

MACHINE-LEARNING IN STATISTICAL PHYSICS  
POST-DOCTORAL POSITION AT CHINESE INSTITUTION  
PROMOTED BY

The Beijing Computational Science Research Center (CSRC)  
<http://www.csrc.ac.cn/>

Post-doctoral associate position on Machine-learning in Statistical Physics opens to study phase transitions and critical phenomena of statistical physics models. The study concentrated on the research on the accuracy of calculating critical temperature and correlation length exponent using neural networks (NN). Includes the investigation of the influence of the NN architecture, the finite-size effects, the boundary effects, and scalability, including the effective realization of the algorithms for the sample generation using parallel hybrid hardware/software architecture.

The Beijing Computational Science Research Center ([www.csrc.ac.cn](http://www.csrc.ac.cn)) provides its facilities for high-performance computing and has a long tradition in computationally intensive methods. Applicants from all countries are welcome.

Host at CSRC (Beijing): Lev Shchur

The position is for a two-year appointment, with strict annual evaluations on performance and the possible extension for a third year.

Salaries are competitive and depend on the Postdoc's previous experience.

Requirements:

- i) be no more than 35 years of age at the time of application and should have obtained their Ph.D. after 2015.
- ii) possess a Ph.D. in Physics and a solid knowledge of statistical physics.
- iii) work closely with L. Shchur and collaborate with other division members;
- iv) have a strong background in programming and numerical skills, with desirable experience in intensive and parallel computing (f.e., Fortran, C, C++, Python).

Applicants with a previous background. in at least one of the following techniques,

- \* Markov-chain Monte Carlo
  - \* Transfer matrix
  - \* Renormalization group
  - \* Machine learning,
- have a significant advantage.

Applications, including detailed curriculum vitae, list of publications, a brief statement of a research plan, and at least two letters of recommendation, should be sent to [Lev.Shchur@gmail.com](mailto:Lev.Shchur@gmail.com)