

## Preparation and Submission of a Manuscript for the Proceedings of the Fusion Energy Conference

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**Abstract.** Since 1998, the proceedings of Fusion Energy Conferences (FECs) are being published electronically on CD-ROM and the Internet. Therefore, for publication in the proceedings, authors must submit their papers in electronic format via our web browser based, password protected file submission system, called LISA (Lightweight Interactive Storage Application for the Collection of Conference Contributions). LISA was developed in 2000 and further improved in 2002 and 2005/6 to help authors to submit their conference contributions in appropriate electronic format. Portable Document Format (PDF) will be the required format for submission of contributions. No other formats will be accepted. This paper describes the required layout for the full manuscripts, gives examples of how to convert them to PDF, and tells how to submit them electronically through LISA.

### 1. Introduction

With the Fusion Energy Conference (FEC) held in October 1998 in Yokohama, Japan, the IAEA began publishing the proceedings of this series of conferences electronically on CD-ROM and the Internet. The proceedings of the FEC 1998 (2001 Edition), FEC 2000, held in Sorrento, Italy, in October 2000, FEC2002, held in Lyon, France, in October 2002, FEC2004 held in Vilamoura, Portugal and of the FEC 2006, held in 2006 in Chengdu, China People's Republic of, can be found on the IAEA home page: The proceedings for the present Fusion energy Conference, 13-18 October, to be held in Geneva, Switzerland, will be published in the same way. There will be no hard copies of the proceedings. The publication on the Internet is a cost free service provided by the IAEA to participants of this series of conferences as well as to interested persons, institutes and libraries. In addition to the electronic proceedings on CD-ROM and the Internet, authors are encouraged to submit their full manuscripts to the **Nuclear Fusion** journal. The manuscripts will undergo the normal refereeing procedure and, if accepted, will be edited and published in the journal (see also the FEC 2010 announcement, Section 8.d, <http://www-pub.iaea.org/mtcd/meetings/Announcements.asp?ConfID=38091>)

This paper describes the particular requirements for the **layout** of the full manuscripts (Section 2) and where to send the **paper copy** (Section 2.9), ways to convert the manuscripts into correct **PDF** (Section 3), and the only way to **submit** them **electronically** to the IAEA (Section 4). **Please read these instructions carefully and follow the guidelines strictly.** These measures will help main authors and submitters of papers as well as the producers of the CD-ROM, to get all correctly submitted manuscripts published soon after the conference.

## 2. Preparation of Manuscripts (Source Files)

This section describes requirements for the layout of manuscripts to be produced by a word processor (e.g. Microsoft Word, LaTeX), which then have to be converted to PDF format for subsequent electronic submission to the IAEA.

### 2.1. Length of Manuscripts

Papers must **not exceed the number of pages** specified below:

- Summaries: 20 pages
- Overviews: 12 pages
- Orals: 8 pages
- Posters: 8 pages

Please note: **rapporteured papers** are considered as posters (maximum number of pages: 8).

### 2.2. General Layout

**Paper Size:** Please use these instructions as an example of the required layout. Use A4 format only, 21 cm x 29.7 cm (portrait format). The required margins are given in Table I below (resulting typing area: 16 cm x 24.7 cm).

TABLE I: MARGINS FOR YOUR MANUSCRIPT.

Margin	A4 Format
Left	2.5 cm
Right	2.5 cm
Top	2.5 cm
Bottom	2.5 cm

**Fonts: Important** – Use Times or Times New Roman<sup>1</sup> 12 point size only (other sizes as specified), and Symbol font for mathematical symbols (in the **text** and in the **figures**).

- Justification should be set to full (or left only, if preferred).
- Do not underline: Use *italics*, **bold** or ***bold italics*** instead<sup>2</sup>.
- Line spacing should be set at 1 (single).
- Leave a line space between paragraphs and sections.
- Leave a line space between section titles and text.
- Leave only one space after a full stop.

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<sup>1</sup> Authors are requested to use the (PostScript printer's) Times or the (TrueType) Times New Roman font and the standard Symbol font only, in order to produce PDF files having good performance. Other fonts used in the source files increase the risk of getting unreadable PDF files. LaTeX users may use Computer Modern or related fonts too, but need to ensure that the Type 1 (outline) version of the fonts is embedded in the PDF file; packages like "times" together with "mathptm" may be an alternative.

<sup>2</sup> Underlined words/sentences usually indicate Internet links.

- **Insert your paper number** on the top right corner of each page (**14 point size bold**) within the area of the top margin (at least 1.0 cm from the upper edge of each page). You may also insert a page number on every page (see examples in this paper).

The **first page** of the full manuscript must begin with the title of the paper centred on the page in **14 point Bold Title Case** (title case means first letter of each main word capitalized), the names of the authors (Initials – followed by a period each – Family Name) with the main author's name mentioned first, the names and locations of the authors' affiliations (Title Case), and the e-mail address of the main author (for an example, please see the title, authors and affiliations of these instructions).

The paper must begin with an **abstract** not exceeding 2400 characters (single paragraph, no references or footnotes, Times Or Times New Roman 10 point).

Widow/Orphan lines: Never start a page with the last line of a paragraph or of a displayed list, and never finish a page with the first line of a paragraph or a displayed list, or a section title. Make sure that all headings are followed on the same page by at least two lines of text.

### **2.3. Section Headings and Numbering**

Each new section and subsection should have a heading consisting of an Arabic numeral followed by a period, a single space and then the section title (**12 point Bold Title Case**, see these instructions).

### **2.4. Mathematical Signs and Symbols**

For mathematical signs in the text use special characters, “.” or “x” for the multiplication sign, “–” for minus, “+” for plus, and “·” for combining units (e.g. MW · h). Mathematical symbols must be clearly and consistently typed to ensure that their meanings and positions are unambiguous.

### **2.5. Footnotes**

Footnotes should be numbered with superscript Arabic numerals; the number and the text should both be typed in Times Or Times New Roman 10 point. Footnotes to the text should be typed at the foot of the appropriate page (see examples in this paper).

## 2.6. Figures and Tables

For figure numbering and captions, use Arabic numerals and text in *Times* or *Times New Roman* 11 point italics (see FIG.1.).

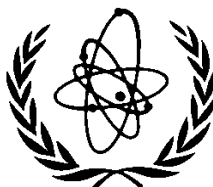


FIG. 1. IAEA logo.

For table numbering and headings, use Roman numerals, TIMES or TIMES NEW ROMAN 11 POINT UPPER CASE (see Table I above). Lettering in figures and tables should be large enough to reproduce clearly **and only the approved fonts may be used**. Ensure that figures and tables are clear and reproducible. Do not use too fine lines, too light colours, etc. All figures and tables should be **cited** in the text and should be **numbered** in the order in which they are first mentioned.

Figures and tables should be placed at the top or bottom of a page as near as possible to the place where they are first mentioned. The **table width** should not exceed 16 cm (if less than 16 cm, centre the table) or, for a table in landscape format, 25 cm.

## 2.7. Other Issues

**Numbering** of sections, paragraphs, references, figures, pictures, tables, equations and footnotes should be consecutive throughout the paper. **Abbreviations** should be explained when they first appear, unless they are commonly understood by the readership to which the paper is addressed. Express all **physical quantities in SI units**.

For **pictures and photographs** please include an electronic image in the document. Take care: pictures and photographs may increase the file size of your manuscript tremendously. Make sure that the file size of your manuscript converted to PDF does not exceed 20 MB (see also Section 4.3. (c)).

## 2.8. References

Please use the **reference style** given in the enclosed sample of references (Appendix 1). References should be numbered (Arabic numerals in square brackets, e.g. [12]) in the order in which they are first mentioned, and listed at the end of the paper. If a reference is cited first in a figure caption or table, it should be numbered according to the place in the text where the figure or table is first cited. Please ensure that journal references contain the journal name, volume number, year and page number. Paper numbers should be given in the case of electronically published conference proceedings. For all proceedings, the location and year of the conference should be given, and for both proceedings and reports, the name of the publisher and the place and year of publication should also be included.

## 2.9. Submission of Paper Copies of Manuscripts

The submission of hard paper copy is no longer required. For electronic submission of your manuscript please see Section 4. below.

**Please note:** Papers will not be edited or retyped by the IAEA before copying on CD-ROM and the Internet.

## 2.10. Recommendations

Authors should **proof read** their text carefully and finally run the source file through a **spelling checker** before converting it to PDF format. Authors should check their manuscript in PDF format for readability and printability before submitting it electronically to the IAEA.

## 3. Conversion of a Source File into PDF Format

As an author of a paper accepted for the FEC, you have already submitted a two-page synopsis in correct PDF during the submission period. This leads to the assumption that you are already familiar with the process of converting source files (Word, LaTeX, etc.) into the required format. If this is the case, you may skip reading this section and go directly to Section 4., Electronic Submission of Papers. Nevertheless, we recommend that you follow carefully the **Recommendations in Section 3.3.**

**General Information:** PDF was chosen as document format. Each author should submit his or her paper in PDF only. No other formats will be accepted.

In principle there are two ways of creating correct PDF files:

- Writing to a PostScript file first, which then has to be converted to PDF with Adobe Acrobat Distiller or similar software in a second step;
- Creating PDF directly from within the text processing software (needs Adobe Acrobat Writer or similar software installed on your computer).

### 3.1. Creation of PS Files

PS files are no longer acceptable.

### 3.2. Creation of PDF Files

To convert a PostScript file to PDF, you will need Adobe Acrobat 4.0 or higher or similar software. To convert the source file of your manuscript to PDF from within the word processing software (e.g. MS Word), you will need Adobe Acrobat Writer or similar software. Please follow the instructions of your software and **make sure that**

1. the fonts used in the document get embedded in the PDF file,
2. Acrobat 3 compatibility mode is set, and
3. document security settings are not used.

- **Possible problems**

If you encounter problems in producing, viewing or printing a PDF file, please consult your local software experts. The newest version of Acrobat Reader can be downloaded for free from the Internet:

URL: <http://www.adobe.com/products/acrobat/readstep.html>.

### 3.3. Recommendations

After generating the PDF file, we urgently recommend that authors review their PDF file by **printing** it and **proof reading** the output **before submitting the file electronically through LISA to the IAEA**. Carefully check the margins, mathematical symbols, graphics, pictures, etc. If you experience any problems, please contact your local software and computer experts. For detailed information, visit the Adobe Acrobat home page on the Internet (Internet address is given above).

## 4. Electronic Submission of Papers

**The full manuscript must be submitted through LISA, our web browser based file submission system with password based access control for electronic submission of FEC contributions. You – the author or submitter – must use the same user account (= e-mail address) and the same password as specified for abstract and synopsis submission. Submissions by e-mail, fax or any other means will not be accepted.**

Only authors/submitters of accepted FEC contributions will be able to access LISA. The system is able to check automatically incoming files in the specified format. You – the author or submitter – already submitted a two-page synopsis and a short abstract through LISA during the submission period. The submission process for a full manuscript will be very similar to that for abstract and synopsis submission.

Besides the full manuscript in PDF you have to submit additional information, especially names and affiliation of co-authors and keywords that will be used for the navigation and index pages on the CD-ROM and the FEC proceedings web site. Data provided during the abstract and synopsis submission period (paper title, main author, abstract, etc.) have been saved in LISA and do not need to be submitted once more. The abstracts may have been slightly modified in several cases with respect to mathematical formatting.<sup>3</sup> You may change the abstract if it is absolutely necessary, however, this is not recommended.

### 4.1. Requirements for Electronic Submission

Authors will need to have a reasonable web browser able to do **HTTP** (Hypertext Transfer Protocol) file uploads, e.g. Netscape Navigator 3.0 or higher, Internet Explorer 4.0 or higher, or any other web browser capable of uploading files by HTTP.

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<sup>3</sup> We requested authors not to use mathematical characters, expressions and symbols in the short abstract. Unfortunately, many authors ignored our request. However, special characters were not transmitted correctly in several cases. The resulting formulas were difficult to understand or unreadable at all. We decided to allow some simple mathematical formatting in the abstracts and used LaTeX to implement this feature.

## 4.2. File Formats

Only files in Portable Document Format (PDF) format will be accepted, as described in Section 3.

## 4.3. Electronic Submission of Auxiliary Information, Keywords and Full Manuscript

Start your web browser on your computer. In the “File” menu or similar click on “Open” and type in (or click directly on)

<http://www.iaea.org/cgi-bin/lisa-FEC2010/start>

This link will start the initial page of LISA. You will be asked to type in your user account (=e-mail address) and the password specified during the abstract and two-page synopsis submission period. Click on the button “**Login**”. After you have successfully logged in, you will be guided through LISA in a similar way as for abstract and synopsis submission (for details please see below). This time, **auxiliary information** will be required (co-authors, keywords). The **submission process** for the full manuscript includes the following steps (**submitters of more than one paper: please read Section 4.4.**):

- a) **submit auxiliary information,**
- b) **submit keywords for your full manuscript,**
- c) **submit your full manuscript in PDF**
- d) **logoff from the site (do not forget this important step).**

### a) Submit auxiliary information

As you may already have noted from the FEC 1998/2000/02/04 proceedings, the navigation through the CD-ROM and the proceedings web site is based on comprehensive summary pages for each paper and on index lists. All authors’ names and affiliations will appear in these pages as typed in during the electronic submission of a full manuscript!

You are asked to type in all co-authors of your paper in the first box of this interactive page according to the following rules: “Initials (each followed by a period) Family Name” followed by “#)” and a comma. The comma is needed for separating the author names in our software that will be used for producing the proceedings (no semicolons or other means of separators). The “#)” refers to the authors’ affiliations; the main author – as defined during the abstract and synopsis submission period – is automatically given affiliation number “1)”.

Example: if the main author was *F.Prefect*, from *The Islington Institute*, who wrote the paper together with two colleagues from the same institute (*A. Dent*, *T. McMillan*) and some other people (*Z.B. Brox*, *S.B. Fast*; please note: no space between the Initials), you would write:<sup>4</sup>

Co-authors:

Z.B. Brox 2), A. Dent 1), S.B. Fast 3), T. McMillan 1)
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<sup>4</sup> You may want to use the same format within your paper, so that you can simply copy and paste the information from your paper into the web browser window (please see the author list and affiliations of these instructions).

**Do not include the main author's name in this list;** this name is already saved in LISA. The co-authors' affiliations and addresses have to be typed now into the second box, preceded by the reference numbers defined in the first box. The main author's affiliation will automatically appear in this box preceded by "1)". Affiliations have to be numbered consecutively – in our example from "1)" to "3)":

Co-authors' affiliations:

- |   |
|---|
| <ol style="list-style-type: none"><li>1) The Islington Institute, Islington, United Kingdom</li><li>2) Improbability Labs, Damogran, France</li><li>3) Landscape Modelling Ltd, MA, Magrathea</li></ol> |
|---|

Fill in all affiliations of your co-authors. Click on the button **"Submit"** afterwards; you will be informed if the submission succeeded. Then click on the button **"Continue"** to continue.

Please note: we have chosen this procedure for co-authors' names and affiliations to protect authors/submitters of full manuscripts from having to go through an "endless" list of text boxes, especially in the case of long author lists. To ease the life of the producers of the FEC proceedings, please handle this part of the submission process very carefully.

#### **b) Submit keywords for your full manuscript**

Please choose up to **five keywords** for your paper out of the predefined keyword list; just click on the keywords appropriate for your paper. If you encounter problems in clicking on more than one keyword, please consult your local software specialist. A printout of the predefined keyword list is attached to these author instructions (Appendix 2). Click on the button **"Submit"** afterwards; you will be informed if the submission succeeded. Then click on the button **"Continue"** to continue.

#### **c) Submit your full manuscript in PDF**

Select the PDF you intend to submit from your computer. Either type the filename into the input box or click on the button which says **"Browse"** and choose your file. Then click on the button **"Submit"** to submit your paper through LISA.

If LISA is able to open and read your submitted file without problems, you will receive a message **"Submission successful"**. Otherwise you will receive an automatic response, **"Try it again"**, together with the error messages generated by Acrobat Distiller. Based on these error messages, you will have to check your manuscript, make the required corrections and submit your file again. Then click on the button **"OK"** to continue.

**Please note: LISA allows up to 25 uploads per paper. Files exceeding 20 MB will not be accepted.**

#### **d) Logoff from the site (do not forget this important step)**

Please logoff when you have submitted all the information described above. This is an urgent step; otherwise the system would still allow input concerning your paper after you have finished your work. This might give someone else a possibility to alter your data. At this stage you may decide to:



- logoff immediately or
- return to the main menu and change information already submitted (contact information, password, short abstract).

In case you decide to go to the main menu, please note:

- From within the main menu you may select the items you want to change by clicking on the left hand menu bar.
- If you need to change the abstract, please be aware that it might contain text formatting commands in LaTeX format which you should not change. To enter special characters or mathematical operators, follow strictly the instructions given online in LISA.
- Do not forget to logoff when you have completed your changes.

#### **4.4. Information for Submitters of More Than One Full Manuscript**

Submitters of more than one full manuscript will be guided to LISA's "Paper" menu after logging in. Select the paper title for which you intend to submit the requested auxiliary information, keywords and full manuscript in PDF. Then click on **"OK"**. From this point on you must go through the same steps as described in Section 4.3. After finishing the input work for one paper, you will be asked either to logoff or to continue with one of the other papers. If you decide to continue with one of the other papers, you will be shown LISA's "Paper" menu once more and may continue as described above. In case you decide to logoff, you may return to LISA later and provide the necessary data and PDF file for each paper, but keep in mind the deadline for submissions.

#### **4.5. Modification of Information, Revision of Manuscripts**

If you wish to correct some part of the information described above, please open your browser again and connect to LISA as described in Section 4.3. The main menu will show up, which allows you to choose one of the functions described in Section 4.3. If you have submitted more than one paper, select the appropriate paper out of the "Paper" menu. Make the necessary corrections in the same way as described above. If you wish to alter your submitted PDF, simply resubmit a new version during the submission period. Please have in mind the maximum number of uploads per paper (25) and the maximum file size (20 MB).

### **5. Deadlines**

Please check about deadlines in section 15 of the conference announcement: <http://www-pub.iaea.org/mtcd/meetings/Announcements.asp?ConfID=38091>

### **6. Copyright and Publishing**

All authors have been requested to sign IAEA Form B, "Submission of a Paper", assigning the IAEA either copyright or a non-exclusive, royalty free license to publish. Authors are responsible for ensuring that nothing in their papers infringes any existing copyright. If previously copyrighted material is included, authors must provide evidence that the copyright holder has given permission for its use.

Although it is hoped that it will be possible to publish all the papers from the conference on CD-ROM and the Internet, the final decision on each paper can only be taken by the IAEA after the conference.

## **7. Final Remarks**

We hope that our improved and extended file submission system LISA has helped and will continue to help authors to submit their contributions in correct formats and on time, but this will also require some effort from the authors, as described above. We kept the file submission system as simple as possible to ease your life but, please, follow the instructions strictly. Authors are reminded that it is their responsibility to produce their PDF or PS files in correct formats. We have seen from the abstract and synopsis submission that LISA works reliably and that authors/submitters had no problems with it. Nevertheless: we wish you good luck!

## Appendix 1: Examples for the Reference Style

- [1] INTERNATIONAL ATOMIC ENERGY AGENCY, Evolutionary Water Cooled Reactors: Strategic Issues, Technologies and Economic Viability, IAEA-TECDOC-1117, Vienna (1999).
- [2] FIL, N.S., et al., “Balancing passive and active systems for evolutionary water cooled reactors”, Evolutionary Water Cooled Reactors: Strategic Issues, Technologies and Economic Viability, IAEA-TECDOC-1117, Vienna (1999) 149–158.
- [3] Energy from Inertial Fusion, IAEA, Vienna (1995) 95–111.
- [4] Topical Issues in Nuclear, Radiation and Radioactive Waste Safety (Proc. Conf. Vienna, 1998), IAEA, Vienna (1999); Contributed Papers (CD-ROM).
- [5] INTERNATIONAL ATOMIC ENERGY AGENCY, Isotope Techniques in Water Resources Development and Management, C&S Papers Series No. 2/C, IAEA, Vienna (1999) (CD-ROM).
- [6] LAO, L.L., et al., “Effects of Plasma Shape and Profiles on Edge Stability in DIII-D”, Fusion Energy 1998 (Proc. 17th Int. Conf. Yokohama, 1998), C&S Papers Series No. 1/C, IAEA, Vienna (1999), CD-ROM file EX8/1 and <http://www.iaea.org/programmes/ripc/physics/fec1998/html/fec1998.htm>.
- [7] TAIT, W.H., Radiation Detection, Butterworth, London (1980).
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- [13] DIAMOND, B.A., Binding of Lectins to the Cell Surface of *T. cruzi* (in preparation).
- [14] VON DRASCHE, R., Acquired cell mediated immunodepression effects in acute Chagas' disease, J. Clin. Invest. (in press).
- [15] REFORMATSKIJ, I.A., Laboratories for Work with Radioactive Substances, Atomizdat, Moscow (1979) (in Russian).
- [16] PHILLIPS, S.M., Kernforschungsanlage Jülich, KOCH, D., Physikalisch-Technische Bundesanstalt, Braunschweig, personal communication, 1995.
- [17] UNITED STATES DEPARTMENT OF ENERGY, Aerosol Fog System for Fixing Radioactive Contamination, Technology Deployment Fact Sheet (1999), <http://www.hanford.gov/techmgmt/factsheets/deploy/fogger.htm>.

## Appendix 2: Keyword Index

accelerated beam plasma fusion

accident analysis

adiabatic particles

advanced helical systems

advanced magnetic systems

advanced scenarios

advanced stellarator

advanced stellarator scenarios

advanced tokamak

advanced tokamak scenarios

Alfvén eigenmodes

Alfvén modes

Alfvén wave current drive

Alfvén waves

alpha particle heating

alpha particles

angular momentum generation

anomalous confinement

anomalous transport

antenna array

aspect ratio

ballooning modes

barrier formation

beta limit

beta value

bifurcation

blanket

blanket development

bootstrap current

boronization

boundary plasma control

Braginskii equations

breeder

Bremsstrahlung

burning plasma

cable-in-conduit conductor

capsules

carbonization

Cauchy formulation

central solenoid

chambers

charcoal-bonding system

charge exchange

chemical erosion

chirping modes

coaxial helicity injection

co injection

collective modes

collective phenomena

collisionality

combined heating and current drive

compact torus

confinement degradation

confinement scaling law

confinement studies

confinement time

conventional scenarios	disruption avoidance
cooling system	disruption control
core density fluctuations	disruption resilience
core micro-instability	divertor/divertor region
core transport	double barrier
core turbulence	drift waves
correlation length	drift Alfvén waves
counter injection	drift wave dynamics
cross field transport	drift wave turbulence
cryogenic system	drivers
current density profile	economic aspects
current drive	eddy currents
current free plasmas	edge database
current hole	edge modes
current profile control	edge pedestal
current profile modification	edge plasma
D-D fusion reactor	edge turbulence
D-inventory	electric tokamak
D-T experiments	electromagnetic turbulence
D-T fusion reactor	electron beam heating
D-T plasmas	electron Bernstein waves
data acquisition	electron cyclotron current drive
density control	electron cyclotron resonance heating
density limit	electron density
detachment	electron dynamics
detached divertor plasmas	electron temperature gradient
diffusion coefficient	electron transport
dipole confined plasma	ELM free regimes
direct drive	ELMs
disruption	

ELMy H mode	fusion experimental breeder
energetic particles	fusion gain
energy confinement	fusion power
energy transport	fusion triple product
enhanced D-alpha H mode	fusion technology applications
enhanced performance	fusion-fission hybrid reactor
environmental aspects	fusion fuel cycle
ergodic divertor	gas dynamic trap
erosion	gas puffing
error field modes	giant sawteeth
external helical fields	global Alfvén eigenmodes
external transport barriers	global MHD modes
fast ignition	global transport
fast ignitor	global warming
fast particle instabilities	Grad-Shavranov shift
fast particles	Grad-Shavranov equation
fast potential changes	Greenwald density
feedback control	Greenwald limit
feasibility studies	gyrotrons
field reversed configuration	H mode
filamentation	H mode pedestal
first wall	H mode scaling
fishbones	H mode threshold
flow shear stabilization	H mode transition
fluctuations	H-L transition
fluid simulations	halo currents
flux dependence	heat flux exhaust
flux driven turbulence	heat load
Fokker-Planck simulations	heat transport
functional ceramics	

heavy ion driven inertial fusion  
helias reactor  
helical system  
helicity injection  
heliotron  
high aspect ratio system  
high beta  
high confinement modes  
high energy ions  
high harmonic fast wave  
high performance experiments  
high power heating experiments  
high repetition rate lasers  
high Tc superconducting coils  
high-Q  
high Z wall materials  
hohlraum  
hybrid electron ion drift mode  
hydrogenation  
ideal ballooning modes  
ignition  
Ignitor  
imploding plasmas  
implosion physics  
improved confinement  
impurity control  
impurity puffing/injection  
impurity transport studies  
indirect drive  
inductive current drive

inertial confinement  
ingress-of-coolant event  
innovation concepts  
instabilities  
interchange mode  
internal inductance  
internal disruptions  
internal reconnection event  
internal transport  
internal transport barriers  
International Fusion Materials Irradiation Facility (IFMIF)  
intrinsic barrier  
in-vessel systems  
ion Bernstein wave heating  
ion Bernstein waves  
ion density  
ion dynamics  
ion cyclotron resonance heating  
ion temperature gradient  
ion transport  
island divertor  
isodynamic conditions  
isotope effect  
ITER  
ITER China  
ITER Japan  
ITER Korea  
ITER EU  
ITER US

ITER Central Team	limiter
ITER central solenoid	limiter plasmas
ITER cryopumping system	linear eigenmodes
ITER diagnostics system	liquid lithium fusion reactor
ITER divertor	liquid walls
ITER divertor modelling	local effects
ITER divertor remote maintenance	locked modes
ITER CTA	long mean free path regime
ITER EDA	long pulse operation
ITER ITA	long life fission products
ITER FEAT	long range correlation
ITER general design requirements	long sustainment
ITER in-vessel components	loss-of-vacuum event
ITER magnets	low activation materials
ITER physics basis	low aspect ratio helical system
ITER plant layout and site services	low shear
ITER plasma facing components	low shear stellarators
ITER poloidal field system	low aspect ratio helical systems
ITER pumping system	low Z materials
ITER safety analysis	lower hybrid current drive
ITER toroidal field system	lower hybrid heating
killer pellets	magnetic configuration
kink modes	magnetic confinement
kink stability	magnetic fluctuation
L-H transition	magnetic reconnection
L mode	magnetized plasma
Larmor radius	magnetized target
laser fusion power plant	magnetosonic modes
laser systems	MARFEs
light ion drivers	



material studies

Maxwell stress

Medium Z wall materials

Mercier limit

MHD activity

MHD phenomena

MHD stability

mirrors

mode suppression

modular field coils

modulated ECH

multi mode transport model

multi mirror plasma confinement

Nb3Sn superconductor

NbTi superconductor

negative central magnetic shear

negative ion based NBI

neoclassical confinement

negative shear

neoclassical islands

neoclassical tearing modes

neoclassical theory

neoclassical transport

next step fusion device

neural network

neural techniques

neutral beam injection

neutrals

neutron wall load

non-adiabatic particles

non-axisymmetric plasmas

non-diffusive phenomena

non-inductive current drive

non-inductive ramp up

non-linear gyrokinetic simulations

non-linear simulations

non-local effects

nuclear heat load

off-axis current drive

off-axis ECCD

Ohmic confinement

Ohmic H mode

Ohmically heated plasmas

open systems

operational limits

particle transport

pebble drop divertor

pedestal

pedestal temperature

pellets

pellet injection

petawatt laser

Pfirsch-Schlüter currents

plasma confinement

plasma control

plasma current filamentation

plasma detachment

plasma elongation

plasma facing components

plasma focus	resistive ballooning mode
plasma neutralizer	resistive edge modes
plasma wall interaction	resistive instabilities
poloidal field coils	resistive modes
positive ion based NBI	resistive wall mode
positive shear	return current
potential turbulence	reversed field pinch
power balance	reversed magnetic shear
precursors	reversed shear
predictive simulations	Reynolds stress
pressure gradient driven turbulence	runaway electrons
private flux region	safety
pulsed heat load	safety analysis
pumped divertor	safety and environment
pumping system	safety factor
q value	sawteeth
quasi-steady state operation	sawtooth control
radiative cooling	sawtooth stabilization
radiative edge	scale invariance
radiative plasmas	scaling law
radio frequency experiments	scrape-off layer
ramp-up experiments	second stable regime
Rayleigh-Taylor instabilities	semi-empirical transport model
reactor relevant scenarios	Shafranov shift
recycling	sheared flows
redeposition	SiC/SiC composites
reduced transport	siliconization
remote control	similarity studies
remote handling	snake
remote handling maintenance	

solid glass targets

spherical tokamak

spherical torus

spheromak

stability

steady state conditions

steady state operation

steady state plasma heating

steady state stellarator

steady state tokamak

steady state wall pumping

stellarator

streamer mode

Stringer-Taylor effect

structural materials

superconductors

supercritical helium

supersonic molecular beam injection

supersonic SOL flow

suprathermal electrons

TAE instabilities

target design

target gain

tearing modes

thermal electrons

thermal ions

thermal ion diamagnetic frequency

thermal loss

tokamak

toroidal field coils

toroidal currents

toroidal mirrors

torsatron

trace tritium transport experiments

transport barriers

trapped electrons

triangularity

tritium handling

tritium inventory

tritium processing plant

tritium production

tritium retention

turbulence studies

vacuum vessel

vertical displacement events

very high confinement

volume neutron source

volume recombination

vorticity

wall coatings

wall conditioning

wall stabilization

wire array Z pinch

$Z(\text{eff})$

Z pinch

Z pinch driven inertial fusion

zonal current

zonal field

zonal flow

