

International Atomic Energy Agency United Nations Educational, Scientific and Cultural Organization



# International Centre for Theoretical Physics News from ICTP

## No. 79

## Special Issue — October 1994



The book section of the ICTP Library.

## Newly Computerised Library at Your Service

## by Susan Biggin

What's the connection between 50

What's the connection between 50 metres of elementary particles, John Archibald Wheeler's recent publication "At Home in the Universe", wooden blocks masquerading as books, letters from Wolfgang Pauli to Abdus Salam, a golden sailing ship and an on-line catalogue facility? The answer is - your Library, far more than just a simple book collection. In fact, ICTP's Library is one of the finest in Europe, but has gained this status over the years through detailed attention and response to scientists' needs. A glance at its history will reveal exactly how valuable the collection is now, and indeed just why the whole collection is being put on-line, giving the user an instant view of what is present.

### Three decades of growth

#### Three decades of growth

The International Centre for Theoretical Physics, ICTP, was established in 1964, and in the early years its Library was funded by US\$20,000 provided as per the Seat Agreement by the Institute (now Department) of Theoretical Physics of the University of Trieste, which transferred physically from the University to ICTP and is still at Miramare today.

The original collection covered mainly the fields of high energy, nuclear physics and plasma physics, but soon extended to other areas such as mathematics and solid state physics, expanding in line with the Centre's activities. To some extent, too, certain areas of the humanities were

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### included.

#### included.

From the establishment of ICTP until the 1980s, the Library was intended for the exclusive use of the Centre's scientists. But since then, the scientific capacity of Trieste has grown. Known today as the "City of Science" for the richness of its scientific culture, Trieste is now home to a number of other scientific institutes and centres of excellence such as TWAS (Third World Academy of Sciences), ICS (International Centre for Science and High Technology) and ISAS (International School for Advanced Studies) on the Miramare/Grignano campus, and others such as the Research Area of Trieste, the **ICGEB** Synchrotron Elettra. (International Centre for Genetic Engineering and Biotechnology), and various departments of the University of Trieste.

With time, it became clear that ICTP and other users could mutually benefit from the Library, and as a consequence, most of the scientific communities in Trieste now use the Library at Miramare. This opening of the Library's doors to the various institutes in Trieste has meant granting access and exchanges of the interlibrary loan type with scientific communities in Trieste, whilst offering access and the full range of services to campus institutes. Each year, around 5000 individual users are registered. In the time since its foundation, ICTP has seen well over 50,000 visitors - representing almost 5000 person-years of scientific research and study - and the Library a similar number.

Let us take at look at the services available.



The facilities offered by the Library include:

- loans and information,
- on-line searching of holdings,
- book and preprint card catalogues,
- book and preprint card catalogues, and lists of journals,
- daily display of newly arrived scientific journals,
- daily display and distribution of preprints and reports received,
- interlibrary loan,
- monthly list of new acquisitions,
- daily list of newly arrived journals,
- reading room with newspapers and magazines,
- photocopiers for users,
- reader-printer for microfiche and microfilm.



Interior of ICTP Library: fireproof carpeting throughout and a sprinkler system ensure maximum protection against fire hazard.

## **Computerisation of Facilities**

Earlier this year, ICTP began automation of its Library. A full on-line search facility is being installed for the user, who will be able to find any type of item held in the Library — the book collection, the preprints and the journals — once the transfer of information to computer record is complete, likely to take another two years complete, likely to take another two years or so. All loans will also be registered on computer. Both user and item will be issued with bar codes, and eventually matched for automatic entry on computer at the loan desk.

The computerisation has been facilitated by using the Library of Congress databank down-loaded in "MARC" or MAchine Readable Cataloguing standardisation. The Library of Congress in Washington is the world's largest, and its international standard, "MARC", has been the leading standard for library automation for close to 25 years. "MARC" is essential for loading stock onto computer, converting existing paper records, since the "MARC" record describes an item — title, author, publisher, etc. — under specific categories and in a standard format that renders it readable by computer.

#### Searching

To search for a book, preprint or journal, the user can interrogate the OPAC as well as the manual card index, though when the work of transferring the Library's collection to computer is completed, the manual index will no longer be used.

Once access to the OPAC catalogues has been gained, the user can request book, preprint or journal information by selecting from the menu, and keying in search commands as requested by the terminal. Keyword entry affords the user great flexibility in the search. At present, the response on the screen, which can be printed out nearby, provides listings of

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Five workstations for consultation are available in the Library.

## Getting connected

To connect to the Library databases, the user accesses through the Online Public Access Catalogue or OPAC, which is the first menu presented to the user, offering choice of book, journal or preprint database. Connection is possible from all workstations on the ICTP campus and in fact from any computer connected to Internet. There are four ways of connecting to the Library:

## 1 Telnet.

Connect directly by entering "telnet library.ictp.trieste.it" or "140.105.16.6". Use "OPAC" as username. No password is needed.

## **2** ICTP Gopher

Connect directly to the ICTP Gopher ("gopher gopher.ictp.trieste.it"). Select ICTP and then the "Library" menu. Choose the "ICTP Library <TEL>" option and then proceed by logging on using "OPAC" as username as above.

## **O** WWW

The ICTP WWW server allows basically the same information available on the ICTP Gopher server to be obtained, but through the World-Wide Web protocol. The ICTP WWW server URL (universal record locator) is "http:// www.ictp.trieste.it/".

• e-mail to Library mail server (for books and journals only) Send a message to the Library mail server ("ictplib@ictp.trieste.it") with "Help" as subject of message. Leave the body of the mail empty. The response given will be a text file as a returned mail, showing all possible search options available.

## Internet

Internet is a voluntary global communications network of some half million computers worldwide. whose interconnection opens up messaging, searching and file transfer possibilities between any two machines on the network. For academic use, there is no charge. Internet not only provides access to information, but to people, reaching an estimated 50 million worldwide, and gives the ability to connect to tens of thousands of remote computers, the power to down-load software programs and images. Internet also acts as a forum for discussion groups, of which there are around 10,000. Some of the commonest services used so far on Internet include "news" or "netnews", a bulletin board information service, and also "listserv", which distributes information as mail. The user con be included on the automatic mailing list for discussion groups in almost any desired area. In the library context, there is a

library automation software group: exchanges are leading to continuous improvement in library services. The network is of great value in locating material, through interrogation of other databases worldwide.

books (with details of author, year, publisher, etc.), journals and preprints, plus their location.

The preprint database can also be accessed though "ICTPINFO" from any terminal connected to the ICTP computer network, or else the ICTP WWW has a direct pointer to the ICTP preprints; in addition, ISAS acts as a worldwide repository of physics preprints, accessible through WWW or e-mail.

In addition, new book acquisitions are listed, and in the future, further information will be available, such as newly arrived journals, items on order or being processed. The user will also be able to add his name to the waiting list for a book or journal.

#### **Computer databases**

Apart from the databases held at ICTP Library itself, access through the computer network will bring databases round the world within the user's reach. As mentioned, the user can connect to the WWW through "ICTPINFO": from there, the user can go onto the WWW and search other libraries worldwide through the PAL (Publicly Accessible Libraries).

An eye is also being kept on the Internet network, for the limitless access to databases and information it allows, effectively the "global library" — the stock and resources of other libraries not found in a home library.

The Library is currently carrying out trials with databanks of Nuclear Physics B and Journal of Chemical Physics, accessed directly through the Gopher. Both library and publisher are interested in data such as the reaction of the users and frequency of access, in order to assess and cost the service.



The periodicals collection.



Print-out of the On-line Public Access Catalogue (OPAC), as shown on the computer screen.

## **Library Holdings**

Approximate figures for holdings, estimated in the Autumn 1994, are:

| 50,000 | books |
|--------|-------|
|        |       |

- 45,000 bound journals 900 subscriptions to journals
- 1,500 theses
- 60,000 preprints/reports
  - 30 microfiche (various journals)
  - 10 CD-ROMs (optical disks).

The books include major collections of physics (in the areas of high energy, nuclear, atomic, plasma, astrophysics, solid state) and mathematics. In addition, technical and applied fields covered are electronics, electricity, computing, alternative energy, biology, medical physics, physics of the earth, atmospheric physics and oceanography. Other subjects include humanities such as philosophy, literature, religion, biographies and economics. Reference material includes a good range of dictionaries, encyclopaedias, yearbooks, statistical publications, directories, atlases.

A breakdown (in %) of research papers issued by scientists at ICTP last year gives a concise idea of the fields of activities to which the Library holdings have to correspond:

- 31 basic physics
- 31 basic physics
- 33 condensed matter
- 22 mathematics
- 4 energy physics
- 4 environmental physics
- 3 living state
- 2 applied physics
- 1 laser, atomic and molecular physics.

### Preprints

A survey has shown that of the present 400-450 ICTP research papers issued each year, about three-quarters are eventually published in the open literature. Nevertheless, some work never actually sees publication. In order not to lose this important font of information, a full preprint collection of ICTP scientists'



The periodicals display.

work is maintained, going back four years, plus around 12,000 received annually from institutions worldwide.

The weekly list of preprints received at ICTP will continue to be published. The Library's daily display and distribution to those requesting copies (using the forms in the display area) of preprints and reports received permits rapid dissemination of scientific research even before publication. It should be noted, though, that since preprints can be accessed via the Gopher on the WWW databases, the paper-copy service has increasingly less importance.

## **Optical disks**

uptical disks is also avanimenting with

The Library is also experimenting with optical disks. These hold extremely compact information and allow its instant location. These can either be purchased individually and consulted in-house, or else accessed through the network, via subscription to the publishing house holding the information.

Optical disks offer every conceivable type of stored information — complete texts, abstracts, dictionaries and so on. The system may be adopted in the future, its main advantages being the immediate access it affords and the virtual elimination of storage problems.

## The ICTP Library in Numbers

| square metres              | 3,200 |
|----------------------------|-------|
| linear metres journals     | 1,700 |
| linear metres books        | 1,500 |
| seats in reading areas     | 60    |
| workstations for consultat | ions5 |

| preprints/reports          | 60,000 |
|----------------------------|--------|
| books                      | 50,000 |
| bound journals             | 45,000 |
| theses                     | .1,500 |
| subscriptions to journals  | 900    |
| subscriptions to journals  | 900    |
| microfiche (various journa | ls)30  |
| CD-ROMs (optical disks).   | 10     |

## **Your Library**

The Library, located on the first floor of the ICTP Main Building, is open from 8.30am to 8.00pm every day of the year except some of the main holidays.

## Layout of the Library

The loan desk is at the entrance (see "A" in plan), and assistants there will answer any enquiries. In this area the user will find the reference section, display shelves holding current journals, photocopying facilities, and corners for reading.

The next section in the Library ("B") houses the reference journals, made up of second copies of the Library's most commonly consulted journals, such as Physical Review Letters and Physical Review. In alphabetical order then follows the full journal collection, by title. The abstract and citation indexes are held in this area, and include the Science Citation Index, on loan from the Third World Academy of Sciences (TWAS).

The final section of the Library ("C") holds the book collection, arranged by subject on open shelving units allowing the user free access. They are arranged according to the Universal Decimal according to the Universal Decimal Classification System, adopted worldwide: a chart is displayed for ready reference (see center pages).

The collection of books and manuals on computing is one of the Library's largest, and held in a side room within the book section.

A curious feature of the Library is its wooden book collection. Found on the shelves along with other books, the wooden book complete with classification number is an indication that the book is held for reference in a store near reception. This method ensures that the user is guaranteed access to some of the most popular books in the Library, which are otherwise prone to "wander". At the ICTP Library, books are arranged on the shelves in numerical order according to the Universal Decimal Classification system, which divides all books into the classification with numbers as follows

**0** GENERALITIES. **1 PHILOSOPHY. PSYCHOLOGY. LOGIC. 2 RELIGION. THEOLOGY. 3 SOCIAL SCIENCES.** 32 Political sciences. **33 Economics.** 34 Law. Legislation. 37 Education. Teaching & training. **4** LINGUISTICS. **5 NATURAL SCIENCES.** Science & technology. 5/6 5(09) History of science. 5.081 Handbooks & physical tables. 51 Mathematics. 51(02) Manuals. 51(04) Essays. Lectures, etc. 51(08) Collected works. 51(09) History. 51-72 Mathematical methods in physics. 51-73 Fractals. 51-74 Mathematics in engineering & technology. Mathematical biology. 51-76 51-77 Econometrics. 51-8 Mathematical games & recreations. 510 Fundamental & general considerations. Foundations & logic, etc. 510.4 Combinatorics. Graph theory. logic, etc. 510.4 Combinatorics. Graph theory. 510.5 Algorithms & computable functions. 510.6 Mathematical logic. 511 Arithmetic. Theory of numbers. 512 Algebra. 512.5 General algebra. 512.53 Semigroups. 512.54 Groups. Group theory. Linear representations of abstract groups. 512.547 512.55 Rings & modules. 512.56 Lattices (incl. Boolean rings & algebras). 512.58 Categories. Category theory. 512.6 Special branches of algebra. 512.62 Fields & polynomials. 512.64 Linear & multilinear algebra (incl. matrix theory). 512.7 Algebraic geometry (incl. commutative rings & algebras). 512.81 Lie groups. Geometry. 514

519.2 Probability & mathematical statistics. 519.68 Computer programming. 519.681 Theory of programming. 519.682 Programming languages. 519.683 Programming methods & devices. 519.684 Programming - specialized computers, 519.69 Applications of computers. 519.8 Operational research. 519.85 Mathematical programming. 519.86 Theory of economic-mathematical models. 519.863 Optimization models. 519.876 Computer simulation. 519.9 Computer so ience. 519.9.1 Microcomputers & microprocessors. 519.91 Theoretical computer science. 519.92 Computer technology. 519.93 Computer architecture. 519.95 Computer communications - networks. 519.961 Operating systems. 519.962 Translators, compilers interpreters, autocoders loaders. 519.963 Data base systems. 52 Astronomy, Astrophysics & descriptive astronomy, 523 523.01 Space physics. 523.038 Cosmic electrodynamics. 523.1 Cosmology & structure of the universe. 523.2 The solar system. 523.1 Cosmology & structure of the universe. 523.2 The solar system. 523.7 The sun. 523.8 Stellar astronomy. 528 Geodesy. 529 Measurement of time. 53 Physics & mechanics. Medical physics. 53:61 53:621.039.8 Nuclear medicine. 53(02) Handbooks. 53(04) Essays. 53(08) Collected works. 53(09) History. 53.08 Methods & principles of measurement. Units. 530.1 General principles of physics. Proceedings of Summer Schools, Conferences, Meetings held periodically. 530.12 General & special relativity. 530.145 Quantum theory (incl. guantum field theory). Scattering theory. Dispersion

539.19 Physics of single molecules. 539.2 Solid state physics. 539.3 Mechanical properties of solids. Continuum mechanics. 539.31 539.4 Strength. Resistance. 54 Chemistry. 54-14 Liquid state. 541 Theoretical chemistry. 541.1 Physical chemistry. 541.1-16 Solid state chemistry. 541.12 Chemical mechanics. 541.14 Photochemistry. 541.18 Surface chemistry. Colloid chemistry. 541.63 Stereochemistry. 543 Analytical chemistry. Inorganic chemistry. 546 547 Organic chemistry. 548 Crystallography. 549 Mineralogy. 55 Geology, geological & geophysical sciences. 550.31 Geophysics. 550.34 Seismology. Earthquakes. 550.8 Applied geology. General geology. Meteorology. Climatology. 551 551.1 Structure of the earth. 551.32 Glaciology. Study of glaciers. 551.35 Marine formation (marine geology). 551.4 Surface of the globe, Physical geography. 551.35 Marine formation (marine geology). 551.4 Surface of the globe. Physical geography. Geomorphology. 551.45 Plains, Deserts, Arid lands, Steppes, 551.46.0 Oceanography. 551.465 Hydrodynamics of ocean waters. Structure of ocean waters. 551.48 Hydrography. Hydrology. 551.50 Meteorology. Climatology. 551.51 Meteorology, dynamic. 551.57 Water vapor & hydrometeors (precipitation). 551.58 Climatology. 551.59 Atmospheric phenomena-56 Palacontology. 57 Biological sciences. 573.6 Biotechnology. 574 Biology. 574:530.145 Biology applied to quantum mechanics. 575 Genetics.

576.8 Parasitology.

| 514   | Geom  |  |  |
|-------|-------|--|--|
|       |       | General geon   | netry.   |
|       | 514.7 | Differential g   | eometry (incl.algebraic & analytic                                 |
|       |       | methods in ge  |  |
|       |       | 514.74   | Algebraic & analytical methods in geometry.                        |
|       | 514 9 | Competetert  |  |
| 515.1 |       |  | udy of objects of mechanics & physics.                             |
| 515.1 | Topol | and the second s | Conservation   |
|       |       | 515.12   | General topology.  |
|       |       | 515.14   | Algebraic topology.  |
|       |       | 515.16   | Topology of manifolds.   |
|       |       | 515.17   | Analytic spaces.   |
| 517   | Analy |  |  |
|       |       | Differential c   |  |
|       |       | Integral calcu   |  |
|       | 517.4 |  | eterminants. Integral transforms.                                  |
|       |       | Operational  |  |
|       | 517.5 | Theory of fun  |  |
|       |       | 517.51   | Functions of a real variable. Real                                 |
|       |       |  | functions.   |
|       |       | 517.52   | Series & sequences.  |
|       |       | 517.53   | Functions of a complex variable.                                   |
|       |       | 517.54   | Conformal mapping & geometric                                      |
|       |       |  | problems in the theory of functions of a                           |
|       |       |  | complex variable. Analytic functions &                             |
|       |       |  | their generalizations.   |
|       |       | 517.55   | Functions of several complex variables.                            |
|       |       | 517.57   | Harmonic functions & their   |
|       |       |  | generalizations.   |
|       |       | 517.58   | Special functions (incl. hyperbolic                                |
|       |       |  | functions).  |
|       | 517.9 | Differential, i  | ntegral & other functional equations.                              |
|       |       |  | nces. Calculus of variations. Functional                           |
|       |       | analysis.  |  |
|       |       | 517.91   | Ordinary differential equations.                                   |
|       |       | 517.93   | Special differential equations & systems.                          |
|       |       | 517.938  | Theory of dynamical systems.                                       |
|       |       | 517.95   | Partial differential equations.                                    |
|       |       | 517.96   | Finite differences, functional & integral                          |
|       |       |  | equations.   |
|       |       | 517.972  | Calculus of variations & mathematical                              |
|       |       |  | theory of control.   |
|       |       | 517.977  | Mathematical theory of control. Optimal                            |
|       |       |  | control. Differential games.                                       |
|       |       | 517.98   | Functional analysis & onerator theory control. Differential games. |
|       |       | 517.09   |  |
|       |       | 517.98   | Functional analysis & operator theory.                             |
|       |       | 517.982.2<br>517.982.4   | Topological linear spaces.   |
|       |       | 517.982.4  | Theory of generalized functions                                    |
|       |       | E17 092 E  | (distributions).   |
|       |       | 517.982.5  | Linear operators in linear infinite                                |
|       |       | 517.094  | dimensional spaces.  |
|       |       | 517.984  | Spectral theory of linear operators.                               |
|       |       | 517.986  | Topological algebras & the theory of                               |
|       |       | 517.000  | infinite dimensional representations.                              |
| E10   | Com   | 517.988  | Nonlinear functional analysis.                                     |
| 518   |       |  | rematics. Mathematical cybernetics.                                |
|       |       | Mathematical   |  |
|       |       |  | al mathematics. Numerical methods.                                 |
|       | 518.7 |  | cybernetics. Control systems theory.                               |
|       |       | 518.713  | Artificial intelligence, robotics, pattern                         |
|       |       |  | recognition.   |
|       |       | 518.72   | Information theory.  |
| 519   | Proba | bility & mathe   | matical statistics. Operational research.                          |

theory), Scattering theory, Dispersion relations. 530.145:538 Quantum electrodynamics. 530.16 Causality & probability. 530.19 Potential theory. 531 Mechanics. 531.011 Analytical mechanics. 531.19 Statistical mechanics. 531.19:530.145 Quantum statistical mechanics. 531.2 Statics. 531.3 Dynamics. 531.5 Gravitation. 531.7 Metrology. Fluid mechanics. 532.5 Fluid dynamics. Mechanics of gases. Aeromechanics. Plasma physics. 533.6 Aerodynamics. 533.7 Kinetic theory of gases. 533.9 Plasma physics. Vibrations. Sound. **Optics.** Light. 535.3 Spectra. 535.4 Interference, Diffraction. Heat. Thermodynamics. 536.2 Heat conduction. Heat transfer. 536.48 Low temperature phenomena. Liquid helium studies. 536.7 Thermodynamics. Electricity. 537.1 Theory of electricity. 537.2 Electrostatics. 537.3 Electric currents (semiconductors & superconductivity). 537.32 Thermoelectricity. 537.5 Electrical discharges & radiations. 537.531 X-rays. 537.591 Cosmic rays. Magnetism. 538.2 Magnetic processes & properties. 538.3 Electromagnetism. 538.4 Magnetohydrodynamics. 538.56 Electromagnetic waves. Physical nature of matter. 539.1 Nuclear, atomic & molecular physics 539 12 Elementary particles Nuclear, atomic & molecular physics 539.1 539.12 Elementary particles, 539.12.08 Radiation. Measurement. 539.122 Photons. 539.123 Neutrinos. 539.124 Electrons. 539.125 Nucleons. 539.126 Mesons & hyperons. 539.127 Hypernuclei. 539.14 Nucleus, Nuclear structure, 539.141 Many-body problem. 539.16 Radioactivity. Radioactive decay. 539.165 Beta radioactivity & decay. 539.17 Nuclear reactions. 539.171 Scattering (in nuclear physics). 539.172 Individual nuclear reactions (except fission). 539.173 Fission

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539.18

Physics of single atoms.

576.8 Parasitology. 577 General properties of life & living organisms. 577.1 Biochemistry. 577.3 Biophysics. 577.4 Ecology. Environment. Pollution. 581 Botany. 591 Zoology. 6 APPLIED SCIENCES MEDICINE. TECHNOLOGY. 61 Medicine. 612 Physiology. 613 Hygiene. 614 Public health. 615.849 Radiotherapy. 62 Engineering & technology. 620.1 Materials testing. 620.9 General economics of power & energy. 621 Mechanical & electrical engineering, Machinery. 621.039 Nuclear engineering. 621.039.4 Reactor engineering theory. 621.039.5 Nuclear fission reactors. Controlled thermonuclear devices, Fusion 621.039.6 reactors. 621.039.7 Radioactive-waste management. 621.1 Steam generation. Steam boilers. 621.3 Electrical engineering. Applied electricity. 621.372:535 Fiber optics. 621.375 Lasers, Masers, Amplifiers. 621.38 Electronics. 621.382 Semiconductor devices, transistors, etc. 621.384 Particle accelerators, 621.384.6:535 Synchrotron radiation. 621.39 Telecommunications. 621.47 Solar energy. 621.5 Pneumatic energy. Machines. Refrigeration. Heat pumps. 621.6 Fluid distribution. Storage. Containers. Pipes. Pumos. 622 Mining & mineral dressing. 623 Milltary technology. 624 Civil engineering. 628 Public health engineering. Water supply. 629.12 Naval engineering. 629.7 Aeronautical engineering. Space technology. Satellites, etc. 63 Aariculture Satellites, etc. 63 Agriculture. 65 Commercial & industrial organization. 65.01 Management theory, method, system. 658 Industrial organization & administration. 66 Chemical engineering. Operations, (unit) processes & plant. 66.017 Material properties. Chemical products. Chemicals. 661 Glass. Ceramics. Enamel. Artificial stones. Cements. 666 Metallurgy. 669 669-154 Liquid metals. 669.017 Physical metallurgy. 669.018 Metallic materials (general properties). Alloys. 678.7 Synthetic polymerizates: rubbers, resins, etc. 69 Building. 7 THE ARTS. ARCHITECTURE. 8 LITERATURE.

**9 GEOGRAPHY. BIOGRAPHY. HISTORY.** 

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The Loan Desk.

## Reading room and preprint area

A reading room, located in ICTP Main Building on the first floor, next to the coffee bar, is available for general interest reading. Current newspapers, magazines and other material can be found here, provided within the limits the budget allows, for example, the chief national and local Italian newspapers, the main international English-language press, other foreign newspapers, and magazines and newsletter from international organisations and academic institutions.

Out-of-date issues, otherwise to be discarded, can be taken from the shelf outside the reading room.

On the opposite side of the stair well, towards the Library itself, is an area where preprints are displayed, shelved under towards the Library itself, is an area where preprints are displayed, shelved under categories of elementary particles, solid state physics, mathematics, plasma physics and nuclear physics. Preprints are circulated from this display to those requesting copies.

#### Loans

Books can be borrowed for one month, renewable up to three. Approximate annual figures of users and loans are clear indication of the stream of activity at the Library:

20,000 loans 300 interlibrary loans 5,000 registered users.

## Interlibrary loans

Interlibrary loans can be requested at the loan desk, and are usually supplied by universities in Italy, mainly Trieste. Very often photocopies of an item are supplied, and occasionally a book sent. Loans take 2-4 weeks to come through. The Library is not able to provide material — books or photocopies — for individuals outside ICTP.

# Photocopying, microfiche and microfilm

There are two black-and-white photocopying machines for users, located in the reference area. A card is needed to operate the machine, and can be purchased at the Mail Offices in the Adriatico Guest House or at ICTP Main Building. Copying is the user's responsibility: the Library does not offer a copying service.

A microfiche/microfilm reader is also available in the photocopy room.

### Acquisitions

During Library Committee meetings, publishers' lists and catalogues are considered, along with suggestions from users and committee members. Users can offer suggestions for material needed to support a project. Publishers' catalogues are available in the Library. Where possible, book orders are executed immediately, though financial constraints might mean deferral to the following year. Books normally take 6-12 weeks to be delivered, depending on the source country.

Journal subscriptions are considered once a year in the Autumn, to allow sufficient time for the subscription to start up the next year. A number of factors need evaluating, including costs: journal



Reading room for general reading.

## **Dedication to Abdus Salam**

In the reference area there is a new commemorative showcase dedicated to Abdus Salam, Director of ICTP for the 30 years up until the time the title of President was bestowed on him in 1994. The display is a permanent record of the years he dedicated to science at ICTP, in Trieste, and indeed throughout the world. The medals, gifts, awards, certificates and expressions of appreciation from the entire world are testimony to the esteem in which he is held as well as his influence.

In pride of place are copies of the Nobel medal and certificate presented to Abdus Salam in 1979 when he was awarded the Nobel Prize for physics, shared with Sheldon Lee Glashow and Steven Weinberg, for their work on unification of the electromagnetic and weak forces. The award stamped a formal seal of approval on the reputation of ICTP, which gained increasing recognition throughout Salam's days as Director. The Atoms for Peace Award, mark of Salam's profound sense of responsibility as both scientist and co-heir to our planet, has also been donated, as has the very recently awarded 1989 "Ettore Majorana" Erice Science for Peace Prize, recognition of Salam's extraordinary contribution in fundamental physics and his tireless efforts on behalf of scientists in developing nations.

Other spectacular pieces include a golden ship presented by the Kuwait Foundation for the Advancement of Science on the occasion of the TWAS 10th Anniversary, November 1993; a set of medals from former Prime Minister of Italy Giulio Andreotti, in March 1991; the UNESCO Einstein Award in 1979; and others from Turkey, Jordan, India, Bolivia, Singapore ... and every corner of the globe.

Also included in this display are the books authored by Abdus Salam, in all editions and languages. The walls of an ante-room off the reference section of the Library, just beyond the showcase, are decorated with just some of the many diplomas gained by Salam, who has also donated his own book collection to the Library. A full set of Salam's collection of research papers, bound in 16 volumes, is also held in the Library. A further precious item is a file of correspondence between Wolfgang Pauli and Abdus Salam, mainly from the 1950s.



Showcase of prizes, awards, and presentations gained by ICTP President Abdus Salam, who has donated his collection to the Library.

subscriptions make up 70% of available library funds. On occasion, the Director of the Centre can grant extraordinary funding to the Library. Care is taken with new subscriptions, to avoid duplication with the other on-campus centres: for example, ISAS holds some journals not kept at ICTP.

## **Library Committee**

The Committee comprises full-time librarians plus scientific staff. Meetings are held periodically to make recommendations regarding new acquisitions and subscriptions. The meetings are attended by permanent scientists representing ICTP's different disciplines, and are normally chaired by ICTP's Deputy Director.

## Library personnel

There are nine permanent library staff plus seven assistants, these latter often students who work after-hours and weekends on the loan desk. The permanent staff periodically attend updating courses, especially now with the introduction of computerisation.

#### Whom to contact

Queries can be communicated via the option "(M)ail" of the OPAC Main Menu, or else through e-mail "libcom@ictp.trieste.it".

For other information, complaints, suggestions or help of any kind, please contact:

Maria Zingarelli,

or

Maria Zingarelli, Head of Library Services

Mariuccia Fasanella, Supervisor of Reader Services.

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Dr. Susan Biggin, freelance scientific journalist. tel/fax (39) 481 777621

## **Calendar of Activities at ICTP in 1995**

## SMR

| 838 | Seventh international workshop on computational condensed matter physics:<br>total energy and force methods                |   |
|-----|--|---|
| 841 |  |   |
|     | Fourth ICTP-URSI-ITU (BDT) college on radiopropagation: propagation,<br>informatics and radiocommunication system planning |   |
|     | followed by  |   |
|     | 846 Second workshop on rural communications in developing countries  |   |
| 842 | Conference on ultrafast transmission systems in optical fibres   |   |
| 843 |  | in in the second s  |
| 0+J | microstructures, to be held in Campinas, Brazil  |   |
| 844 | Adriatico research conference on lower dimensionality semiconductor systems  |   |
| 845 | Second winter college on optics  |   |
| 847 | Conference on topological and geometrical problems related to quantum field theory   |   |
|     |  |   |
| 848 | Spring school and Workshop on string theory, gauge theory and quantum gravity  |   |
| 849 | Conference on recent developments in statistical mechanics and quantum field theory  | Contraction of the second se |
| 852 | Conference on nuclear physics at intermediate energy   |   |
| 853 | Antonio Borsellino College on neurophysics   |   |
| 854 | College on computational physics   |   |
| 855 | Workshop on dynamical systems  |   |
| 856 | Trieste Conference on physical and mathematical implications of mirror symmetry  |   |
| 865 | Workshop on computational methods in material science and engineering  | 12 - 25 June  |
| 858 | Summer school in high energy physics and cosmology   |   |
|     | including  |   |
|     | 864 Workshop on the search for new elementary particles  |   |
| 859 | Research workshop on condensed matter physics  |   |
| 860 | Adriatico research conference on physics of sliding friction   |   |
| 862 | Workshop on biological models (tentative)  |   |
|     | including  | 14 LUNDER STAT  |
|     | 866 Adriatico research conference on biophysics at the molecular and mesoscopic sc   |   |
| 857 | Miniworkshop on strong electron correlations   |   |
| 863 | School on non-accelerator particle astrophysics  |   |
| 861 | Adriatico research conference on chaos in atomic and molecular systems   |   |
| 851 | Symposium on African drought   |   |
| 892 | African regional workshop on parallel processing and its applications,   |   |
|     | to be held in Yaoundé, Cameroon  |   |
| 889 | Miniworkshop on Josephson junction arrays  |   |
| 027 | Washahan an nantinagaiter nains in nantinan aratama  | 1,A DE August   |
| 889 | Miniworkshop on Josephson junction arrays  |   |
| 867 | Workshop on nonlinearity: noise in nonlinear systems   |   |
| 869 | Conference on partial differential equations and applications to geometry  |   |
| 868 | Adriatico research conference on randomness stochasticity and noise  |   |
| 870 | Adriatico research conference on information theory in   |   |
|     | classical and quantum systems  |   |
| 871 | Workshop on general theory of partial differential equations and microlocal analysis                                       |   |
| 873 | College on soil physics  |   |
| 872 | Workshop on non-conventional energy sources  |   |
| 874 | Autumn college on plasma physics   |   |
| 875 | Workshop on telematics   |   |
| 876 | Workshop on topical subject in plasma physics  |   |
| 888 | Conference on oceanography: "Antonio Michelato" memorial   |   |
| 880 | International conference on ultrafast processes in spectroscopy (UPS '95)  |   |
| 877 |  |   |
|     | School on synchrotron radiation in science and technology  |   |
| 878 | Experimental training course on chemistry and physics of oxide materials:  |   |
| 070 | high T <sub>e</sub> superconductors, to be held in Bangalore, India  | 5 weeks in October/November   |
| 879 | Third workshop on non-linear dynamics and earthquake prediction  |   |

## **Getting Information on ICTP Activities via Computers**

Information on the various ICTP activities throughout the year can be retrieved via electronic mail, the Internet Gopher and WWW. The procedure is as follows.

#### Using Electronic Mail

#### (1) Scientific Program of ICTP Activities

The complete Scientific Program can be obtained by sending an e-mail to

smr@ictp.trieste.it

using as Subject: get calendar Note: The Scientific Program is constantly updated. So, please check the issue date.

To each activity listed in the Scientific Program there is an associated **smr-number** from which you can obtain more detailed information, when available.

## (2) Information on a specific ICTP activity

To receive a list with the names of documents available for a particular activity, you should first identify the smr### code as indicated above. Then send an e-mail to smr###@ictp.trieste.it

Subject: get index

using as

If you send another mail to

#### smr###@ictp.trieste.it

using as Subject: get document\_name (e.g., announcement, etc.) you will receive detailed information on the topic document\_name. Note: If you wish more than one document of an activity then use Subject: get doc1 doc2 ... etc.

## Using Internet Gopher

The ICTP Gopher server allows you to explore, search and retrieve general information regarding the many scientific activities carried out at ICTP. It is possible to access the Gopher space by issuing the Gopher command and exploring the branch "Other Gopher servers in the world" pointing to the geographical region: Europe $\rightarrow$ Italy $\rightarrow$ ICTP.

To access directly to the ICTP server, you can issue the command: gopher gopher.ictp.trieste.it

#### Using World-Wide Web

The ICTP WWW server allows you to obtain basically the same information available on the ICTP Gopher server, but through the World-Wide Web protocol.

The ICTP WWW server URL is: http://www.ictp.trieste.it/ The ICTP WWW server URL is: http://www.ictp.trieste.it/

News from ICTP is also available on Gopher server.

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EDITORIAL NOTE - News from ICTP is not an official document of the International Centre for Theoretical Physics. Its purpose is to keep scientists informed on past and future activities at the Centre and initiatives in their home countries. Suggestions and criticisms should be addressed to the Scientific Information Office.

Editorial Assistant: Anna Triolo.