

## EPAC'08

### Scope of Sessions and Associated Classifications

#### Main Classification 01

##### Circular Colliders

**Coordinator: Rüdiger Schmidt**

**Allocation: invited/contributed papers – to be decided**

*Session 1 is devoted to synchrotrons and storage rings for physics. It includes lepton and hadron colliders presently in operation, under construction or under development. Among the subjects for this session are operating experience and performance limitations, upgrade plans, accelerator physics and technology issues specific to a certain collider and the design and R&D for future projects.*

Sub-classifications associated with MC 01 are:

A01	Hadron Colliders	A17	Electron-Hadron Colliders
A02	Lepton Colliders	A20	Accelerators and Storage Rings, Other
A14	Advanced Concepts	T12	Beam Injection/Extraction and Transport
A15	High Intensity Accelerators (from High Intensity Proton Machines)	T19	Collimation and Targetry

#### Main Classification 02

##### Synchrotron Light Sources and FELs

**Coordinator: Carlo Bocchetta**

**Allocation: invited/contributed papers – to be decided**

*Session 2 covers Light Sources based on synchrotron storage rings and linacs including Energy Recovery Linacs (ERLs) and FELs. These light sources incorporate advanced insertion devices, including high quality planar and helical field undulators based on permanent magnet or electromagnet technologies. Associated accelerator systems, such as injectors, booster synchrotrons and high brightness electron sources can also be proposed for this Session, as can laser systems and their use. Papers presented can be project descriptions or cover individual aspects of light sources. Both theoretical and experimental results are solicited.*

Sub-classifications associated with MC 02 are:

A05	Synchrotron Radiation Facilities	T02	Lepton Sources
A06	Free Electron Lasers	T12	Beam Injection/Extraction and Transport
A14	Advanced Concepts	T15	Undulators and Wigglers
A16	Energy Recovery Linacs (ERLs)	T24	Lasers

**Main Classification 03**  
**Linear Colliders, Lepton Accelerators and New Acceleration Techniques**  
**Coordinator: Reinhard Brinkmann**  
**Allocation: invited/contributed papers – to be decided**

*Session 3 is devoted (i) to all aspects of the design of linear colliders, neutrino factories and muon colliders, their challenges and limitations (accelerator physics, accelerating systems, beam delivery systems, etc.) together with the status and experimental results of the test facilities; and (ii) to new concepts of accelerating techniques which may overcome the present limitations due to size and cost of future large accelerators or give access to very new beam characteristics.*

Sub-classifications associated with MC 03 are:

A03	Linear Colliders	A13	New Acceleration Techniques
A08	Linear Accelerators	A14	Advanced Concepts
A09	Muon Accelerators and Neutrino Factories	A15	High Intensity Accelerators (from High Intensity Proton Machines)
A10	Damping Rings	T02	Lepton Sources
A12	FFAG, Cyclotron	T19	Collimation and Targetry

**Main Classification 04**  
**Hadron Accelerators**  
**Coordinator: David Findlay**  
**Allocation: invited/contributed papers – to be decided**

*Session 4 is devoted to designing, developing, upgrading, constructing and commissioning low-, medium- and high-energy hadron accelerators, excluding hadron colliders. The session includes ion sources, electrostatic accelerators, proton and ion linear accelerators, proton and ion synchrotrons, radioactive beam facilities, antiproton accumulators and collectors, ion accumulator and storage rings, cyclotrons, synchrocyclotrons, FFAGs and any other similar machines. Both low- and high-intensity machines are covered, as are all relevant aspects of high-intensity fixed-target machines such as proton drivers for spallation neutron sources, neutrino factories, etc.*

Sub-classifications associated with MC 04 are:

A04	Circular Accelerators	A15	High Intensity Accelerators
A07	Electrostatic Accelerators	A19	Secondary Beams
A08	Linear Accelerators	T01	Proton and Ion Sources
A11	Beam Cooling	T12	Beam Injection/Extraction and Transport
A12	FFAG, Cyclotrons	T19	Collimation and Targetry
A14	Advanced Concepts		

**Main Classification 05**  
**Beam Dynamics and Electromagnetic Fields**  
**Coordinator: Andrzej Wolski**  
**Allocation: invited/contributed papers – to be decided**

*Session 5 includes reviews and progress reports on general aspects of electro-magnetic interaction of charged particle beams in accelerators and storage rings. It covers linear and non-linear beam optics, modeling of externally applied or beam-generated electro-magnetic fields, as well as theory, observations and simulations of single-particle dynamics and collective effects, both coherent and incoherent. The emphasis is on deepening the understanding of fundamental processes or limitations governing beam dynamics and uncovering possible new mechanisms relevant to accelerator design and performance, independent of technological or project-specific aspects.*

Sub-classifications associated with MC 05 are:

D01	Beam Optics – Lattices, Correction Schemes, Transport	D04	Instabilities – Processes, Impedances, Counter-measures
D02	Non-linear Dynamics – Resonances, Tracking, Higher Order	D05	Code Developments and Simulation Techniques
D03	High Intensity – Incoherent Instabilities, Space Charge, Halos, Cooling		

**Main Classification 06**  
**Instrumentation, Controls, Feedback & Operational Aspects**  
**Coordinator: Kay Wittenburg**  
**Allocation: invited/contributed papers – to be decided**

*Session 6 is devoted to measurement and control of the beam parameters in particle accelerators including beam diagnostics and instrumentation, beam feedback systems, timing and synchronization schemes and laser-based instrumentation. Included also are contributions on accelerator/storage ring control systems and operational aspects of modern accelerators such as alignment and surveying methods, machine protection systems, and issues pertaining to reliability and operability and to radiation monitoring and safety.*

Sub-Classifications associated with MC 06 are:

T03	Beam Diagnostics and Instrumentation	T21	Reliability, Operability
T04	Accelerator/Storage Ring Control Systems	T22	Machine Protection
T05	Beam Feedback Systems	T23	Timing and Synchronization
T17	Alignment and Survey	T24	Lasers
T18	Radiation Monitoring and Safety		

**Main Classification 07**  
**Accelerator Technology Main Systems**  
**Coordinator: Francisco Pérez**  
**Allocation: invited/contributed papers – to be decided**

*Session 7 is devoted to contributions on the design, construction, testing and performance of accelerator components or subsystems, with emphasis on technological aspects and methods. Special attention is due to technological developments that allow to improve accelerators from the point of view of performance, size or cost effectiveness.*

Sub-classifications associated with MC 07 are:

T06	Room Temperature RF	T16	Pulsed Power Technology
T07	Superconducting RF	T20	Infrastructures
T08	RF Power Sources	T22	Machine Protection
T09	Room Temperature Magnets	T23	Timing and Synchronization
T10	Superconducting Magnets	T24	Lasers
T11	Power Supplies	T25	Low level RF
T13	Cryogenics	T28	Subsystems, Technology and Components, other
T14	Vacuum Technology		

**Main Classification 08**  
**Applications of Accelerators, Technology Transfer and Relations with Industry**  
**Coordinators:**  
**Hartmut Eickhoff (Applications),**  
**Michael Peiniger (TT & Relations with Industry)**  
**Allocation: invited/contributed papers – to be decided**

**Scope of Applications**

*Session 8 includes contributions with emphasis on applications of accelerators rather than on accelerator aspects proper.*

**Scope of TT Session**

*The Technology Transfer Session, is mainly addressed to Accelerator Laboratories to improve the methods and strategies for TT, and to Industry to create business out of TT. It covers relevant issues for successful TT, structures needed to promote TT, technology incubator for start-up companies, and intellectual property and patenting.*

**Scope of Session on Relations with Industry**

*The Session on Relations between Laboratories and Industry is addressed to both sides in order to improve performance and the achievement of the contract goals through the creation of mutual understanding, contractual matters, joint research and development, measures to improve contract goals.*

Sub-classifications associated with Applications are:

U01	Medical Applications
U02	Materials Analysis and Modification
U03	Transmutation and Power Generation
U04	Other applications

Sub-classifications associated with TT and Industrial Relations

T26	Technology Transfer
T27	Industrial Collaboration