Abdulgani Annaberdiyev

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Education

Ph.D. in Physics 2015-
NC State University, Raleigh, NC, USA

M.Sc. in Physics 2015-2018
NC State University, Raleigh, NC, USA

B.Sc. in Physics 2011-2015
Fatih University, Istanbul, Turkey

Research Experience

Research Asssistant 2017-
Lubos Mitas group, NC State University, Raleigh, NC, USA

Intern 2014
Xu Du group, Stony Brook University, NY, USA

Research Member 2012-2015
Burak Yilmaz group, Fatih University, Istanbul, Turkey

Teaching Experience

Teaching Asssistant 2018
Problem Solving Sessions, NC State University, Raleigh, NC, USA

Physics Tutor 2016-2017
Physics Tutorial Center, NC State University, Raleigh, NC, USA

Undergraduate Lab Supervisor 2015-2017
Electricity and Magnetism Lab, NC State University, Raleigh, NC, USA

Presentations

Accurate Total Energies of Pseudopotentials 2019
March Meeting, American Physics Society, Boston, MA

New ccECPs for the 3rd-row Main Group Elements 2019
QMCPACK all-hands meeting, Oak Ridge National Laboratory, Oak Ridge, TN

Workshops

Qiskit Global Summer School 2020
IBM Quantum, Online

MOLSSI School on Stochastic Approaches 2019
University of Pittsburgh, Pittsburgh, PA

QMCPACK Users Workshop 2019
Oak Ridge National Laboratory, Oak Ridge, TN

AFLOW: Predicting Material Properties with Databases 2019
NC State University, Raleigh, NC

Awards & Honors

TUBITAK Scholarship 2013-2015
Fatih University, Istanbul, Turkey

Academic Excellence Scholarship 2011-2015
Fatih University, Istanbul, Turkey

IPhO Silver Medal 2011
42^{nd} International Physics Olympiad, Bangkok, Thailand

Gold Medal 2010
National Physics Olympiad, Ashgabat, Turkmenistan

Technical Skills

Languages: Python, C, C++, SAS, Matlab, Bash
Misc: Git, LaTeX, HPC, Pandas, Qiskit

Memberships

APS: American Physics Society 2019-
CPSFM: Center for Predictive Simulation of Functional Materials 2019-

Languages

English, Turkish, Russian, Turkmen

Web Links

Google Scholar: Click for the profile
Github: https://github.com/aannabe
LinkedIn: https://www.linkedin.com/in/annaberdiyev
Personal Website: https://aannabe.github.io

Publications

1. M. Chandler Bennett, Cody A. Melton, **Annaberdiyev, Abdulgani**, Guangming Wang, Luke Shulenburger, and Lubos Mitas. A new generation of effective core potentials for correlated calculations. *J. Chem. Phys.*, 147(22):224106, December 2017

2. M. Chandler Bennett, Guangming Wang, **Annaberdiyev, Abdulgani**, Cody A. Melton, Luke Shulenburger, and Lubos Mitas. A new generation of effective core potentials from correlated calculations: 2nd row elements. *J. Chem. Phys.*, 149(10):104108, September 2018

3. **Annaberdiyev, Abdulgani**, Guangming Wang, Cody A. Melton, M. Chandler Bennett, Luke Shulenburger, and Lubos Mitas. A new generation of effective core potentials from correlated calculations: 3d transition metal series. *J. Chem. Phys.*, 149(13):134108, October 2018

4. Guangming Wang, **Annaberdiyev, Abdulgani**, Cody A. Melton, M. Chandler Bennett, Luke Shulenburger, and Lubos Mitas. A new generation of effective core potentials from correlated calculations: 4s and 4p main group elements and first row additions. *J. Chem. Phys.*, 151(14):144110, October 2019. Publisher: American Institute of Physics

5. **Annaberdiyev, Abdulgani**, Cody A. Melton, M. Chandler Bennett, Guangming Wang, and Lubos Mitas. Accurate Atomic Correlation and Total Energies for Correlation Consistent Effective Core Potentials. *J. Chem. Theory Comput.*, 16(3):1482–1502, March 2020. Publisher: American Chemical Society

6. P. R. C. Kent, **Annaberdiyev, Abdulgani**, Anouar Benali, M. Chandler Bennett, Edgar Josué Landinez Borda, Peter Doak, Hongxia Hao, Kenneth D. Jordan, Jaron T. Krogel, Ilkka Kylänpää, Joonho Lee, Ye Luo, Fionn D.

Malone, Cody A. Melton, Lubos Mitas, Miguel A. Morales, Eric Neuscamman, Fernando A. Reboredo, Brenda Rubenstein, Kayahan Saritas, Shiv Upadhyay, Guangming Wang, Shuai Zhang, and Luning Zhao. QMCPACK: Advances in the development, efficiency, and application of auxiliary field and real-space variational and diffusion quantum Monte Carlo. *J. Chem. Phys.*, 152(17):174105, May 2020. Publisher: American Institute of Physics

7. Guangming Wang, **Annaberdiyev, Abdulgani**, and Lubos Mitas. Binding and excitations in Si_xH_y molecular systems using quantum Monte Carlo. *J. Chem. Phys.*, 153(14):144303, October 2020. Publisher: American Institute of Physics