Call for 2015 CSC Fellowship Applicants

## **Helmholtz Centre: GSI Helmholtz Centrie for Heavy Ion Research**

## **Department/Institute: Helmholtz Institute Jena**

## **Supervising scientist: Dr. Sergey Rykovanov**

## **University for Registration (for those looking for a dissertation): Friedrich Schiller University Jena**

## **Research Field: QED cascades in the presence of the strong laser pulse**

**Position:** PhD Student **X** Sandwich PhD Student **□** Postdoc **□**

As laser systems are getting more powerful and have already reached petawatt (PW) level (i.e. POLARIS Laser in Jena), the Quantum Electrodynamics Effects become important as such laser pulses propagate through vacuum or matter. The work will be theoretical.

**Research Area:**

**Specific Requirements:**

To prepare a letter of support for your CSC fellowship application we need some information about you. Please submit the material as described on our webpage

<http://www.hi-jena.de/en/helmholtz_institute_jena/rs_aps/application/>

If your profile meets our requirements, we will inform you and provide you two letters of support signed by your future supervisor and the head of the Research School, respectively

The successful candidate will study the QED effects, such as, for instance, electron-positron pair cascades, by means of analytical methods and Monte-Carlo simulations. It is also expected that the candidate will implement the pair creation into the Particle-In-Cell codes, hence some experience in C/C++ coding is essential. The candidate should have a strong interest in Quantum Electrodynamics and Plasma Physics.

**Work Place: Jena/Germany**

**Earliest Start:** as soon as possible

**Language Requirement:** English for work

**Email Address:** serge.rykovanov@gmail.com