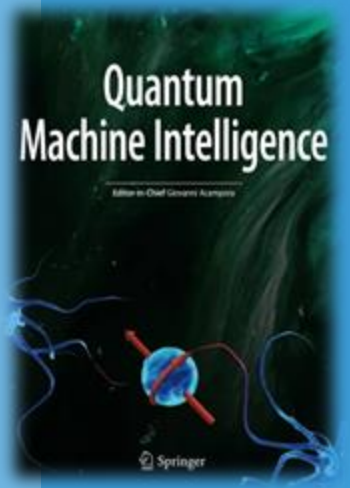
EPJ Research Infrastructures – a journal proposal

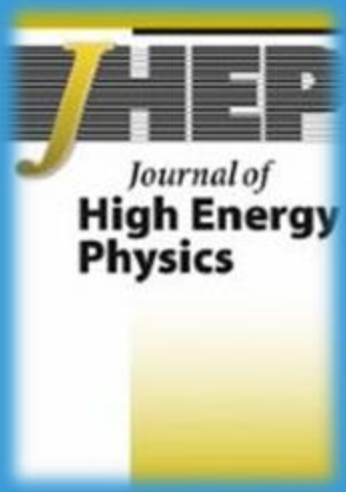
Christian Caron, Ph.D.
Executive Publisher | Physics
Springer | Editorial Department

Team leader journals
Nuclear & Particle Physics, Theoretical & Mathematical Physics, Quantum Sciences & Technology, Astrophysics & Space Science, History & Philosophy of Physics, Interdisciplinary Topics & Complex Systems

The European Physical Journal
Publishing Editor & Member of the Steering Committee

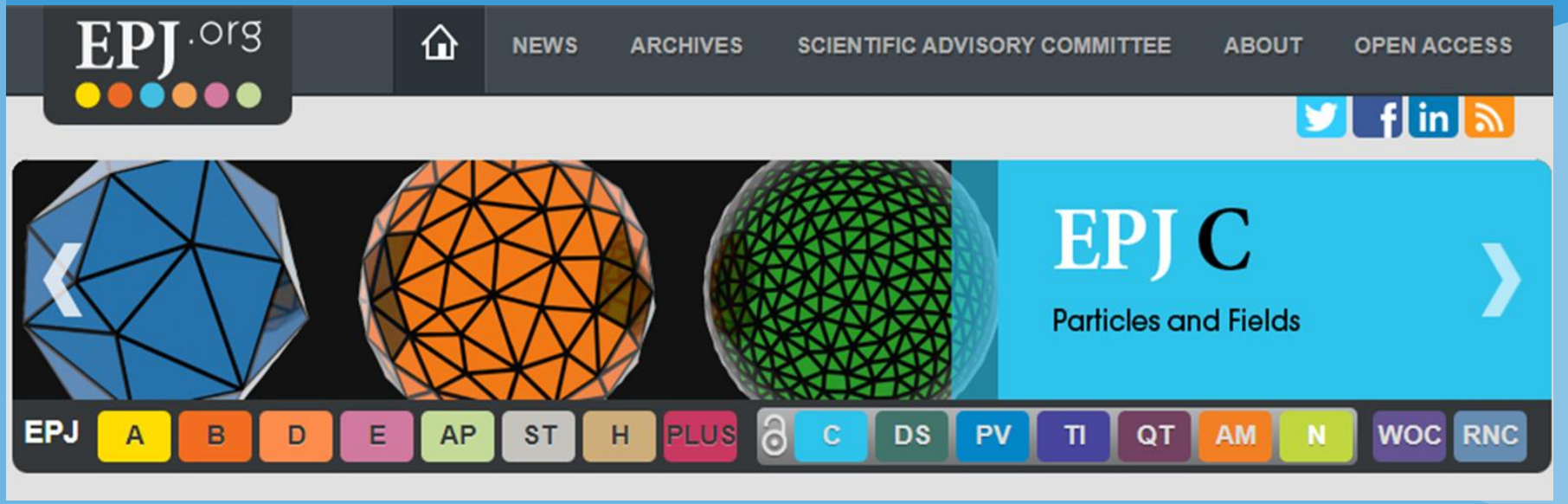

Quantum
Machine Intelligence
Springer


Communications in
Mathematical
Physics


JHEP
Journal of
High Energy
Physics


177/1–4
SPACE
SCIENCE
REVIEWS


Journal of
FUSION
ENERGY
Springer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ABOUT
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EPJ C
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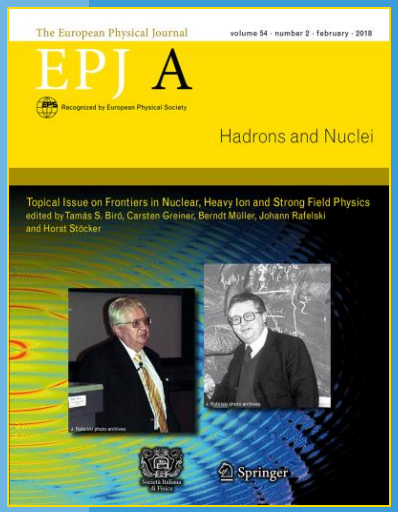
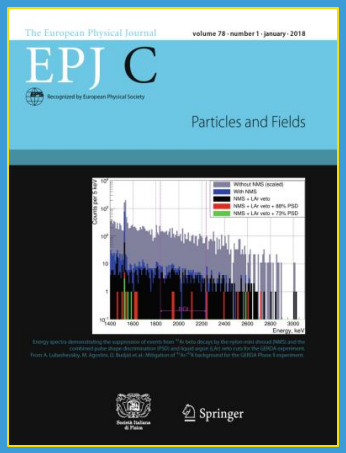
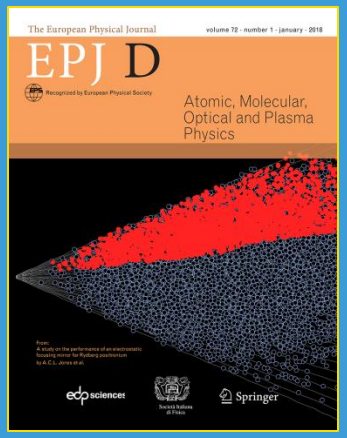
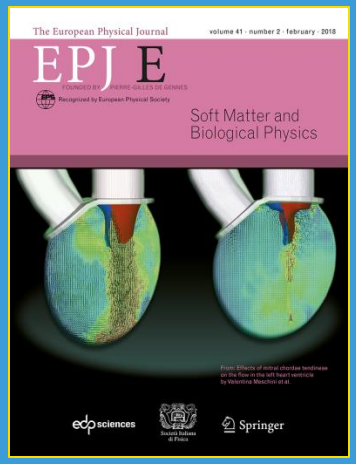
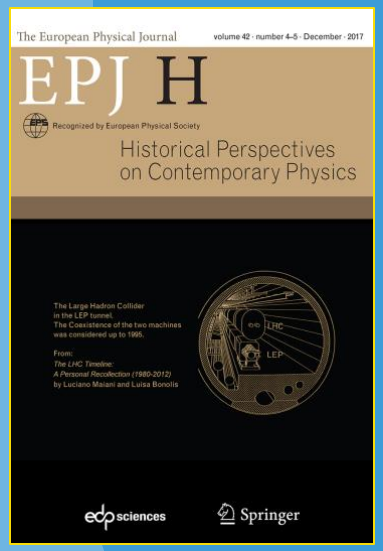

The European Physical Journal
volume 54 · number 2 · february · 2018
EPJ A
Recognized by European Physical Society
Hadrons and Nuclei
Topical Issue on Frontiers in Nuclear, Heavy Ion and Strong Field Physics
edited by Tamás S. Biró, Carsten Greiner, Berndt Müller, Johann Rafelski and Horst Stöcker
Springer

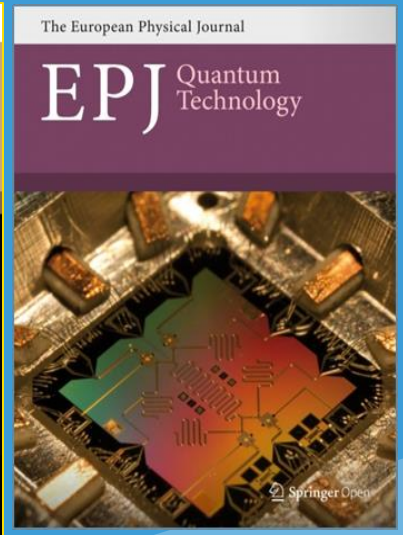

The European Physical Journal
volume 91 · number 2 · february · 2018
EPJ B
Recognized by European Physical Society
Condensed Matter and Complex Systems
edp sciences
Springer

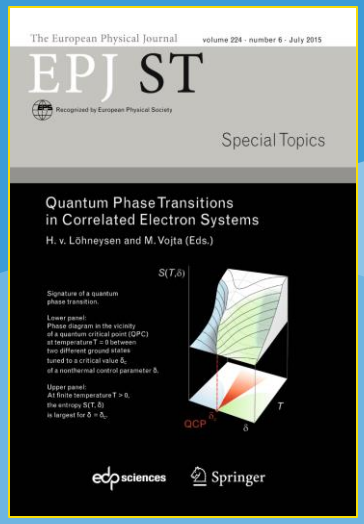

The European Physical Journal
volume 78 · number 1 · january · 2018
EPJ C
Recognized by European Physical Society
Particles and Fields
Springer

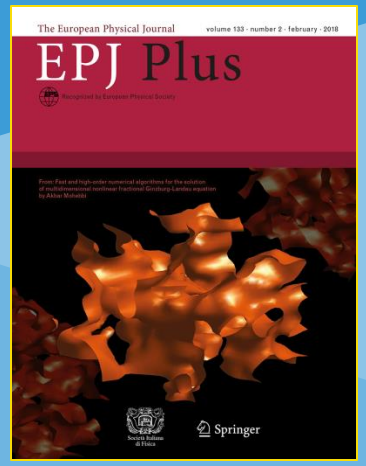

The European Physical Journal
volume 72 · number 1 · january · 2018
EPJ D
Recognized by European Physical Society
Atomic, Molecular, Optical and Plasma Physics
edp sciences
Springer

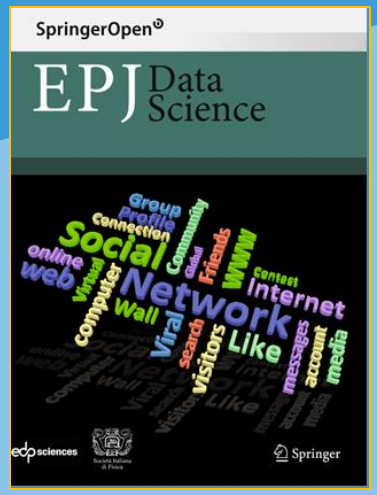

The European Physical Journal
volume 41 · number 2 · february · 2018
EPJ E
Recognized by European Physical Society
Soft Matter and Biological Physics
edp sciences
Springer


The European Physical Journal
volume 42 · number 4-5 · December · 2017
EPJ H
Recognized by European Physical Society
Historical Perspectives on Contemporary Physics
The Large Hadron Collider in the LEP tunnel. The Coexistence of the two machines was considered up to 1995.
From: The LHC Timeline: A Personal Recollection (1980-2012) by Luciano Maiani and Luisa Bonolis
LHC
LEP
edp sciences
Springer


The European Physical Journal
EPJ Quantum Technology
Springer Open


The European Physical Journal
volume 224 · number 6 · July 2015
EPJ ST
Recognized by European Physical Society
Special Topics
Quantum Phase Transitions in Correlated Electron Systems
H. v. Löhneysen and M. Vojta (Eds.)
edp sciences
Springer


The European Physical Journal
volume 133 · number 2 · february · 2018
EPJ Plus
Springer


SpringerOpen
EPJ Data Science
Social Network
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RI-related projects in EPJs:

1) EPJ A (Nuclear Physics) & EPJ C (Particle Physics)

In both fields experimental research is concentrated around relatively few large-scale instruments, globally.

2) EPJ Plus (all fields) collective roadmaps – examples:

RI-related projects in EPJs:

3) EPJ Special Topics (all fields) publishes large CDRs/TDRs – examples:

OPENING NEW HORIZONS

EUPRAXIA HAS NOW MOVED TO THE NEXT PHASE

EuPRAXIA has received a major impulse with its inclusion in the European Strategy Forum on Research Infrastructures (ESFRI) Roadmap of 2021 and the funding of several multi-million euro initiatives under the umbrella of the EuPRAXIA project.

Home › The European Physical Journal Special Topics › Article

EuPRAXIA Conceptual Design Report

Review | Open access | Published: 23 December 2020

Volume 229, pages 3675–4284, (2020) Cite this article

Welcome to the CompactLight Project

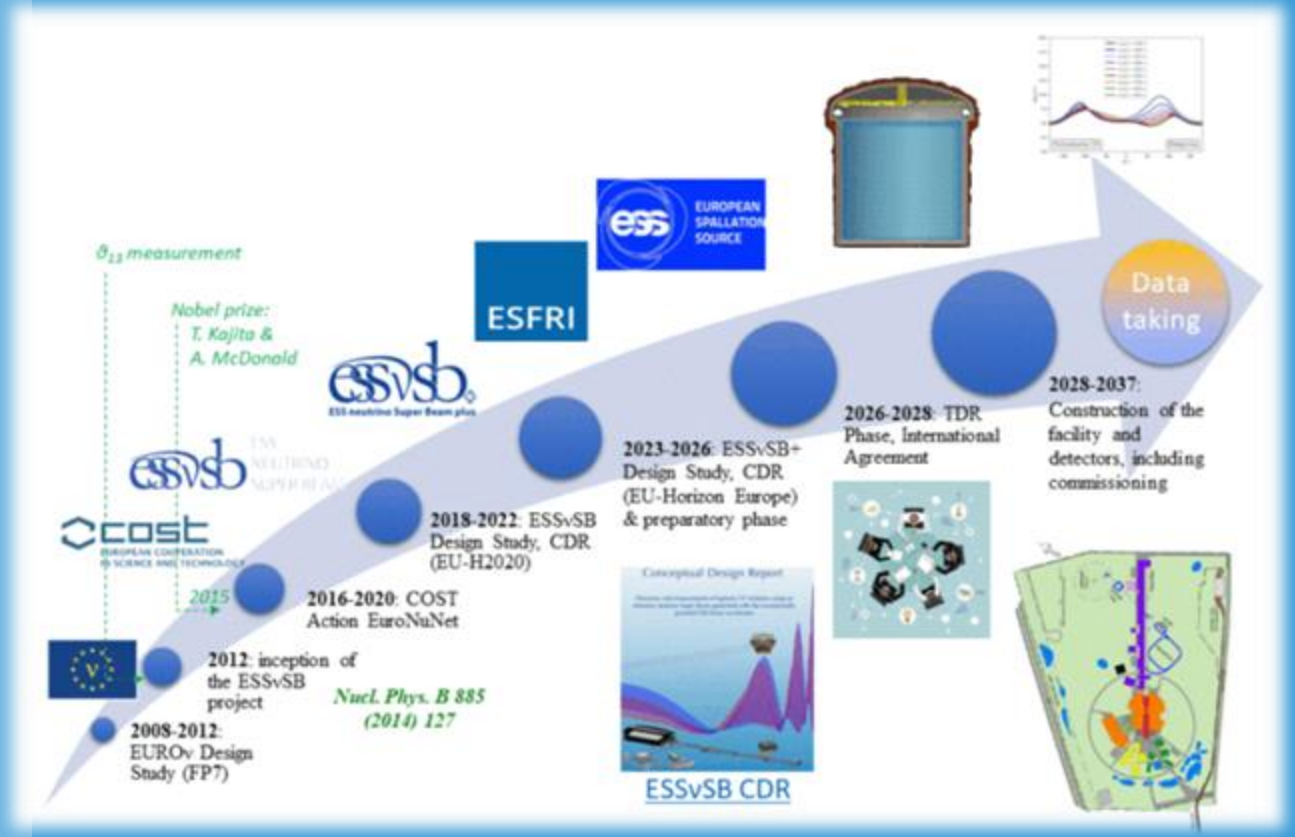
The EU-funded CompactLight design study, launched by a team of 22 International Laboratories and two Industries in January 2018, brings together world experts in the fields of accelerators and magnetic structures for photon production. The objective is to use the most innovative technologies for the implementation of the main components of an FEL: high brightness photo-injectors of the last generation, compact and very high-gradient X-band accelerating structures to increase the global efficiency of the machine as well as state-of-the-art undulators, to be able to produce high-energy photons at lower electron beam energies in comparison with current machines.

Home › The European Physical Journal Special Topics › Article

The CompactLight Design Study

Review | Open access | Published: 22 March 2024

olume 233, pages 1–208, (2024) Cite this article



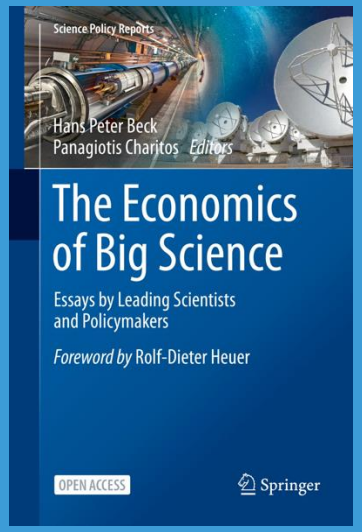
Home › The European Physical Journal Special Topics › Article

The European Spallation Source neutrino super-beam conceptual design report

Review | Open access | Published: 16 November 2022

Volume 231, pages 3779–3955, (2022) Cite this article

Springer/EPJ collaboration with FCCIS



- Publications via EPJ (and other Springer outlets)
- Support for writing large reports (Overleaf)
- Data for Socio-Economic Impact study (Dimensions)

DIGITAL science

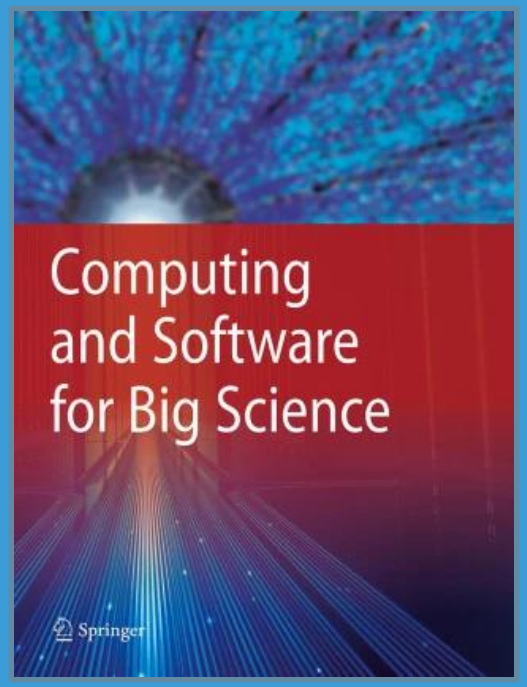
Dimensions · Altmetric · figshare · SYMPLECTIC · ReadCube · CLAIMS Patent Services · Overleaf · scismic

Springer/EPJ collaboration with FCCIS

Volume 3: Civil Engineering, Implementation and Sustainability

30% of the total material of the final FCC study

EPJ Research Infrastructures as major relaunch



Computing and Software for Big Science is dedicated to the publication of high-quality material originating from all current and emerging scientific communities in which experimental research is increasingly based on large-scale research infrastructures.

Advantages

- Already indexed in SCOPUS and SCImago
- Springer Nature agreements: full OA and TAs

EPJ Research Infrastructures - title, subtitle, aims and scope

Main title: EPJ Research Infrastructures

Subtitle: Information Systems, Sustainability and Socio-Economics of Big Science

Research in the fundamental sciences is increasingly organized around large-scale research infrastructures - both on Earth and in space, through virtual research networks with shared resources or using major facilities and instruments. At the same time this research is carried out as increasingly collaborative effort involving many scientists and professionals, with a broad range of expertise and backgrounds.

EPJ Research Infrastructures is a peer-reviewed open access journal devoted to the most prominent challenges that research infrastructures are facing, including but not limited to data handling, computing, contributions to SDGs, socio-economic impact, as well as developing collaborative network governances within science and industry viewed globally.

The journal will also consider manuscripts that describe major planned scientific and technological developments at research infrastructures.

EPJ Research Infrastructures – topical sections:

- Data and Computing (Software, Middleware and workflows; online/offline data handling; frameworks and heterogenous computing; hardware and IT equipment; FAIR principles; data/software repositories)
- Socioeconomics (Socio economic impact assessments and project appraisal results; Social License to Operate; Environmental externalities; Long-term planning and risk management)
- Innovation and knowledge transfer (including spin-offs and start-ups)
- Sustainability (contributions to SDGs, specifically energy-efficiency and circular economy)
- Science communication, policy and diplomacy (including outreach and participatory sciences)

EPJ Research Infrastructures – further comments

- EPJ RI will not publish ‚results' papers from primary research at RIs

- Timeline: early 2026

- Assessing type and volume of published literature:

difficult to search because typical keywords asscoated with RIs do not necessarily appear in the available metadata (of even fulltext) of posted or published contributions.

contributions are widely spread across grey literature, conference proceedings or scattered among the fully indexed peer-reviewed journals.

no existing journal specifically devoted to RIs:
both an opportunity and challenge … but we do not start from scratch