

TA6: Transnational Access ECT*

Gert Aarts (ECT* and Swansea University)

STRONG-2020 ANNUAL MEETING (2022)



ECT* mission

- ✓ to be a Centre at the frontline of research in theoretical nuclear physics
- ✓ to promote active contacts between theory and experiments,
 and to related areas of research
- ✓ to further the training of young researchers
- o established in 1993
- Institutional member of ESF-Expert Committee NuPECC (Nuclear Physics European Collaboration Committee)

Scientific Board

selected based on recommendations by the community

Almudena Arcones | TU Darmstadt (D)

Constantia Alexandrou | The Cyprus Institute (CY)

Carlo Barbieri | University of Milan (I)

Anna Corsi | IRFU/DPhN (F)

David Kaplan | University of Washington (USA)

Denis Lacroix | CNRS/IN2P3 (F)

Marek Lewitowicz | NuPECC/GANIL (F)

Barbara Pasquini | University of Pavia (I)

Urs Wiedemann, Board Chair | CERN-TH (CH)

Ex officio: Sandro Stringari | University of Trento (I)

all participants at ECT* activities are invited to join as ECT* associate

Scientific Board is User Selection panel for STRONG2020

2021 Annual report

available on the ECT* website



ANNUAL REPORT 2021

European Centre for Theoretical Studies in Nuclear Physics and Related Areas Trento | Italy

Institutional Member of the European Science Foundation Expert Committee NuPECC

ECT* | Strada delle Tabarelle 286 | Villazzano (Trento)

Local Researchers (October 2022)

ECT* - Senior Researchers



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ACHILLE FIORE ECT* Postdoc

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ECT* Postdoc

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ALEX GNECH ECT* Postdoc

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ZHAO-QIAN YAO ECT* Postdoc

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ECT* Fellows



BORYS HRYNIUK ECT* Fellow

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ECT* PhD students



LUIS BENJAMÍN RODRÍGUEZ AGUI ECT* PhD student

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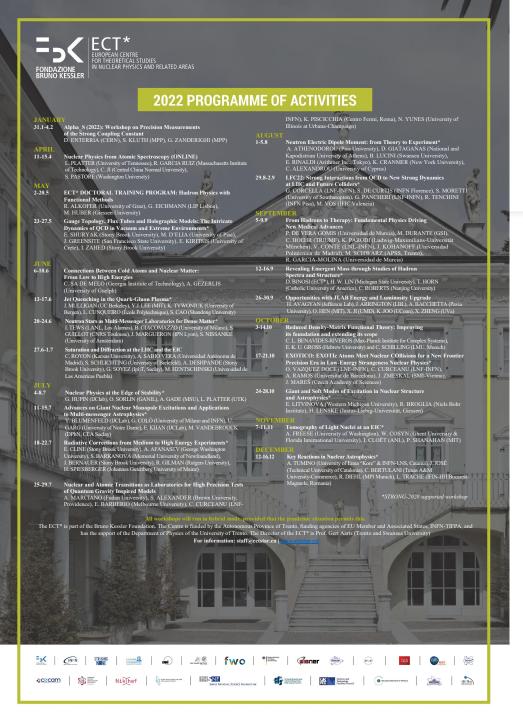
LUCA VESPUCCI ECT* PhD student

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Visitor programme (post pandemic)

people are visiting ECT* for a few days or longer again

- Jean-Paul Blaizot (2 weeks)
- Paul Hoyer (3 weeks)
- Gordon Baym (1 week)



2022 Activities

full programme:
meetings in January and in April
then almost continuously from May to
October with 3-week break in August

DTP: hadron physics with functional methods 3 weeks in May

STRONG2020 supported activities (2019)

- Light Clusters in Nuclei and Nuclear Matter: Nuclear Structure and Decay, Heavy Ion Collisions and Astrophysics 2-6 Sept 2019
- LFC19: Strong Dynamics for Physics Within and Beyond the Standard Model at LHC and Future Colliders 9-13 Sept 2019
- Diquark Correlations in Hadron Physics: Origin, Impact and Evidence 23-27 Sept 2019
- Universal Physics in Many-Body Quantum Systems From Atoms to Quarks 7-11 Oct 2019
- STRANEX: Recent Progress and Perspectives in Strange Exotic Atoms Studies and Related Topics 21 25 Oct 2019
- JPAC Collaboration Meeting 18-20 Dec 2019

STRONG2020 supported activities (2020/21)

- Spin and Hydrodynamics in Relativistic Nuclear Collisions (online) 5-16 Oct 2020
- Mass in the Standard Model and Consequences of its Emergence (online) 19-23 Apr 2021
- Heavy-Flavour Transport in QCD Matter (online) 26-30 Apr 2021
- Heavy-lons and New Physics (online) 20-21 May 2021
- STRANU: Hot Topics in STRANgeness NUclear and Atomic Physics (online) 24-28 May
- Saturation and Diffraction at the LHC and the EIC (online) 29 Jun-1 Jul 2021
- Relativistic Fermions in Flatland: Theory and Application (online) 5-9 Jul 2021
- Machine Learning from High Energy Physics: On and Off the Lattice (hybrid) 27 Sept-1 Oct 2021
- Exploring High MuB-Matter with Rare Probes (hybrid) 11-15 Oct 2021
- Quark-Gluon Plasma Characterisation with Heavy Flavour Probes (hybrid) 15-18 Nov 2021

STRONG2020 supported activities (2022)

- Gauge Topology, Flux Tubes and Holographic Models: the intricate dynamics of QCD in vacuum and extreme environments (hybrid) 23-27 May 2022
- Jet quenching in the quark-gluon plasma (hybrid) 13-17 Jun 2022
- Neutron stars as multi-messenger laboratories for dense matter (hybrid) 20-24 Jun 2022
- Nuclear physics at the edge of stability (hybrid) 4-8 Jul 2022
- Advances on Giant Nuclear Monopole Excitations and Applications to Multi-messenger Astrophysics (hybrid) 11-15 Jul 2022
- Radiative Corrections from medium to high energy experiments (hybrid) 18-22 Jul 2022
- Neutron Electric Dipole Moment: from theory to experiment (hybrid) 1-5 Aug 2022

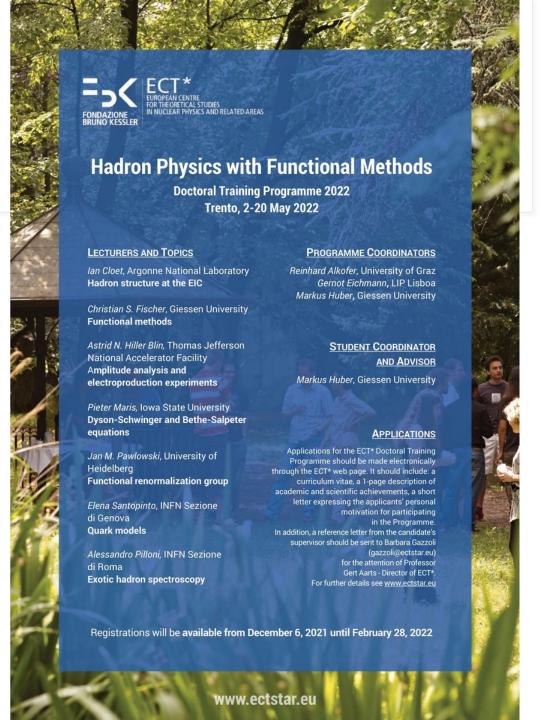
STRONG2020 supported activities (2022)

- LFC22: Strong interactions from QCD to new strong dynamics at LHC and Future Colliders (hybrid) 29
 Aug-2 Sept 2022
- Revealing emergent mass through studies of hadron spectra and structure (hybrid) 12-16 Sept 2022
- Giant and soft modes of excitation in nuclear structure and astrophysics (hybrid) 24-28 Oct 2022
- Tomography of light nuclei at an EIC (online) 7-11 Nov 2022
- Key Reactions in Nuclear Astrophysics (hybrid) 12-16 Dec 2022

programme for 2023 in preparation

DTP 2022





DTP 2022 (2-20 May 2022)



- 23 participants
- in person only (!)
- 25 lectures in total, including lectures on numerical techniques
- students gave 25-minute presentations on their research projects
- participants worked in groups of 2-5 persons on research project

STRONG2020

- essential to support
 ECT* activities
- extension beyond Nov 2023 useful to further plan support for workshops
- non-negligible part of budget remaining



Following

ECT*_Trento

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European Centre for Theoretical Studies in Nuclear Physics and Related Areas - #ectstar #Trento @FBK_research

284 Following **332** Followers