European Centre for Theoretical Studies in Nuclear Physics and Related Areas

Jochen Wambach
ECT* & TUDa

- Scientific Board News
- Scientific Activities 2015-16
- Research @ ECT*
- Budget Status
International Scientific Board of ECT*

(status at Board Meeting Jan 8, 2016)

Gert Aarts  
Univ. of Swansea

Omar Benhar  
INFN Rome

Angela Bracco (NuPECC)  
Univ. of Milano

Paul-Henri Heenen  
Univ. Libre de Bruxelles

Judith McGovern  
Univ. of Manchester

Ubirajara van Kolck  
CNRS - INP Orsay

Piet Mulders (Chair)  
Free Univ. of Amsterdam

Sanjay Reddy  
INT & Univ. Washington, Seattle

Johanna Stachel  
Univ. Heidelberg


- Two additional Board members nominated:
  - Dirk Rischke, Goethe Univ. Frankfurt
  - Nicole d’Hose, CEA Saclay

  ...subject to approval by NuPECC and FBK
ECT* Scientific events 2016

18 accepted Workshops (out of 24 proposals)

ECT* Doctoral Training Program:
“Nuclear, Neutrino and Relativistic Astrophysics”
student application process ongoing
Organizers per country
18 accepted workshops 2016
Senior Research Associates

Daniele Binosi (SRA - Italy)  
Alexis Diaz-Torres (SRA - Cuba / Germany)  
Dionysis Triantafyllopoulos (SRA - Greece)

Gauge Field Theories; QCD
Nuclear Structure & Reactions; Nuclear Astrophysics
QCD, Collider Physics, Strong Coupling Gauge Th.

Postdocs

Guillaume Beuf (PD - France)
Maria Gomez Rocha (PD - Spain)
Philipp Gubler (PD - Switzerland / Japan)
Chen Ji (PD - China) (ECT*/TIFPA)
Daisuke Sato (PD - Japan) (until March 2016)
Arno Tripolt (PD - Germany) (since March 2016)
Jesus Casal Berbel (PD - Spain) (Oct 2016)

QCD, Collider Physics
Hadron Physics, Quarkonia
QCD Sum Rules; Hadrons in Matter; Lattice QCD
Nuclear Few-body Effective Field Theories, Cold Atoms
Finite T Field Theory, Hot Matter, Fermion Systems
Finite T Field Theory, Hot Matter
Low-Energy Nuclear Theory

+ 5 ECT* - LISC Researchers
Interdisciplinary Laboratory for Computational Science
Research Unit of ECT* since Jan 2015
In order to foster scientific exchange and joint research activities, the host institution will normally provide accommodation and cover the living expenses of the visiting scientists, in a form of cooperation will vary and will be adjusted according to the goals and needs of the joint projects.

The two institutions will seek further opportunities to cooperate in scientific research.

The research projects will be defined by mutual consent. They may cover the following program based on mutual equality and reciprocity of benefits:

1. The two institutions agree upon the exchange of visiting scientists from the home institutions for periods of six consecutive months. It will be extended for an additional period of three years. It will be extended for an additional period of three years. It will be extended for an additional period of three years. It will be extended for an additional period of three years.

2. The two institutions agree to attend yearly held Doctoral Training Programmes and Quantum Physics of Small Systems).

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Meetings per year on the topical problems listed below:

- Perspectives of Nuclear Physics in Europe – NuPECC Long Range Plan 2010
- Jülich Supercomputer Centre, Germany
- JSC's strategy is a dual architecture to have always a competitive leadership-class, highly scalable machine, ...
Contributions from European Funding Agencies and Institutions 2015

Based on MoU signed by EJFRC (ECT* Joint Finance Review Committee) and Protocols of Agreement (Oct. 2014) with contributing countries

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>PAYMENT REQUEST SENT</th>
<th>CONTRIBUTION ASKED FOR</th>
<th>RECEIVED ON</th>
</tr>
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<tbody>
<tr>
<td>Belgium FWO (Flemish)</td>
<td>March 25</td>
<td>10.000</td>
<td>10/04/2015</td>
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<tr>
<td>Belgium FNRS</td>
<td>March 25</td>
<td>10.000</td>
<td>23/04/2015</td>
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<tr>
<td>Czech Republic</td>
<td>March 25</td>
<td>10.000</td>
<td>07/04/2015</td>
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<tr>
<td>Finland</td>
<td>March 25</td>
<td>8.000</td>
<td>14/04/2015</td>
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<tr>
<td>France CEA (Saclay)</td>
<td>March 25</td>
<td>35.000</td>
<td>11/05/2015</td>
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<td>France CNRS</td>
<td>March 25</td>
<td>65.000</td>
<td>30/04/2015</td>
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<tr>
<td>Germany</td>
<td>prepaid 2015 + 2016</td>
<td>200.000</td>
<td>16/01/2015</td>
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<td>Hungary</td>
<td>March 25</td>
<td>2.000</td>
<td>29/04/2015</td>
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<td>Italy (INFN)</td>
<td>March 25</td>
<td>100.000</td>
<td>13/05/2015</td>
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<td>March 25</td>
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<td>15/04/2015</td>
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<tr>
<td>Romania</td>
<td>March 25</td>
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<tr>
<td>UK</td>
<td>March 25</td>
<td>26.000</td>
<td>07/09/2015</td>
</tr>
</tbody>
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Received so far: 490.000

Total (expected): € 490.000

Total 2014: € 396.700

EJFRC meeting Sept. 2015: confirmations for 2016
Self-supported activities

Belgium, Czech Republic, Finland, Hungary, the Netherlands, Poland, Romania, United Kingdom

EU etc. 0.14

others 0.09

Italy 0.14

Germany 0.13

France 0.10

FBK 0.48

M€

Annual Running Budget 2016
(tentative)

total: ~ 1 M€
FBK contribution to ECT* stable at 480 k€ in 2016

Additional indirect INFN contribution (TIFPA postdoc) to ECT* in 2016

EU projects: ECT* as TNA (Transnational Access) Facility:
- ENSAR2 (ECT*: 229 k€ for 4 years) - started March 1, 2016
- HadronPhysicsHorizon - new targeted application
effective 2016 / 17 (if successful)

Number of self-supported workshop participants has increased in 2015

Denmark stopped payments from 2015 onward.
No contributions from Norway and Sweden
(i.e. Finland remains the only Nordic country contributing to ECT*)

No contributions from Austria, Greece, Portugal, Spain, Switzerland
In this chapter, we present the European landscape of current Nuclear Physics facilities, plans for building new large-scale research infrastructures (RIs) or performing major upgrades of existing ones, and the collaboration in the field at European and global level.

### 3.1 Existing Research Infrastructures and Upgrades

Europe may be grouped into theoretical and computing, lepton and hadron beam facilities. They form a network of closely collaborating laboratories that enjoy the strong support of the European Union via their Framework Programme (FP) 7.

Access to these research infrastructures is generally open to researchers whose proposals have passed the scrutiny of programme advisory committees.

#### 3.1.1 Theory and Computing

ECT* in Trento, Italy

ECT* has achieved high visibility and fulfills an important coordinating function in the European and international scientific community by:

- **Meetings per year on the topical problems listed and strengthening thereby the interchange between theoretical and experimental physicists, an absolute prerequisite for the advancement in the various areas of research.**
- **To attend yearly held Doctoral Training Programmes and arranging for them to participate in ECT* research projects.**
- **Moreover, presently and in the years ahead, ECT* administers scientifically the AuroraScience project which consists of interdisciplinary proposals that explore the architectural opportunities for high performance computing applications in Physics, Biology, Bioinformatics and Medical Physics.**

ECT* is the only centre of its kind in Europe and faces new opportunities and challenges in the gradual more international coordination.

### Jülich Supercomputer Centre, Germany

The Jülich Supercomputing Centre (JSC), a European MFBEFSTIJQDMBTTNBDIJOFJTBO*#.#MVF(FOF1TZTUFN

JSC's strategy is a dual architecture to have always a competitive leadership-class, highly scalable machine, and a general-purpose system with a balance of approximately five to three, in terms of capability. Today, the

FBK/PAT

External funds

EU projects: HP3, ENSAR

ENSAR2

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