The research groups of Prof. Kay Hamacher and Prof. Stefan Katzenbeisser at the Department of Computer Science at Technische Universität Darmstadt, members of the Profile Area CYSEC –   
Cybersecurity [at] TU Darmstadt, are searching for a

**Ph.D. Candidate in Computer Science or Physics**

**Topic**: **Agent-Based Simulation of Public Security & Policies**

Traditionally, decisions in the area of public security are made through risk management as well as an assessment of past security events. However, this traditional approach does not allow the quantitative assessment of the success of security measures and policies. In the current project we want to tackle this problem through the development of agent-based modeling approaches, which allows to thoroughly assesses the effectiveness of security policies.

Area of Research

* Agent-Based Modeling
* Public Security
* Scientific Computing
* Computational Statistics

Required Qualification

M.Sc. degree in any of the following subjects

* Computer Sciences
* (Theoretical) Physics
* Mathematics or Statistics

Sufficient proficiency in English; strong analytical skills; programming know-how in C++, Fortran, Python, Julia, R, and/or Lisp a prerequisite.

The successful candidate will be given the opportunity to work towards a Ph.D. degree in either computer science or physics under the supervision of Prof. Katzenbeisser and Prof. Hamacher.

Applications must include the following information attached as a single PDF:

* A complete CV, including educational and employment history and contact data
* Scanned-in copies of master's degree or diploma
* The names and e-mail addresses of at least two references whom we may contact for comments on an applicant's work and achievements.

Contact

Prof. Dr. Kay Hamacher

Dept. of Computer Science, Dept. of Physics

[kay.hamacher@cysec.de](mailto:kay.hamacher@cysec.de)

Prof. Dr. Stefan Katzenbeisser

Dept. of Computer Science,

stefan.katzenbeisser[@cysec.de](mailto:kay.hamacher@cysec.de)

About CYSEC

More than 30 research groups from eight departments are members of CYSEC and study issues surrounding cybersecurity and privacy protection. Core competencies of CYSEC include internationally renowned, top-notch research as well as the training of highly specialized professionals in the area of cybersecurity. Technology transfer and national and international cooperation with research institutes and industry complete CYSEC’s profile. CYSEC is a partner in the Center for Research in Security and Privacy (CRISP), which is funded by the German Federal Ministy of Education and Research (BMBF) and the Federal State of Hesse. With more than 400 researchers, CRISP is the largest alliance of research institutions in the area of cybersecurity and privacy in Europe. The competence center is a collaboration between TU Darmstadt - represented by CYSEC, Fraunhofer Institute for Secure Information Technology (SIT), Fraunhofer Institutes for Computer Graphics Research (IGD) and the University of Applied Sciences Darmstadt. CRISP offers an attractive, international, English speaking environment in one of the most interesting metropolitan areas in Europe surrounded by beautiful countryside. The Frankfurt Airport is just 30 km away. For more information: [www.cysec.tu-darmstadt.de](http://www.cysec.tu-darmstadt.de/)