
Lyncs

Release 0.0.0

Sep 28, 2020

A python API for lattice QCD applications

Lyncs is a Python API for Lattice QCD applications currently under development with a first released version expected by the end of Q2 of 2020. Lyncs aims to bring several popular libraries for Lattice QCD under a common framework. Lyncs will interface with libraries for GPUs and CPUs in a way that can accommodate additional computing architectures as these arise, achieving the best performance for the calculations while maintaining the same high-level workflow. Lyncs is one of 10 applications supported by PRACE-6IP, WP8 “Forward Looking Software Solutions”.

1.1 Installation

You can install Lyncs with `conda`, with `pip`, or by installing from source.

1.1.1 Conda

1.1.2 Pip

1.1.3 Install from source

1.2 FAQs

1.3 Contacts

For any help on Lyncs, please refer to this *documentation*.

FAQs are collected in *FAQs*.

If you are facing any issue running Lyncs, please open an issue on the GitHub page *Issues*.

1.3.1 Authors

Simone Bacchio

- **Institution:** The Cyprus Institute
- **Email:** s.bacchio AT gmail.com

1.4 Citing & Acknowledgment

If you need to cite Lyncs in your work, please use the following reference.

TODO

1.4.1 Acknowledgment

If your work used Lyncs and you want to acknowledge the software, please use the following sentence.

TODO

1.5 Publications

The following work have been published on Lyncs.

1.6 Fundings

Lyncs acknowledges the following fundings:

- **PRACE-6IP:** Lyncs is one of 10 applications supported by PRACE-6IP, WP8 “*Forward Looking Software Solutions*”. Grant agreement ID: 823767, Project name: LyNcs.

BSD 3-Clause License

Copyright (c) 2019, Simone Bacchio All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holder nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS “AS IS” AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED

TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.