

# **The nuclear interaction: post-modern developments**

## **Report of Contributions**

Contribution ID: 9

Type: **not specified**

## **The 0+ excited state of the alpha-particle**

*Friday, August 23, 2024 9:30 AM (45 minutes)*

**Presenter:** BACCA, Sonia (Johannes Gutenberg University)

Contribution ID: **10**

Type: **not specified**

# **Computing atomic nuclei based on Chiral EFT and HALQCD interactions**

*Wednesday, August 21, 2024 3:15 PM (45 minutes)*

**Presenter:** BARBIERI, Carlo (Università degli Studi di Milano)

Contribution ID: 11

Type: **not specified**

# Pionless effective field theory for few-baryon Systems

*Tuesday, August 20, 2024 10:15 AM (45 minutes)*

**Presenter:** BARNEA, Nir (The Hebrew University of Jerusalem)

Contribution ID: 12

Type: **not specified**

## **Superfluidity systematized**

*Thursday, August 22, 2024 11:30 AM (45 minutes)*

**Presenter:** BEANE, Silas (University of Washington, USA)

Contribution ID: 13

Type: **not specified**

## **DWBA, again: Sticking with a modernist view of nuclear forces**

*Thursday, August 22, 2024 9:30 AM (45 minutes)*

**Presenter:** BIRSE, Mike (University of Manchester)

Contribution ID: 14

Type: **not specified**

## **Bayesian model calibration of pionless effective field theory using nucleon-nucleon scattering data**

*Tuesday, August 20, 2024 2:30 PM (45 minutes)*

**Presenter:** BUB, Jason (Washington University in St. Louis)

Contribution ID: 15

Type: **not specified**

## **Cluster effective field theory calculation of electromagnetic breakup reactions with the Lorentz Integral Transform method**

*Thursday, August 22, 2024 2:30 PM (45 minutes)*

**Presenter:** CAPITANI, Ylenia (University of Salento, INFN Lecce)



Contribution ID: 16

Type: **not specified**

## **Contact theory for many nucleons: key issues, solutions, and takeaways**

*Tuesday, August 20, 2024 11:30 AM (45 minutes)*

**Presenter:** CONTESSI, Lorenzo (IJCLab - CNRS - Université Paris Saclay)

Contribution ID: 17

Type: **not specified**

## **Nucleon-nucleon potentials in comparison: physics or polemics?**

*Wednesday, August 21, 2024 11:30 AM (45 minutes)*

**Presenter:** CORAGGIO, Luigi (Dipartimento di Matematica e Fisica, Università degli studi della Campania "Luigi Vanvitelli")

Contribution ID: **18**

Type: **not specified**

## **Chiral effective field theory using gradient flow**

*Monday, August 19, 2024 2:30 PM (45 minutes)*

**Presenter:** EPELBAUM, Evgeny (Ruhr University Bochum)

Contribution ID: **19**

Type: **not specified**

## **Momentum-dependent nucleon-nucleon contact interactions**

*Monday, August 19, 2024 3:15 PM (45 minutes)*

**Presenter:** FILANDRI, Elena (Università di Pisa, INFN sezione di Pisa)

Contribution ID: 20

Type: **not specified**

## **Renormalizability criteria in nuclear Chiral EFT**

*Thursday, August 22, 2024 3:15 PM (45 minutes)*

**Presenter:** GASPARYAN, Ashot (Ruhr-Universität Bochum)

Contribution ID: 21

Type: **not specified**

## Wilsonian RG and Halo EFT

*Thursday, August 22, 2024 10:15 AM (45 minutes)*

**Presenter:** GEGELIA, Jambul (RUB)

Contribution ID: 22

Type: **not specified**

## **Testing chiral EFT interactions and currents: the muon capture on deuteron.**

*Friday, August 23, 2024 10:15 AM (45 minutes)*

**Presenter:** GNECH, Alex (Old Dominion University and Jefferson Lab)

Contribution ID: 23

Type: **not specified**

## What can possibly go wrong?

*Monday, August 19, 2024 10:15 AM (45 minutes)*

**Presenter:** GRIESSHAMMER, Harald (George Washington University)



Contribution ID: 24

Type: **not specified**

## Effective description of shallow states

*Tuesday, August 20, 2024 12:15 PM (45 minutes)*

**Presenter:** KIEVSKY, Alejandro (INFN)

Contribution ID: 26

Type: **not specified**

## **Hyperon-nucleon (YN), hyperon-hyperon (YY) interactions and correlation functions**

**Presenter:** LIU, Zhi-Wei (Beihang University)

Contribution ID: 27

Type: **not specified**

## **Perturbative nuclear forces**

*Monday, August 19, 2024 12:15 PM (45 minutes)*

**Presenter:** LONG, Bingwei (Sichuan University)

Contribution ID: 28

Type: **not specified**

## **An accurate relativistic chiral nuclear force**

**Presenter:** LU, Junxu (Beihang University)

Contribution ID: 29

Type: **not specified**

## **Effective field theory with resonant P-wave interaction**

**Presenter:** LYU, Songlin (Università della Campania "Luigi Vanvitelli")

Contribution ID: **30**

Type: **not specified**

**TBD**

**Presenter:** MARCUCCI, Laura (University of Pisa and INFN-Pisa)

Contribution ID: 33

Type: **not specified**

## **Pionful EFT and the long-forgotten lore of renormalization**

*Wednesday, August 21, 2024 2:30 PM (45 minutes)*

**Presenter:** PAVON VALDERRAMA, Manuel (Beihang University)

Contribution ID: 34

Type: **not specified**

## **Chiral EFT uncertainties for improved nuclear force inference**

*Tuesday, August 20, 2024 3:15 PM (45 minutes)*

**Presenter:** PHILLIPS, Daniel (Ohio University)



Contribution ID: **36**

Type: **not specified**

## **Renormalization of singular interactions**

*Thursday, August 22, 2024 12:15 PM (45 minutes)*

**Presenter:** PLATTER, Lucas (University of Tennessee, Knoxville)

Contribution ID: **38**

Type: **not specified**

## **Non-perturbative renormalization of NN singular interactions**

*Wednesday, August 21, 2024 10:00 AM (45 minutes)*

**Presenter:** RODRIGUEZ ENTEM, David (University of Salamanca)

Contribution ID: 39

Type: **not specified**

## **Nuclear structure and reactions using short-ranged interactions**

**Presenter:** RUPAK, Gautam (Mississippi State University)

Contribution ID: 40

Type: **not specified**

## **A beautiful life, Ruprecht's Style**

*Wednesday, August 21, 2024 12:15 PM (45 minutes)*

**Presenter:** SAMMARRUCA, Francesca (University of Idaho)

Contribution ID: 41

Type: **not specified**

## **Few-nucleon scattering in Pionless EFT: status, long-term plan, and challenges**

*Tuesday, August 20, 2024 9:30 AM (45 minutes)*

**Presenter:** SCHÄFER, Martin (Nuclear Physics Institute of the Czech Academy of Sciences)

Contribution ID: 42

Type: **not specified**

## **Perturbative computations of neutron-proton scattering observables using chiral effective field theory up to N3LO**

*Friday, August 23, 2024 11:30 AM (45 minutes)*

**Presenter:** THIM, Oliver (Chalmers University of Technology)

Contribution ID: 43

Type: **not specified**

## Setting the scene

*Monday, August 19, 2024 9:45 AM (30 minutes)*

**Presenter:** TIMMERMANS, Rob (University of Groningen)

Contribution ID: 44

Type: **not specified**

## Welcome

*Monday, August 19, 2024 9:30 AM (15 minutes)*

**Presenter:** VAN KOLCK, Ubirajara (CNRS/ECT\*)



Contribution ID: 45

Type: **not specified**

## **Ruprecht Machleidt session: opening remarks**

*Wednesday, August 21, 2024 9:30 AM (30 minutes)*

**Presenter:** VAN KOLCK, Ubirajara (CNRS/ECT\*)

Contribution ID: 46

Type: **not specified**

## **Modified power counting and the importance of three-body forces**

*Monday, August 19, 2024 11:30 AM (45 minutes)*

**Presenter:** YANG, Chieh-Jen (ELI-NP)

Contribution ID: 47

Type: **not specified**

## Picture