

Welcome to the Autumn College on Nonequilibrium Quantum Systems

Departamento de Física
Universidad de Buenos Aires
Argentina

Origin of this activity

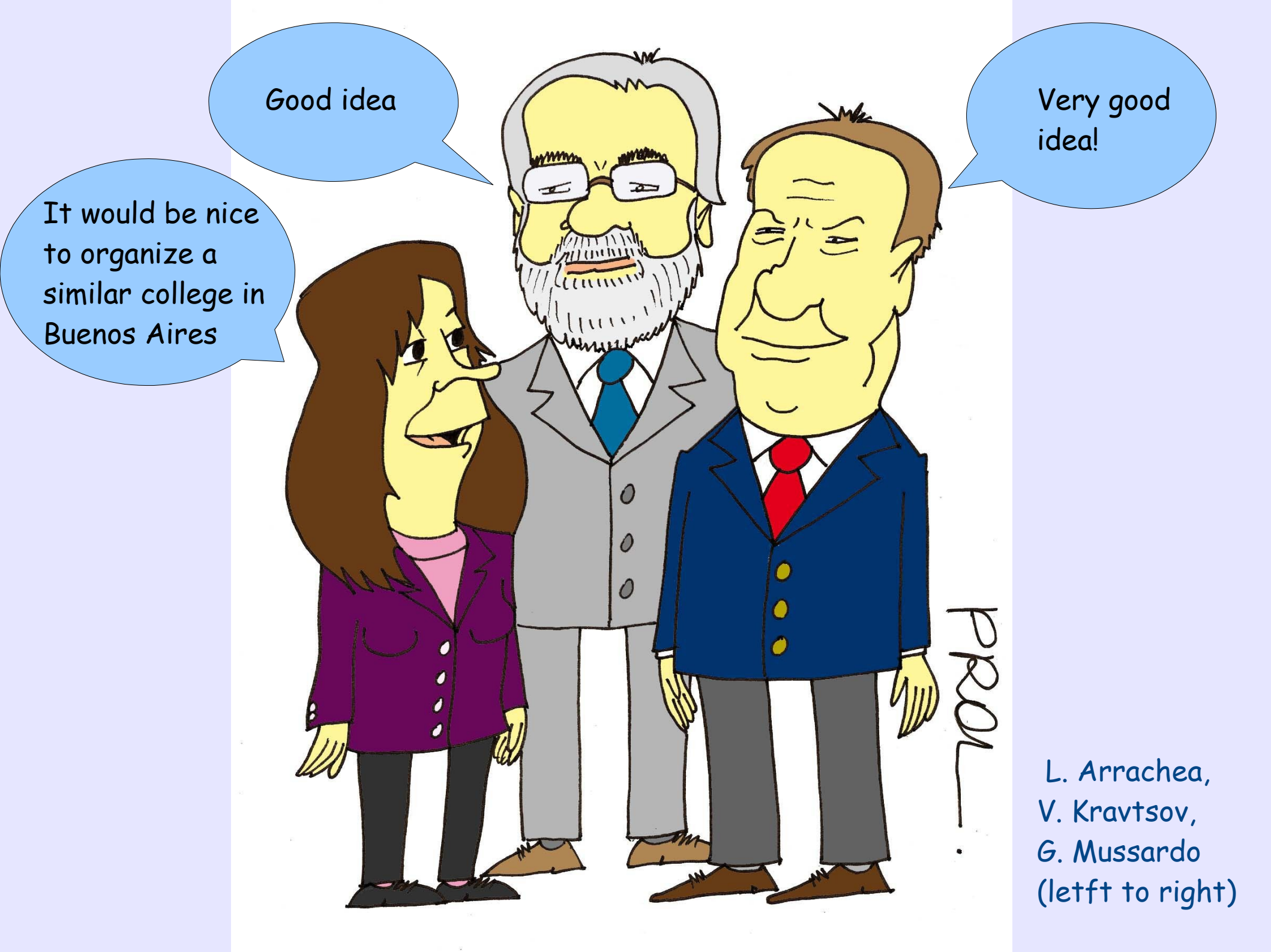
Trieste, Italy

July 2009

6 July - 24 July

**Summer College on Nonequilibrium Physics from Classical to
Quantum Low Dimensional Systems**

Organizer(s): Directors: L. Cugliandolo, L. Glazman, G.
Mussardo. Local Organizers: M. Kiselev and A. Silva
E-mail: smr2046@ictp.it



It would be nice to organize a similar college in Buenos Aires

Good idea

Very good idea!

prol.

L. Arrachea,
V. Kravtsov,
G. Mussardo
(left to right)



Leticia Cugliandolo



Misha Kiselev



Gustavo Lozano



Boris Altschuler

Berlin, 2009

AvH grant has
been aproved.

We must organize a
Conference in
Buenos Aires



Tamara Nunner



Felix von Oppen



The Abdus Salam
International Centre for Theoretical Physics

Autumn College on Non-Equilibrium Quantum Systems

2 - 13 May 2011

Buenos Aires, Argentina

This College will review the state of the art in the experiment and theory of quantum non-equilibrium phenomena mainly focused on low dimensional systems. Pedagogical lecture courses consist on 8 series of 2 - 4 lectures on general topics will encompass:

- Many-body localization
- Topological quantum computations
- Quantum noise: Theory and experiment
- Non-equilibrium physics in nano-structures
- 1D fermions beyond the Luttinger liquid theory
- Ultra-cold atomic gases out of equilibrium
- Methods of non-equilibrium many-body theory
- Non-equilibrium spintronics

LECTURERS:

Aleiner, I.L. - Columbia University, New York
Büttiker, M. - Université de Genève
Chamon, C. - Boston University
Glazman, L.I. - Yale University, New Haven
Kamenev, A. - University of Minnesota, Minneapolis
Markus, C. - Harvard University, Cambridge
Salomon, C. - Ecole Normale Supérieure, Paris

SPEAKERS:

Altshuler, B.L. - Columbia University, New York
Birge, N.O. - Michigan State University, East Lansing *)
Cirac, I.J. - MPI of Quantum Optics, München *)
Cugliandolo, L.F. - Université Pierre et Marie Curie, Paris
Gefen, Y. - The Weizmann Institute of Science, Rehovot
Kiselev, M.N. - International Centre for Theoretical Physics, Trieste
Marquardt, F. - Friedrich-Alexander-Universität Erlangen-Nürnberg
Molenkamp, L.W. - Universität Würzburg
Mussardo, G. - International School for Advanced Studies, Trieste
Pastawski, H.M. - Universidad Nacional de Córdoba
Refael, G. - California Institute of Technology, Pasadena
Shekhter, R. - University of Gothenburg
Shlyapnikov, G. - Université XI, Paris
Stern, A. - The Weizmann Institute of Science, Rehovot
von Delft, J. - Ludwig-Maximilians-Universität München
von Oppen, F. - Freie Universität Berlin
Yacoby, A. - Harvard University, Cambridge *)

*) to be confirmed

Participation

Scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the College. The activity is aimed to young researchers from developing countries working or planning to study physical phenomena out of equilibrium and its applications in quantum systems. Priority will be given to advanced undergraduates, graduate students, postdoctoral researchers, faculty and research scientists from Latin American countries.

As it will be conducted in English, participants should have an adequate working knowledge of that language. Although the main purpose of the Centre is to help research workers from developing countries, through a programme of training activities within a framework of international cooperation, a limited number of students and post-doctoral scientists from developed countries are also welcome to attend.

As a rule, travel and subsistence expenses of the participants should be borne by the home institution. Every effort should be made by candidates to secure support for their fare (or at least half-fare). However, limited funds are available for some participants who are nationals of, and working in, a developing country, and who are not more than 45 years old. Such support is available only for those who attend the entire activity. There is no registration fee.

HOW TO APPLY FOR PARTICIPATION

The application form can be accessed at the activity website

<http://agenda.ictp.it/smr.php?2280>

Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form.

You may address general requests for information to the College secretary:

Ms. M. Poropat (smr. 2280)
the Abdus Salam International Centre for Theoretical Physics
Strada Costiera 11 - 34151 Trieste, Italy
Telephone: +39-040-2240540 - Telefax: +39-040-2240354
E-mail: smr2280@ictp.it
ICTP Home Page: <http://www.ictp.it>



co-sponsored by:
Alexander-von-Humboldt Foundation

DIRECTORS:

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(International Centre for Theoretical Physics, Trieste)
Giuseppe MUSSARDO
(International School for Advanced Studies, Trieste)
Felix VON OPPEN
(Freie Universität Berlin)

LOCAL ORGANISERS:

Liliana ARRACHEA
(Universidad de Buenos Aires)
Gustavo S. LOZANO
(Universidad de Buenos Aires)

DEADLINE

for requesting
participation:
10 January 2011
(if requesting funds)

15 February 2011
(if requesting neither
funds nor visa assistance)

International Center of
Theoretical Physics
and

Departamento de Física
J.J. Giambiagi, Universidad de
Buenos Aires

Juan José Giambiagi (1924-1996)



- PhD 1950, Universidad de Buenos Aires, Argentina
- 1951-1953, Postdoc, Manchester University, United Kingdom
- 1953-1956, Researcher, Rio de Janeiro, Brazil
- 1956-1959, Professor, Universidad de Buenos Aires
- 1959-1966, Director of the Physics Department, Universidad de Buenos Aires
- 1966-1969, exile in California, Paris, Buenos Aires
- 1969-1976, Universidad Nacional de La Plata
- 1976-1994, Director of Centro Brasileiro de Pesquisas Físicas, Rio de Janeiro, Brazil

Juan José Giambiagi



Guido Bollini



Dimensional regularization
J. Nuovo Cimento (1972)

GAUGE UNIFICATION OF FUNDAMENTAL FORCES

Nobel lecture, 8 December, 1979

by

ABDUS SALAM

Imperial College of Science and Technology, London, England
and International Centre for Theoretical Physics, Trieste, Italy

35. 't Hooft, G. and Veltman, M., Nucl. Phys. B44, 189 (1972); *ibid.* B50, 318 (1972). An important development in this context was the invention of the dimensional regularization technique by Bollini, C. and Giambiagi, J., Nuovo CimentoE12, 20 (1972); Ashmore, J., Nuovo Cimento Letters 4, 289 (1972) and by 't Hooft, G. and Veltman, M.

36. Feynman, R. P., Acta Phys. Academiae Sci. 24, 697 (1962).

Castelletto di Miramare Trieste 1962



The result of the school was what Salam and Budinich expected. It was attended by some of the most prominent names in theoretical particle physics, including Eugene Wigner and Nobel Laureate Julian Schwinger. Argentinean J.J. Giambiagi, with whom Salam had developed a very good relationship since his visit to Buenos Aires in 1958, recalls that: “the dominant topic was actually the proposal of Abdus Salam and Paolo Budinich to create an international centre for the benefit of the developing countries. The seminar was in fact a kind of pilot experiment for testing the feasibility of a centre.”⁷¹

⁷¹J.J. Giambiagi, “Memories from ICTP,” in *From a vision to a system. The International Centre for Theoretical Physics of Trieste (1964-1994)*, edited by André Hamende, (Trieste, 1996), 219-225, on 220.

⁷²IAEA, GC/(VI)/194, September, 1962.

La Plata, Argentina (1986)



Juan José Giambiagi (1924 – 1996)

Juan José Giambiagi, better known as "Bocha" to his friends and colleagues, studied at the University of Buenos Aires where he graduated in physics in 1948 and completed his doctorate in 1950. He was a pioneer in the development of physics in Latin America, a charismatic leader and inspiring teacher. Professor Giambiagi was one of the founders of the Escuela Latinoamericana de Física (ELAF) in the 1960s and Director of the Centro Latinoamericano de Física (CLAF) from 1986 to 1994. He collaborated with Carlos Guido Bollini and made important contributions to "dimensional regularization". Professor Giambiagi's ties with ICTP started prior to its foundation when he participated in the 1962 preparatory conference, which led to the creation of the Centre. He was an early ICTP Associate, Senior Associate and a close friend and strong supporter of ICTP. Professor Giambiagi was a member of the ICTP Scientific Council from 1987 to 1995. *This lecture hall was dedicated to the memory of Professor Giambiagi in September 2001*



Miguel Angel Virasoro



- PhD 1967, Universidad de Buenos Aires, Argentina
- 1967-1971, Postdoc, Weizmann Institute, Israel, Wisconsin and California, USA.
- 1971-1975, Professor, Universidad de Buenos Aires
- 1973 Dean, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires
- 1975-1995 Princeton University, USA, Ecole Normale Supérieure, Paris, Università La Sapienza, Rome
- 1995-2002 Director International Center of Theoretical Physics, Trieste.

Alexander von Humboldt and Latinoamerica

Alexander von Humboldt (1769-1859)



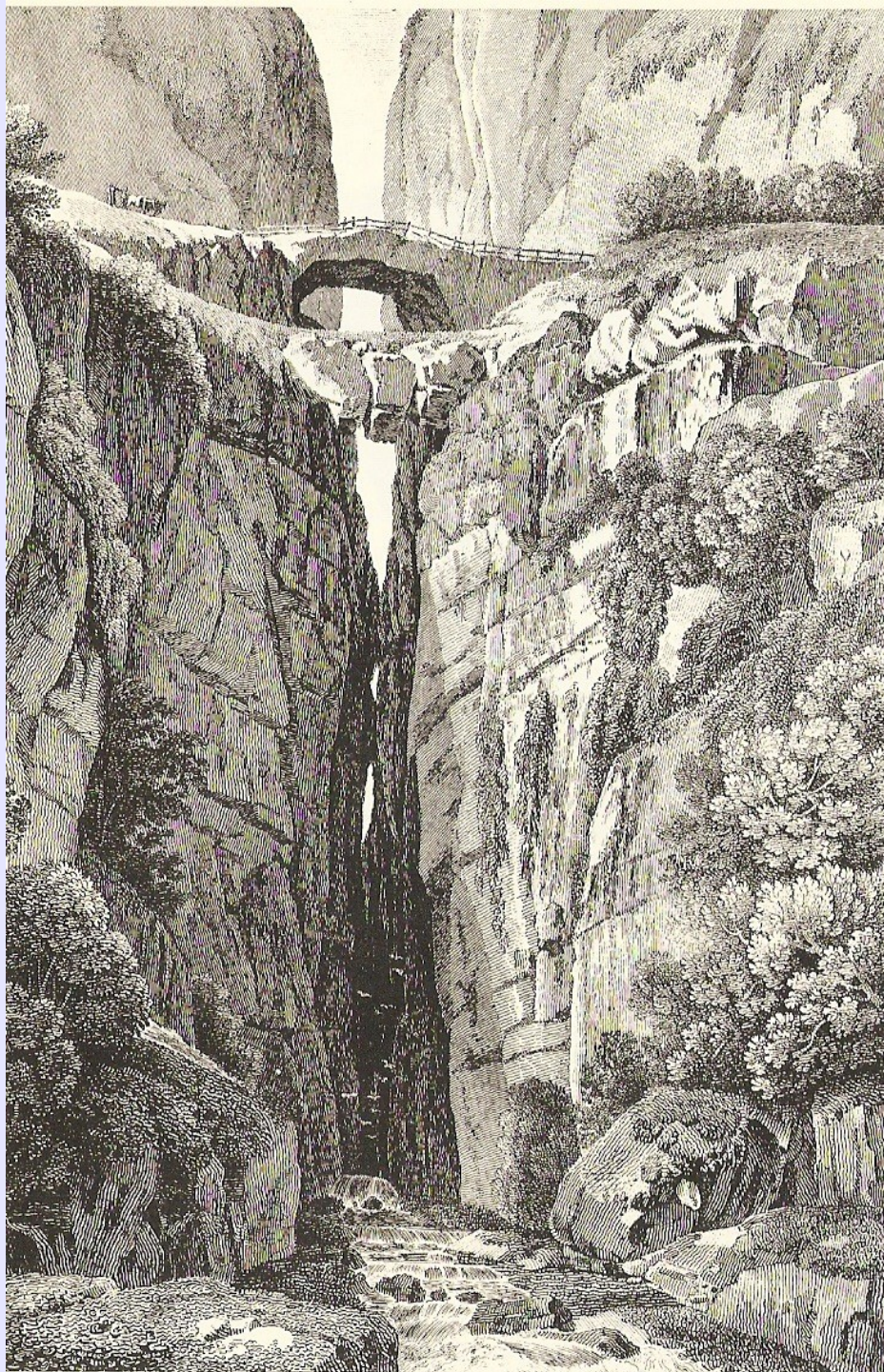
- Born and educated in Berlin
- Studied mineralogy in Freiberg and had a position in the Prussian Ministry of Industry and Mines.
- 1796. Declined and began his career as Naturalist.
- 1799-1804. Travel to America: Central, South and North America.
- 1807. Paris. Edition of ''Le voyage aux régions équinoxiales du Nouveau Continent'', by A. von Humboldt and A. Bonpland.
- 1841-1858. Edition of ''Kosmos'', Vol 1-5.

Alexander von Humboldt and Aimé Bonpland in the Amazonian jungle

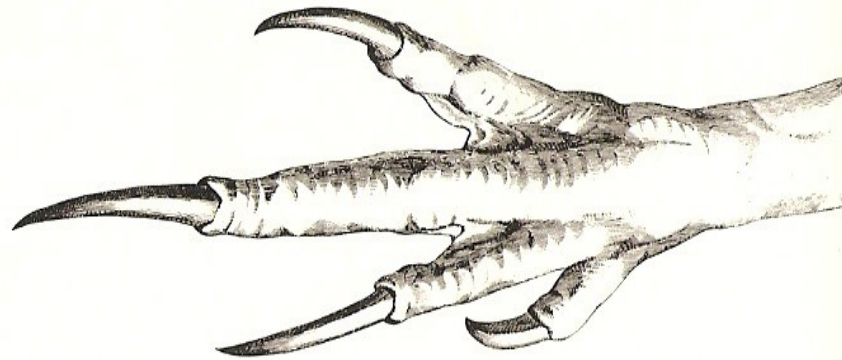
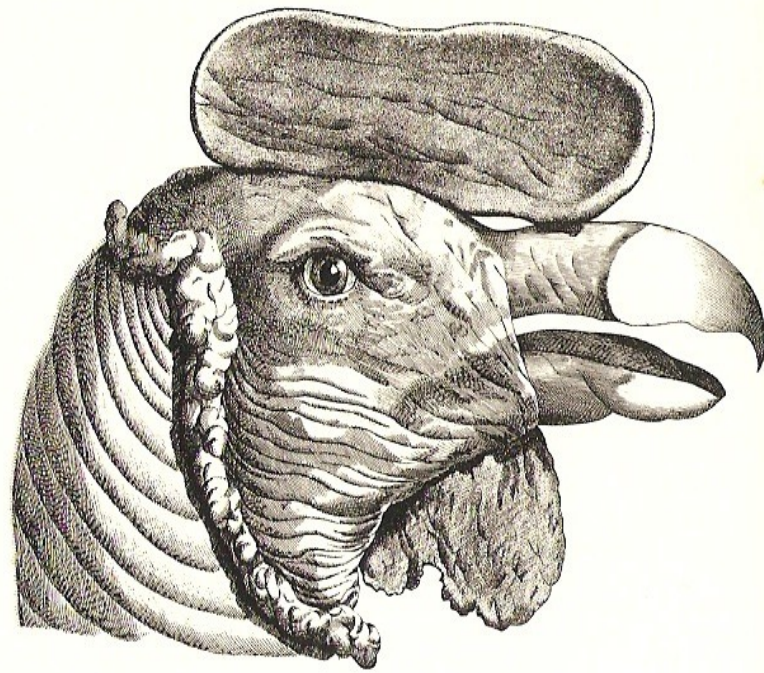


Alexander von Humboldt and Aimé Bonpland's expedition





19 The natural bridge over the Rio de la Suma at Icononzo in Colombia – one of the many illustrations in Humboldt's travel book, which were based on his own sketches.



VULTUR GRYPHUS. Lin.

25/26 The South American condor (*Vultur gryphus lin*) is discussed in the zoological volume of the travel book. Humboldt himself made a sketch of it, and also of the catfish (*Astroblepus grixalvii*).



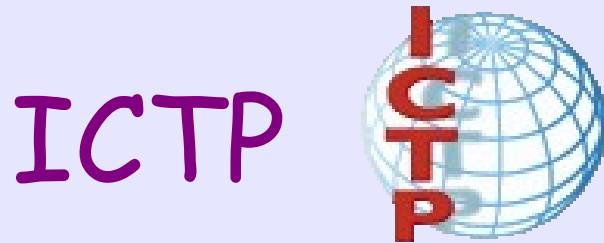
Humboldt Universität Berlin Unter den Linden St

To the second discoverer of
Cuba, La Havana University

Palermo, Buenos Aires



Thanks for support



AvH Foundation



MINCyT, Argentina

CONICET, Argentina

UBA, Argentina

CLAF



Enjoy!

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