra-relativistic energies
- recent experimental and theoretical advances in nuclear physics

Organized by:

Ruder Bošković Institute,
Nuclear Physics Laboratory
and Croatian Academy of
Sciences and Arts,
Institute for Scientific
and Artistic Work in Split

Nikola was involved in pioneering work of
these topics and he played an important role
in both research and mentoring.

Registration and further information:
<http://symposium.cindro.ribo.hr/>

Organizing Committee

Đorđe Horvatić, Zagreb
Klaudia Galimov, Zagreb
Mladen Kolić, Zagreb
Dana Mitrović, Zagreb
Roman Čadež, Zagreb
Davorin Muzarić, Split
Matko Miličević, Zagreb
Ivica Dabović, Split
Ilija Dadićević, Split
Ivica Puljak, Split



Milesi palace

Ruder Bošković



Institute - 1950



GSX



INSOC

LECTURE NOTES IN PHYSICS



2 volumes book

CLUSTERS IN NUCLEI

Christian Beck, editor

2nd volume is in print and will be **dedicated to** the memory of **D.A. Bromley and N. Cindro**

✦ **A memory corner with books and photos remembering Nikola and his work**

✦ **An exposition of a few recent LNP issues**



*Welcome to Split and
enjoy meeting old friends*

*Thank you for
your attention*

Ruder Bošković



Institute - 1950

Symposium



Milesi palace

Social events

Highlights in Heavy-Ion Physics A Symposium in Honour of Nikola Cindro

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<http://symposium-cindro.irb.hr/>

Organizing Committee:

Zoran Bašak, Zagreb
Suzana Šolner, Zagreb
Mladen Kšić, Zagreb
Duro Mijanović, Zagreb
Roman Čaplar, Zagreb
Davorin Rudolf, Split
Matko Milič, Zagreb
Mile Džalilić, Split
Nikola Godinović, Split
Ivica Putjak, Split

Nikola was involved in pioneering age of these topics and he played an important role in both research and mentoring.



Ruder Bošković



Institute - 1950



Social events

TODAY at 8 pm

◆ *Symposium dinner*

Ruđer Bošković



Institute - 1950

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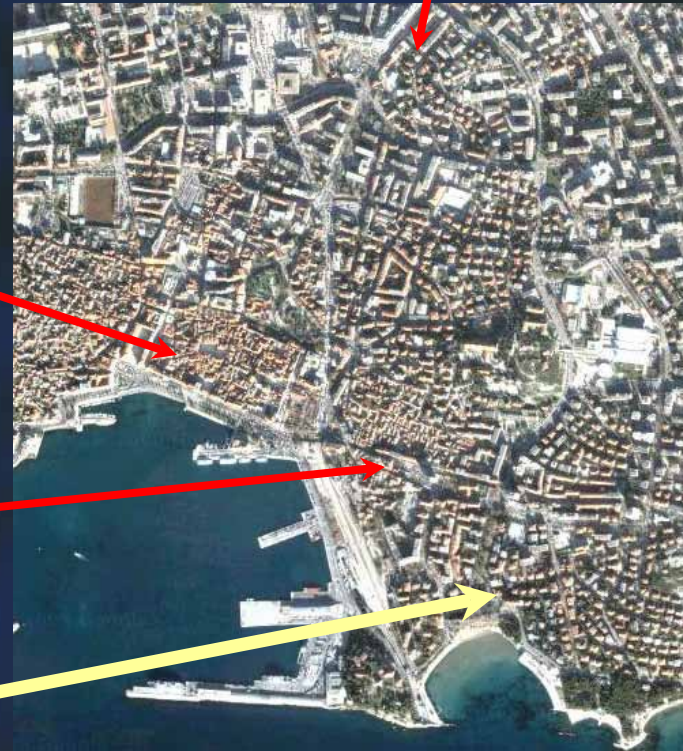
Restaurant of Hotel PARK

We are here

Hotel Consul

Hotel Luxe

Hotel Park



Social events

TODAY at 8 pm

◆ *Symposium dinner*

SUNDAY at 10 am

◆ *Wreath laying at Nikola's grave*

◆ *Visiting Cindro's family summer house at outskirts of Split*

Ruder Bošković

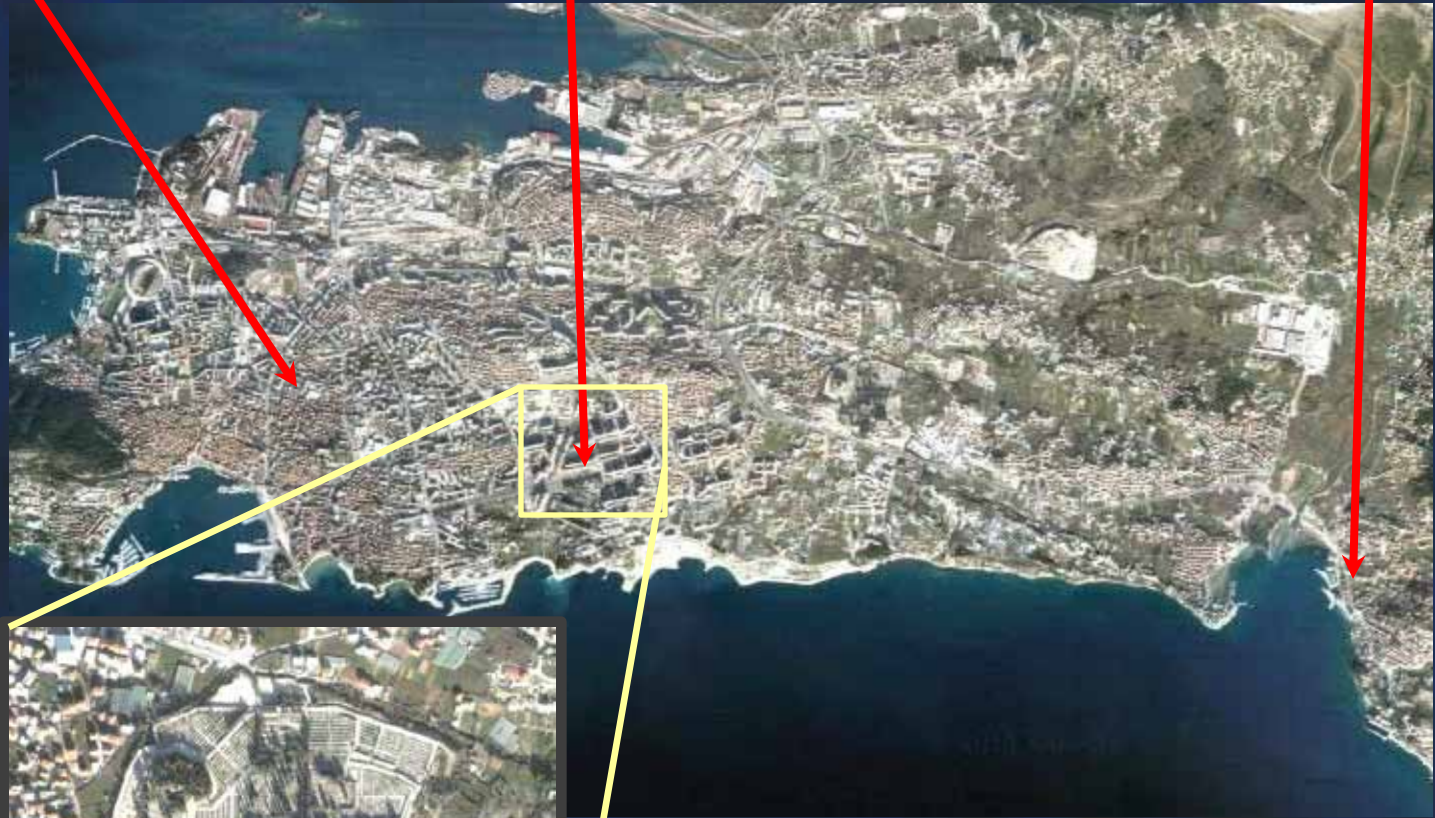


Institute - 1950

Hotel Consul

Lovrinac cemetery

Cindro's estate



Ruđer Bošković



Institute - 1950

Hotel Consul

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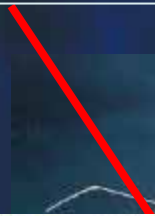


Ruđer Bošković



Institute - 1950

Hotel Consul



Cindro's estate



Ruder Bošković



Institute - 1950