Publications in Refereed Journals


Contributed Papers to Conferences,
Invited Talks and Oral Presentations at Professional Meetings

1. CUSTIPEN Workshop on the Theory of Rare Nuclear Decays, May 14-19, 2018, Chengdu, China, Inv. Talk, ‘Faddeev Approach to (d,p) Reactions as Tool to Study Exotic Nuclei’, Ch. Elster, L. Hlophe, J. Lei, A. Nogga, F. Nunes.


3. APS April Meeting 2018, April 14-17, Columbus, OH, ‘Momentum Space Faddeev Calculations of $^6$Li and $d + \alpha$ Scattering’, J. Lei, L. Hlophe, A. Nogga, F. Nunes.

4. 2017 Fall Meeting of the APS Division of Nuclear Physics, October 25-28, 2017, Pittsburgh, PA, ‘$^6$Li and $d + \alpha$ scattering in a three-body momentum space Faddeev model (I)’, Jin Lei, L. Hlophe, Ch. Elster, A. Nogga, F.M. Nunes.

5. 2017 Fall Meeting of the APS Division of Nuclear Physics, October 25-28, 2017, Pittsburgh, PA, ‘$^6$Li and $d + \alpha$ scattering in a three-body momentum space Faddeev model (II)’, L. Hlophe, Jin Lei, Ch. Elster, A. Nogga, F.M. Nunes.


9. 2016 Fall Meeting of the APS Division of Nuclear Physics, October 13-16, 2016, Vancouver, Canada, ‘Separable Multichannel Momentum Space Potentials for Nuclear Reactions’, L. Hlophe, Ch. Elster


52. Annual Meeting of the Division of Nuclear Physics, November 2-6, 2010, Santa Fe, NM, Inv. Talk: ‘Nuclear Reactions: Challenge and Opportunity for Few- and Many-Body Theory’, Ch. Elster


60. Symposium Frontiers in Nuclear Physics, Inv. Talk: ‘Faddeev Calculations in Three Dimensions’, Bad Honnef, Germany, June 18-20, 2009, Ch. Elster

16


106. Workshop on Computational Methods for Few-Body Dynamical Systems, NIST Gaithersburg, MD, Nov. 15-17, 2000; Inv. Talk ‘Faddeev Calculations in Nuclear Physics’, Ch. Elster


109. 20th COSY-PAC Meeting, May 5-6, 2000, Forschungszentrum Jülich, Inv. Talk ‘Physics at the Spectrometer Big Karl at COSY’, Ch. Elster


126. ‘Parallel Computing: The T3D and Beyond’, Conference sponsored by the Pittsburgh Supercomputing Center, Arctic Region Supercomputing Center, Ohio Supercomputer Center, Columbus, April 2-3, 1997, Inv. Talk ‘Nuclear Scattering Calculations on the T3D’, with S.P. Weppner

http://db.nea.fr/science/om200


141. ‘Visualization of Nucleon Nucleon Scattering Amplitudes’ Ch. Elster in ‘Visions’, Fall 1994, Publication of the Ohio Supercomputer Center.


143. Argonne Workshop on Correlations and Reactions in Nuclei, August 8-12, 1994, Inv. Talk, ‘Microscopic Description of Nuclear Medium Contributions in Elastic Nucleon-Nucleus Scattering.’, Ch. Elster.


147. ‘n-p Differential Cross Sections at Backward Angles and the $\pi$NN Coupling Constant.’ Inv. Talk at the Theory Workshop on Meson-Nucleus Dynamics at Intermediate and High Energies, Argonne, IL, August 2-6, 1993.


154. ‘First Order Optical Potentials in Elastic Proton Nucleus Scattering’. Inv. Talk at the Tamura Workshop on Nuclear Reaction Dynamics, Austin, TX, November 15-17, 1990.


166. German Physical Society (DPG) meeting, Heidelberg (W.-Germany), March 1986, ‘NN Scattering up to 1 GeV and Nucleon Renormalization’, Ch. Elster, W. Ferchländer, K. Holinde and D. Schütte.


Colloquia and Seminars


RISP, Daejoen, Republic of Korea, July 4-14, 2017: Six invited Lectures on the two and three-body problem at the 2nd RISP Intensive Program on ”Rare Isotope Physics”

TRIUMF, Canada, August 2015: ‘Towards ab-initio optical potentials for elastic scattering of $^6$He off protons’

Louisiana State University, Baton Rouge, LA, September 2014: ‘Nuclear Reactions: A Challenge for Few- and Many-Body Theory’

Pacific University, Khabarovsk, Russia, June 2014: ‘Spin Phenomena in Elastic Scattering of Helium-6 and Helium-8 off Protons’

Indiana University, January 2014: ‘Let’s go Skating ... and do some Physics on the Ice!’

Notre Dame University, IN, November 2013: ‘Spin Phenomena in Elastic Scattering of Helium-6 and Helium-8 off Protons’

Notre Dame University, IN, November 2013: ‘Let’s go Skating ... and do some Physics on the Ice!’

NSCL, Michigan State University, November 2013: ‘Separable Optical Potentials for (d,p) Reaction Calculations’

Iowa State University, Ames, IA, October 2013: ‘Spin Phenomena in Elastic Scattering of Helium-6 and Helium-8 off Protons’

The Ohio State University, Columbus, OH, February 2013: ‘Spin Phenomena in Elastic Scattering of Helium-6 and Helium-8 off Protons’
Livermore National Laboratory, Livermore, CA, December 2012:
‘Spin Phenomena in Elastic Scattering of Helium-6 and Helium-8 off Protons’

Ohio University, OH, November 2012:
‘Let’s go Skating ... and do some Physics on the Ice!’

Oak Ridge National Laboratory, November 2012:
‘Spin Phenomena in Elastic Scattering of Helium-6 and Helium-8 off Protons’

University of Tennessee, TN, November 2012:
‘Let’s go Skating ... and do some Physics on the Ice!’

UC Davis, Davis, CA, April 2012:
‘The Nuclear Force Through the Decades’

RIKEN Nishina Center, RIKEN, Japan, December 2011:
‘Microscopic Optical Potentials for the Reaction Helium-6 (p,p) Helium-6’

Livermore National Laboratory, Livermore, CA, December 2010:
‘Microscopic Optical Potentials in Nucleon-Nucleus Scattering’

U. Iowa, Iowa City, IA, October 2010:
‘Let’s go Skating ... and do some Physics on the Ice!’

Miami University, Oxford, OH, March 2010:
‘Let’s go Skating ... and do some Physics on the Ice!’

University of Kentucky, Lexington, KY, December 2009:
‘Let’s go Skating ... and do some Physics on the Ice!’

University of Kentucky, Lexington, KY, December 2009:
‘Poincaré Invariant Three-Body Scattering at Intermediate Energies’

Ohio State University, Columbus, OH, November 2009:
‘Let’s go Skating ... and do some Physics on the Ice!’

Kent State University, Kent, OH, May 2009:
‘Poincaré Invariant Three-Body Scattering at Intermediate Energies’

University of Wisconsin, Madison, WI, April 2009:
‘Let’s go Skating ... and do some Physics on the Ice!’

University of Wisconsin, Madison, WI, April 2009:
‘Poincaré Invariant Three-Body Scattering at Intermediate Energies’

Jefferson Laboratory, Newport News, VA, April 2009:
‘Poincaré Invariant Three-Body Scattering at Intermediate Energies’
Ohio Supercomputer Center (OSC), Columbus, OH, November 2008:
‘Challenges in Three-Nucleon Physics’

RIKEN Nishina Center, RIKEN, Japan, July 2008:
‘Challenges for the Nucleon-Nucleon Force in the Second Resonance Region’

Hosei University, Tokyo, Japan, July 2008:
‘Challenges for the Nucleon-Nucleon Force in the Second Resonance Region’

Kochi University of Technology, Kochi, Japan, July 2008:
‘Challenges in Few Nucleon Physics’

RIKEN Nishina Center, RIKEN, Japan, July 2008:
‘Faddeev and Glauber Calculations for n+d Scattering at Intermediate Energies’

Center for Nuclear Science, U. Tokyo, Japan, June 2008:
‘Poincaré Invariant Three-Body Scattering at Intermediate Energies’

RIKEN Nishina Center, RIKEN, Japan, June 2008:
‘Poincaré Invariant Three-Body Scattering’

Centro de Física Nuclear, University of Lisbon, Portugal, May 2008:
‘Faddeev and Glauber Calculations for n+d Scattering at Intermediate Energies’

Centro de Física das Interacções Fundamentais, University Lisbon, Portugal, April 2008:
‘Poincaré Invariant Three-Body Scattering’

The Ohio-State University, Columbus, OH, March 2008: ‘Poincaré Invariant Three-Body Scattering at Intermediate Energies’

University of Iowa, Iowa City, IA, November 2007: ‘Poincaré Invariant Three-Body Scattering at Intermediate Energies’

Argonne National Laboratory (ANL), Argonne, IL, November 2007: ‘Poincaré Invariant Three-Body Scattering’

Institute of High Energy Physics (IHEP), Beijing, China, September 2007: ‘Challenges for the Nucleon-Nucleon Force in the Second Resonance Region’

Institute of Theoretical Physics, Shanghai Jiao Tong University, Shanghai, China, September 2007: ‘Poincaré Invariant Three-Body Scattering at Intermediate Energies’

Institute of Modern Physics (IMP), Chinese Academy of Science, Lanzhou, China, September 2007: ‘Poincaré Invariant Three-Body Scattering at Intermediate Energies’

Institute of Modern Physics (IMP), Chinese Academy of Science, Lanzhou, China, September 2007: ‘Questions and Challenges in Few-Body Reactions’
Institute of Modern Physics (IMP), Chinese Academy of Science, Lanzhou, China, September 2007: ‘Nucleon-Nucleon Forces above Pion Production Threshold’

The Ohio State University, Columbus, OH, June 2007: ‘First Order Relativistic Three-Body Scattering’


University Fluminense, Niteroi, Brazil, August 2006: ‘Three-Body Scattering at Intermediate Energies’

National Superconducting Cyclotron Laboratory, MSU, East Lansing MI, February 2006: ‘The Nuclear Force above Pion Threshold’

University of Kentucky, Lexington KY, April 2005: ‘Three-Body Scattering at Intermediate Energies’

Centro de Física das Interacções Fundamentais, University Lisbon, March 2005: ‘Three-Body Scattering at Intermediate Energies’

The Ohio State University, Columbus OH, February 2005: ‘Three-Body Scattering at Intermediate Energies’

Argonne National Laboratory, Argonne IL, January 2005: ‘Three-Body Scattering at Intermediate Energies’


Kenyon College, Gambier OH, October 2004: ‘What do we know about the Strong Force?’


University of Iowa, Iowa City IA, February 2004: ‘Towards Three Nucleon Calculations at Higher Energies.’

University of Georgia, Athens GA, January 2004: ‘The η-Nucleon System as Observed in Incoherent Photoproduction of η-Mesons from Deuterium near Threshold.’

University of Mainz, Mainz, Germany, June 2002:
‘Incoherent Photoproduction of $\eta$-Mesons from Deuterium near Threshold.’

Kent State University, Kent, OH, February 2002:
‘Incoherent Photoproduction of $\eta$-Mesons from Deuterium near Threshold.’

Ohio University, Athens, OH, November 2001:
‘The $\eta$-Nucleon System as Observed in Incoherent Photoproduction of $\eta$-Mesons from Deuterium near Threshold.’

The Ohio State University, Columbus, OH, October 2001:
‘The $\eta$-Nucleon System as Observed in Incoherent Photoproduction of $\eta$-Mesons from Deuterium near Threshold.’

Gesellschaft für Schwerionenforschung (GSI), Darmstadt, June 2000:
‘Towards Faddeev Calculations at Intermediate Energies.’

Institut for Theoretical Nuclear Physics, University Bonn, February 2000:
‘Faddeev Calculations without Partial Wave Decomposition at Higher Energies.’

Centro de Física das Interacções Fundamentais, University Lisbon, January 2000:
‘Faddeev Calculations without Partial Wave Decomposition.’

Ohio Wesleyan University, Science Lecture Series, October 1998:
‘What do we know about the Nuclear Force?’

Physics Division, Livermore National Laboratory, May 1998:
‘Three Nucleons: Physical Insights and Computational Challenges’

Dept. of Physics, Kent State University, November 1997:
‘Application of Multiple Scattering Theory to Elastic Nucleon-Nucleus Scattering.’

Indiana University Cyclotron Facility, IUCF, July 1997:
‘Application of Multiple Scattering Theory to Elastic Nucleon-Nucleus Scattering.’

Dept. of Physics, Univ. of Kentucky, October 1996:
‘Meson Exchange Potentials for the Nucleon-Nucleon Interaction: Success and Difficulties.’

Dept. of Physics, Univ. of Notre Dame, January 1996:
‘Application of Multiple Scattering Theory to Elastic Nucleon-Nucleus Scattering.’

Dept. of Physics, Ohio University, November 1995:
‘Application of Multiple Scattering Theory to Elastic Nucleon-Nucleus Scattering.’

Dept. of Physics, The Ohio State University, January 1995:
‘Application of Multiple Scattering Theory to Elastic Nucleon-Nucleus Scattering.’
Dept. of Physics, Ruhr-University Bochum, Germany, December 1994:
‘Application of Multiple Scattering Theory to Elastic Nucleon-Nucleus Scattering.’

Dept. of Physics and Astronomy, Bowling Green State University, November 1994:
‘Application of Multiple Scattering Theory to Elastic Nucleon-Nucleus Scattering.’

Dept. of Physics and Astronomy, Ohio University, November 1994:
‘Visualization of NN Scattering Amplitudes.’

Nuclear Theory Division, KFA-Jülich (Germany), December 1993:
‘n-p Differential Cross Section at Backward Angles and the πNN Coupling Constant.’

Inst. of Theoretical Nuclear Physics, University of Bonn (Germany), December 1993:
‘Microscopic Description of Elastic Nucleon-Nucleus Scattering’

Dept. of Physics, Indiana University, October 1993:
‘Microscopic Formulation of Medium Contributions to the First Order Optical Potential’

Dept. of Physics and Astronomy, Ohio University, September 1993:
‘Microscopic Formulation of Medium Contributions to the First Order Optical Potential’

Nuclear Theory Group, Oak Ridge National Laboratory, August 1993: ‘n-p Differential Cross Sections at Backward Angles and the πNN Coupling Constant.’

Ohio University, Dept. of Physics, Eisenhower Project, June 1992:
‘High Performance Supercomputing’

Dept. of Physics and Astronomy, Ohio University, March 1992:
‘Dibaryons - Myth and Reality.’

Triangle University National Laboratory, TUNL, February 1992:
‘Is Elastic Nucleon Nucleus Scattering a solved Problem?’

Dept. of Physics and Astronomy, Ohio University, November 1991:
‘What you always wanted to know about the Bonn Potential and were afraid to ask.’

Institute for Nuclear Theory, Univ. of Washington, November 1991:
‘Proton Nucleus Interactions in a Multiple Scattering Expansion.’

Dept. of Physics, Univ. of Pittsburg, October 1991:
‘First Order Optical Potentials in Elastic Proton Nucleus Scattering.’

Dept. of Physics and Astronomy, Ohio University, June 1990:
‘Modern Meson-Exchange Interactions and Proton-Nucleus Scattering at Intermediate Energies.’

Dept. of Physics, Bryn Mawr College, Feb. 1990:
‘The Nuclear Structure as revealed by Proton-Nucleus Scattering’

Theory Division, Los Alamos National Laboratory, September 1989:
‘Implications of Modern Meson-Exchange NN Interactions in Medium-Energy Nuclear Physics.’

Nuclear Theory Group, TRIUMF, Vancouver (Canada), Feb. 1988:
‘NN Scattering at intermediate energies’.

Dept. of Physics, The Ohio State University, Febr. 1988:
‘The Bonn Potential. A survey and recent investigations.’

Dept. of Physics, Univ. of Erlangen-Nürnberg (W-Germany), Jan. 1988:
‘A field-theoretical Model for Pion Nucleon Scattering.’

Nuclear Theory Division, KFA - Jülich (W-Germany), Jan. 1988:
‘Low Energy Pion Nucleon Scattering’.

Theory Division, Los Alamos National Laboratory, June 1987:
‘The Bonn Potential above Pion Production Threshold and its relation to Pion-Nucleon scattering’.

Dept. of Physics and Astronomy, Univ. of Maryland, Feb. 1987:
‘The Bonn Meson Exchange Potentials above Pion Production Threshold, Renormalization and Unitarity’.

Physics Division, Argonne Nat. Laboratory, Nov. 1986:
‘NN Scattering at intermediate energies - the Bonn approach’.

Dept. of Physics, Kent State University, Sept. 1986:
‘Nucleon-Nucleon Scattering above Pion Production Threshold’.

Dept. of Physics, Univ. of Erlangen-Nürnberg (W-Germany), July 1984:
‘Resonance Structures in NN Scattering up to 1 GeV’.

Inst. of Theoret. Nucl. Physics, Univ. of Bonn (W-Germany), July 1986:
‘Extension of the Bonn Meson Exchange Potential above Pion Production Threshold’.

Dept. of Astronomy, Univ. of Bonn (W-Germany), Nov. 1985:
‘The Dynamo Earth’.

Atomist. Institute, Univ. of Vienna (Austria), May 1985:
‘A consistent Meson Exchange Model for the NN Interaction’.

Dept. of Physics, Univ. of Graz (Austria), May 1985:
‘The Bonn Meson Exchange Model for the NN Interaction’.


Inst. of Theoret. Nucl. Physics, Univ. of Bonn (W-Germany), Dec. 1983: ‘The NN-Potential concept derived from field theory’.

Inst. of Theoret. Nucl. Physics, Univ. of Bonn (W-Germany), May 1983: ‘One Boson Exchange Potentials in Coordinate Space’.