



The Abdus Salam
International Centre for Theoretical Physics



May 2009

Academic Year 2010-2011
BULLETIN / APPLICATION FORM

(Please remove the information sheets before submitting the application.)

Strada Costiera 11
I-34151 Trieste
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bulletin

ICTP DIPLOMA PROGRAMME ACADEMIC YEAR 2010 - 2011

The Abdus Salam International Centre for Theoretical Physics (ICTP) announces the *twentieth* ICTP Diploma Programme, a one-year advanced training programme in the fields of *Condensed Matter Physics*, *High Energy Physics*, *Earth System Physics* and *Mathematics*. The courses will be held in Trieste, Italy, during the period 1 September 2010 - 31 August 2011 and will lead to the ICTP Diploma (DICTP).

I. PURPOSE AND NATURE

The Diploma Programme is designed to provide young promising graduates in physics or in mathematics (mainly from developing countries) with post-graduate training suitable for pursuing teaching and research work in these fields.

II. THE COURSES

The Diploma Programme will consist of several basic and advanced courses in *Condensed Matter Physics*, *High Energy Physics*, *Earth System Physics* and *Mathematics* to be given by experts in these fields.

In addition to some selected advanced topics in each of the four fields, the main topics will include:

Condensed Matter Physics

Solid State Physics
Statistical Mechanics
Many-Body Theory
Nanophysics

High Energy Physics

Quantum Field Theory
General Relativity & Cosmology
Group Theory
Particle Physics
The Standard Model

Earth System Physics

Mathematical Geophysics
Physics of the Atmosphere and Ocean
Physics of the Solid Earth
Environmental Data Analysis

Mathematics

Algebra
Analysis
Algebraic Geometry
Differential Geometry
Topology/Dynamical Systems

There will be an examination at the end of each course. After all courses are completed, participants will be required to work on a dissertation, to be submitted and defended during the last month of the programme. The participants may also be required to take part in the ongoing activities of the ICTP in their related fields.

The ICTP Diploma will be awarded only to those candidates who successfully complete all examinations, dissertation, and other requirements as may be decided upon by the Scientific Committee of the DICTP.

Successful ICTP Diploma participants may have the opportunity to take the entrance examination for the Ph.D. programme of the International School for Advanced Studies, which is located near the Centre in Trieste.

III. QUALIFICATIONS AND SCHOLARSHIPS

(1) The minimum qualification for applicants is a degree equivalent to an M.Sc. (or an exceptionally good B.Sc.) **in Physics, Mathematics or in a field related to the topics listed above**. The selection of candidates will be based on their university performance and on academic recommendations.

(2) The applicant is expected to have adequate knowledge of the following topics in the specific field for which he/she is applying:

(a) For Condensed Matter Physics: Solid state physics; Quantum mechanics; Statistical mechanics; Classical mechanics; Electrodynamics; Mathematical physics.

(b) For High Energy Physics: Classical mechanics; Electrodynamics; Special theory of relativity; Relativistic quantum mechanics; Statistical mechanics.

(c) For Earth System Physics: Mathematical Methods applied in Geophysics.

(d) For Mathematics: Basic abstract algebra; Elements of real and complex analysis; Topology.

(3) The Diploma programme is open to young (generally below 28 years of age) qualified graduates from all countries that are members of the United Nations, UNESCO or IAEA.

(4) A limited number of scholarships (around 10 per field) will be awarded to successful candidates from developing countries for living expenses during their stay at the ICTP. The Centre will also offer travel grants to successful candidates. There are **no course fees** for the Diploma Programme.

(5) A limited number of qualified candidates will be welcome to attend the courses at their own cost. They must, however, supply written evidence that funds available for their stay are at least equal to those offered by the Centre (i.e. an amount equivalent to Euro 800.00- per month for the entire 12-month period must be available). This evidence may consist of a statement from the Institution supporting the candidate, or from a qualified banking institution.

IV. APPLICATION The applicant should submit:

(1) **The application form (attached to this Bulletin) completed in dark legible print, whether handwritten or typed. All sections of the form MUST be completed.**

(2) **A transcript of academic records and a copy of the highest university degree, with authorized English translations of the same.**

(3) Any certificates or documents, which give proof of the student's ability to follow advanced level courses, study and write scientific literature in the English language.

(4) **Two letters of recommendation**, from senior scientists familiar with the applicant's studies and work are also required. Please use the Recommendation Forms attached to this Bulletin for this purpose. These forms **should be sent separately** in sealed envelopes directly to the Abdus Salam ICTP **by the scientists recommending** the applicant.

All applications and/or correspondence should be addressed to:

ICTP Diploma Programme
The Abdus Salam International Centre for Theoretical Physics
Strada Costiera 11, 34151 TRIESTE (Italy)
Fax: +39 040 2240 388
Email: diploma@ictp.it

*Applications and recommendations should reach the Centre before **31 December 2009***
Trieste, May 2009

the **ABDUS SALAM INTERNATIONAL CENTRE FOR THEORETICAL PHYSICS**

ICTP Diploma Programme
Strada Costiera 11
I-34151 Trieste
Italy

Telephone: +39-040-2240 389
Telefax: +39-040-2240 388
E-mail: diploma@ictp.it

REQUEST FOR PARTICIPATION

**2010-2011 ICTP
DIPLOMA PROGRAMME**

1 September 2010 – 31 August 2011

please print legibly or use a typewriter. All sections of the form MUST be completed.

Tick course of study for which application is made (Choose ONLY ONE):

CONDENSED MATTER PHYSICS

HIGH ENERGY PHYSICS

EARTH SYSTEM PHYSICS

MATHEMATICS

PERSONAL DATA

Attach here a
recent
photograph,
signed legibly on
reverse

SURNAME/FAMILY Name:

First name:

Middle name(s):

for women, MAIDEN NAME (if applicable):

Gender:

Female

Male

IMPORTANT: PLEASE ALSO COMPLETE THIS SECTION, IF YOUR NAME(S) IN YOUR PASSPORT ARE SPELT DIFFERENTLY FROM THE ABOVE.

SURNAME/FAMILY Name:

First name:

Middle name(s):

for women, MAIDEN NAME (if applicable):

Date of birth (Year-Month-Day):

Marital status:

SINGLE

MARRIED

Place of birth (City and Country):

Present Nationality:

Number of children (if applicable):

ADDRESSES (PLEASE GIVE ADDRESSES IN FULL & TICK ONLY ONE BOX TO INDICATE WHERE CORRESPONDENCE SHOULD BE SENT):

PRIVATE:

INSTITUTION:

Phone: _____

Phone: _____

Telefax: _____

Telefax: _____

Personal E-mail*: _____

Institute E-mail*: _____

PRESENT ADDRESS FOR VISA PURPOSES : (to be filled only if different from Institution or Private)

Phone _____

Telefax: _____

Present E-mail*: _____

NOTE: please give an E-mail address or Telefax number or Cable through which you can be contacted for urgent communications.

Name and address of person to notify in case of emergency - Relationship:

Tel. No.

* I agree that my e-mail address(es) may be made public on the ICTP WWW page: YES NO

EDUCATION:

Note: A transcript of academic records of completed/ongoing courses, showing grades, and a copy of the highest university degree received, with AUTHORIZED English translations MUST be sent with this application.

year/month		Name, city & country of educational establishment	Degree (B.S., M.Sc. or their equivalents) Indicate areas of specialization, if any
from	to		
			Final Cumulative Grade:
			Final Cumulative Grade:
			Final Cumulative Grade:

CONDENSED MATTER and **HIGH ENERGY PHYSICS** applicants, list all advanced courses in Physics and Mathematics taken:
EARTH SYSTEM PHYSICS applicants, list all advanced courses in Physics, Mathematics and Geophysics taken:
MATHEMATICS applicants, give details of topics covered in the fields of Abstract algebra, Real and complex analysis and Topology:
ALL APPLICANTS, list textbooks used for the related courses:

THESIS OR OTHER RESEARCH WORK CARRIED OUT. LIST YOUR PUBLICATIONS, IF ANY (Title, Year & Journal).
Attach a separate sheet if necessary.

SEMINARS, SUMMER SCHOOLS & CONFERENCES ATTENDED:

Title, City & Country

Year

SCIENTIFIC EMPLOYMENT AND ACADEMIC RESPONSIBILITY:

period of duty

Research Institution or University

from
Month/Year

to
Month/Year

Academic Responsibility

GIVE YOUR MOTIVATION FOR ATTENDING THE COURSE AND FORESEEN EMPLOYMENT UPON RETURN TO HOME COUNTRY AFTER THE COURSE:

ENGLISH LANGUAGE PROFICIENCY (Attach any certificate or documents which give proof of the same):

<u>Reading:</u>	Good	<input type="checkbox"/>	<u>Writing:</u>	Good	<input type="checkbox"/>	<u>Speaking:</u>	Good	<input type="checkbox"/>
	Average	<input type="checkbox"/>		Average	<input type="checkbox"/>		Average	<input type="checkbox"/>
	Poor	<input type="checkbox"/>		Poor	<input type="checkbox"/>		Poor	<input type="checkbox"/>

FINANCIAL SUPPORT REQUESTED FROM THE ABDUS SALAM ICTP (please tick in the appropriate box).

No support local support only local and travel support

I certify that the statements made by me above are true and complete. If accepted, I undertake to refrain from engaging in any political or other activities which would reflect unfavourably on the international status of the ICTP. I understand that any breach of this undertaking may result in the termination of the arrangements relating to my visit at the Centre.

Signature of candidate

Date

(1) RECOMMENDATION OF APPLICANT for the 2010-2011 ICTP Diploma Programme *

Section I: To be completed in legible print by the Diploma Programme Applicant:

Applicant's Name: _____

Applicant's Country of present residence / Nationality (if different): _____

Course of Study for which the candidate is applying :

(Tick only ONE): **Condensed Matter Physics** **High Energy Physics**
 Earth System Physics **Mathematics**

Section II: To be completed by the scientist recommending the applicant:

- How long have you known the applicant and in what capacity?
- Where would you grade the applicant among students you have known at the same level in the past five years?
 Top 5% Top 10% Top 20%
- How strongly do you recommend the student for participation in the ICTP Diploma Programme?
 Very strongly Strongly With some reservations
- Please assess the candidate in terms of qualities below, in comparison with other students at the same level.

	OUTSTANDING	VERY GOOD	GOOD	AVERAGE	BELOW AVERAGE	UNABLE TO JUDGE
INTELLECTUAL ABILITY						
ACADEMIC PREPARATION						
DEGREE OF MOTIVATION						
EMOTIONAL MATURITY						

5. Please give your assessment below, regarding the applicant's academic preparation and intellectual ability to pursue higher studies in the relevant field. Please highlight strengths and weaknesses.
[Alternatively, a separate letter may be attached].

Signature: _____ Date: _____

Name (in BLOCK letters): _____

Full address of Institution: _____

Email: _____

Title or position held at Institution: _____

Have you ever taken part in ICTP activities? Yes No

If yes, in what capacity? _____

*** All recommendations, which must reach us by 31 December 2009, are to be sent directly by the scientist recommending the applicant to:**

Ms. P. Passarella, ICTP Diploma Programme, The Abdus Salam International Centre for Theoretical Physics, Strada Costiera 11,
34151 Trieste, Italy. Fax: +39 040 2240388 Email: diploma@ictp.it

(2) RECOMMENDATION OF APPLICANT for the 2010-2011 ICTP Diploma Programme *

Section I: To be completed in legible print by the Diploma Programme Applicant:

Applicant's Name: _____

Applicant's Country of present residence / Nationality (if different): _____

Course of Study for which the candidate is applying :

(Tick only ONE): **Condensed Matter Physics** **High Energy Physics**
 Earth System Physics **Mathematics**

Section II: To be completed by the scientist recommending the applicant:

- How long have you known the applicant and in what capacity?
- Where would you grade the applicant among students you have known at the same level in the past five years?
 Top 5% Top 10% Top 20%
- How strongly do you recommend the student for participation in the ICTP Diploma Programme?
 Very strongly Strongly With some reservations
- Please assess the candidate in terms of qualities below, in comparison with other students at the same level.

	OUTSTANDING	VERY GOOD	GOOD	AVERAGE	BELOW AVERAGE	UNABLE TO JUDGE
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ACADEMIC PREPARATION						
DEGREE OF MOTIVATION						
EMOTIONAL MATURITY						

5. Please give your assessment below, regarding the applicant's academic preparation and intellectual ability to pursue higher studies in the relevant field. Please highlight strengths and weaknesses.
[Alternatively, a separate letter may be attached].

Signature: _____ Date: _____

Name (in BLOCK letters): _____

Full address of Institution: _____

Email: _____

Title or position held at Institution: _____

Have you ever taken part in ICTP activities? Yes No

If yes, in what capacity? _____

*** All recommendations, which must reach us by 31 December 2009, are to be sent directly by the scientist recommending the applicant to:**

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