

In the service of knowledge: courses and books at the *PhT



Riccardo Guida (with the help of many colleagues)

The IPhT in the service of knowledge...



~200 **articles** per year

1-4 **seminars** per week + JCs

≥ 1 international **conferences** per year

academic and specialized **books**

teaching around the world

organizing Schools around the world
(Les Houches RB, JZJ, FD ; DI...)

the IPhT courses

public **outreach** activities:
books, seminars (*Bourbaphy*), interviews, IPhT “staff seminar”,
blogs, YT channels (*Scientia Egregia*)

open-knowledge engagement:
Wikipedia/Scholarpedia, answering questions in forums,
open-access software



1945-10-18
creation of the CEA

(pre)history of *PhT Courses

1946
CEA at Fort de Chatillon

1949
Service de Physique Mathématique
part of *Département d'Étude des Piles*

1952
opening of CEA Saclay site

1963-02-21
Service de Physique Théorique
@CEA Saclay, Building 530

1968
SPHT @ CEA Orme des Merisiers
(new site)

2008-01-01
SPHT → Institut de Physique
Théorique

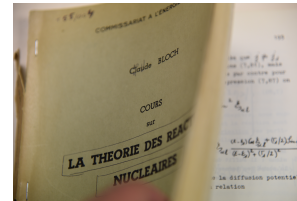
2015
UMR 3681 of CNRS



Albert Messiah



Claude Bloch



1955-1960 @ INSTN CEA Saclay

Mécanique quantique
first on 1955

Théorie des réactions nucléaires

Outside SPM

- **Anatole Abragam** Résonance magnétique
- **André Herpin** Physique des solides, cristallographie
- **Michel Trocheris** Physique des plasmas.

SPHT@530 courses

- ~64 Group+Lie Algebras by G.Cohen-Tannoudji &
- XXX by YYY



- salle café
- amphi C. Bloch
- salle Itzykson (>1990)

- QFT / Gauge Th. by Itzykson & Zuber (Orsay U+SPHT)
- QFT / RG and Crit. Ph. by Brézin & Zinn-Justin
- XXX by YYY

courses v2 start in 1996...

COURSES V0

COURSES V1



*PhT Courses v2: features

- Lectures are typically in **English** and **open** to everyone.
- **~4-6 courses per year** (up to pandemic).
- **~4-6 lectures per course , 2 hours per lecture** (currently on Friday morning).
- The **level** of the courses varies on a case-by-case basis: from **graduate to top-of-the-notch-research level**
- **Lecture notes, review articles, and books**, have been written following the courses.
- All courses are recognized by the graduate school EDPIF.
- To maximize the local audience, the choice of topics and speakers is done after an **IPhT-wide call for ideas** followed by a **survey**.

Milestones

- since 2015: dedicated **course website** containing course pages and archive
- since 11-2016: lectures are **video-recorded** and uploaded on **IPhT-TV@youtube**
- since 2021: **live broadcasting** on video-conference virtual room and on IPhT-TV
- since 2021: birth of the **IPhT Lecture Notes Series**, part of **SciPost Physics Lecture Notes**

Theoretical Physics Courses

Welcome Program Archive Calendar Subscriptions Practical

Courses of this academic year

Introduction to quantum integrability
Jules Lamers (IPhT)
2023-09-08 10:00, Videoconference and in person in Salle Itzykson, IPhT
2023-09-12 10:00, Videoconference and in person in Salle Itzykson, IPhT
2023-09-15 10:00, Videoconference and in person in Salle Itzykson, IPhT
2023-09-20 10:00, Videoconference and in person in Salle Itzykson, IPhT
2023-09-26 10:00, Videoconference and in person in Salle Itzykson, IPhT

Naturalness in Quantum Field Theory after the Large Hadron Collider
Raffaele Tito D'Agnolo (IPhT)
2023-09-29 10:00, Videoconference and in person in Salle Itzykson, IPhT
2023-10-03 10:00, Videoconference and in person in Salle Itzykson, IPhT

IPhT-TV
@IPhT-TV 3.6K subscribers 565 videos
IPhT-TV presents the activities of the Institut de Physique Théorique de Sa...
IPhT-TV and 5 more links

HOME VIDEOS LIVE PLAYLISTS COMMUNITY CHANNELS ABOUT

IPhT Courses


Andreas Montanari (2023) - Mathematical problems in...
Luca Rieker (2023) - Advances in 2D holography
Eric Perlmutter (2023) - The space of holographic CFTs
Michel Bauer (2023) - Rough paths for physicists
Bertrand Eyraud (2022) - Introduction to Topological...
Mark Srednicki (2022) - Quantum chaos and eigenstates...
Michel Vallinon (2022) - Gravitational waves in a nutshell
Ricardo Schiappa (2022) - Resurgence methods &
Andrea Puhm (2021) - Celestial holography primer
Bhagoke Obhi (2021) - An Ultra-Relativistic Review of baby BMS
Alexander Zhiboedov (2021) - The analytic S-matrix
Gregory Sotiriou (2019) - Exploring High-Energy Physics with Jets




*PhT courses v2: meet the organizers

- 1998-1999 **Peschanski**




- 1999-2000 Guida 


- 2000-2001 to 2009-2010 Guida **Misguich** 



- 2010-2011 **Biroli** Guida 



- 2011-2012 Guida 

- 2012-2013 to 2017-2018 Guida **Ribault** 



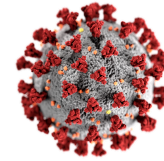
- 2018-2019 and 2019-2020 Guida **Schirò** 



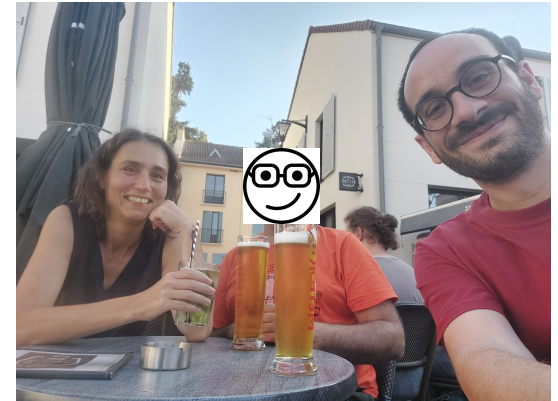
thanks to the
administrative and
computer staff for
their invaluable
help over the
years

Thanks guys!

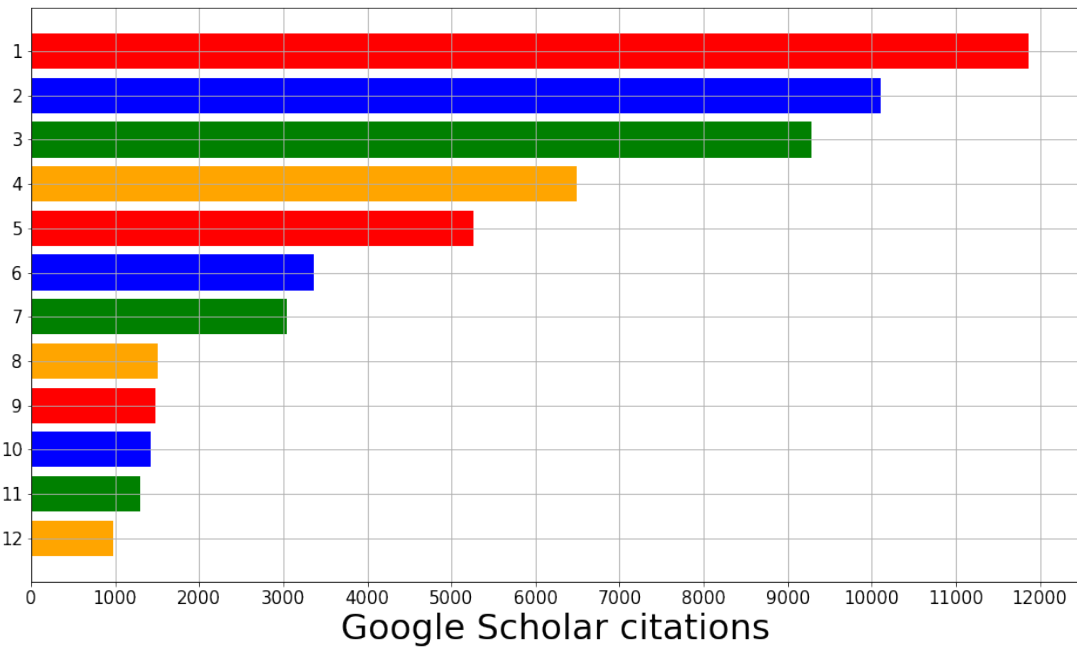
- March 2020



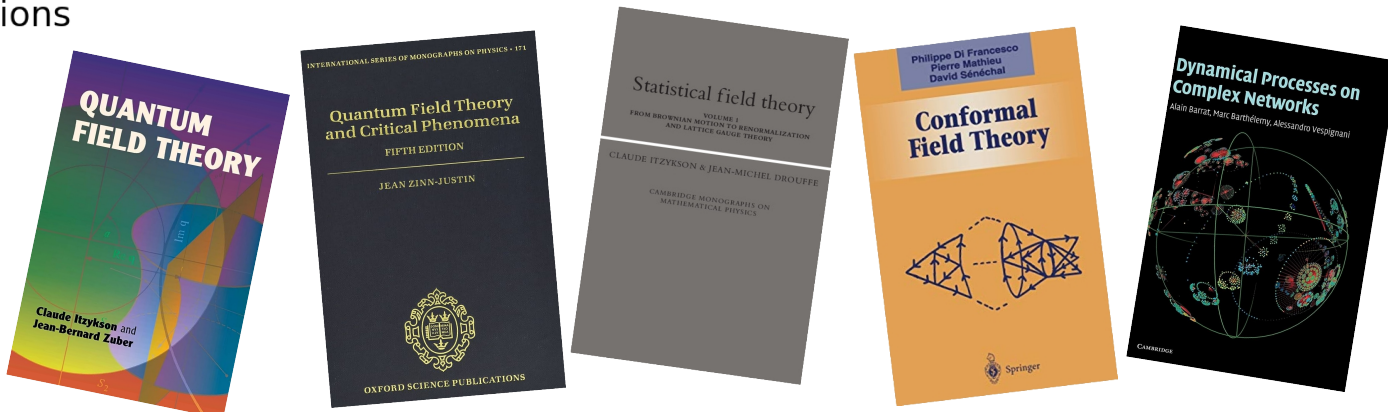
- 2021 - ... **Guica Guida Urbani**



Hall of fame



Exercise:
find the mapping
books → ranks



Thanks!