

Centrum Wiskunde & Informatica (CWI) has vacancies in the Stochastics research group for

two talented PhD students,

on the subject of "Machine Learning for Combatting Cybercrime".

Job description

Over the past few years, cybercrime has increased dramatically and has become a major threat to the proper functioning of our modern society. This has raised the need for the development of new and powerful methods to combat cybercrime. At the same time, the recent emergence of artificial intelligence and machine learning algorithms has created tremendous opportunities for developing such methods.

Motivated by this, the two PhD positions are aimed at developing new models, methods and machine learning techniques, and to evaluate their effectiveness in handling cybercrime activities. Topics of interest include intrusion-detection systems, active learning, neural networks, supervised and unsupervised learning, generative adversarial networks. Within this broad range of topics, there will be much academic freedom in the choice of the specific topics to be addressed.

Position

We offer two full-time 4-years PhD positions. The students will become members of the Stochastics group at CWI, and get their PhD degrees from the Vrije Universiteit Amsterdam.

Requirements

Candidates are required to have a Master's degree in Operations Research, Computer Science or Applied Mathematics or a related discipline, and have knowledge of (and affinity with), data science, artificial intelligence and machine learning. The candidates should also have strong implementation skills.

Preferable qualifications for candidates include proven research talent, an excellent command of English, and good academic writing and presentation skills.

Terms and conditions for PhD students

The terms of employment are in accordance with the Dutch Collective Labour Agreement for Research Centres ("CAO-onderzoeksinstellingen"). The initial labour agreement will be for a period of 18 months. After a positive evaluation, the agreement will be extended by 30 months. The gross monthly salary, for a PhD student on a full time basis, is €2,407 during the first year and increases to €3,085 over the four year period. Employees are also entitled to a holiday allowance of 8% of the gross annual salary and a year-end bonus of 8.33%. CWI offers attractive working conditions, including flexible scheduling and help with housing for expat employees.

Please visit our website for more information about our terms of employment:

<https://www.cwi.nl/jobs/terms-of-employment>

Application

Send a motivation letter, a CV, including the email addresses of two references, a grade transcript and a copy of your Master's thesis and preferably a list of publications to apply@cwi.nl. There is no deadline for applications, but applications will be processed in order of arrival. The positions remain open until they are filled.

For residents outside the EER-area, a Toefl English language test might be required. The selected candidates will be subjected to a screening process.

For more information about the vacancies, please contact Prof. Rob van der Mei, email mei@cwi.nl. For more information about CWI, please visit www.cwi.nl or watch our video about working at CWI.

CWI encourages a diverse workforce: we endeavour to develop talent and creativity by bringing people from different backgrounds and cultures together. We recruit and select based on capabilities and talent. We strongly encourage everyone with the appropriate qualifications to apply for the vacancy, regardless of age, gender, origin, sexual orientation or physical abilities.

About Centrum Wiskunde & Informatica

Centrum Wiskunde & Informatica (CWI) is the Dutch national research institute for mathematics and computer science and is part of the [Institutes Organisation](#) of the [Dutch Research Council \(NWO\)](#). The mission of CWI is to conduct pioneering research in mathematics and computer science, generating new knowledge in these fields and conveying it to trade, industry, and society at large.

CWI is an internationally oriented institute, with 160 scientists from approximately 27 countries. The facilities are first-rate and include excellent IT support, career planning, training, and courses.

CWI is located at Science Park Amsterdam, the home of AMS-IX, that is presently developing into a major location of research in the physical sciences in The Netherlands, housing the sciences of the University of Amsterdam as well as several other national research institutes next to CWI.

Research group

To find more information about the group, please visit the group page and watch their video (see <https://www.cwi.nl/research/groups/stochastics>).