The *Machine Culture* theme at the *Center for Humans and Machines* (Director: Prof. Dr. Iyad Rahwan), Max Planck Institute for Human Development, is seeking applications for

**Postdoctoral Research Positions**  
(E 13 TVöD; 39 hours/week)

Funding for the postdoctoral positions is available for two years, with possibility of extension for a third year. The positions are available from now on.

**Job Description**

The "Machine Culture" project (Principal Investigator: Dr. Manuel Cebrian) seeks to quantify how the public perception and discussion of Artificial Intelligence (AI) spreads across networked media. AI interfaces more and more with society and it is discussed widely in all types of fora, predominantly networked media at tremendous speed and geographical reach, generating immense attention across all areas of society. This research project will study the question of the perception and discussion at the frontier of AI development (both technologically and scientifically), as it originates, spreads, and coalesces in networked media, using tools mainly from network science and computational social science. The goal of this project is to form models of how society reacts to AI advances across time, space and culture.

This research will advance the fields of network science and computational social sciences and using rigorous empirical and observational methodology, together with strong analytic and computational techniques. We expect that the post-doctoral researcher will work on quantitative and technical aspects of the project, providing their expertise in using current and novel approaches to network modeling, information theoretic measures, complex systems modeling, and statistical inference. Extensive experience in collection, filtering, and analysis of mass media as well as social media data is required.

The successful candidate will have no formal teaching requirements. The project is part of the Center for Humans and Machines (Director: Iyad Rahwan) at the Max Planck Institute for Human Development (MPIB) in Berlin.

**Requirements**

We are searching a postdoc with a strong interest and established expertise in network science, computational social science, information theory, complex systems, evolutionary modeling, computer science and machine learning. The successful applicant is expected to hold a doctoral degree in computer science, physics, applied mathematics, epidemiology, or a related quantitative field.
Stellenausschreibung Nr. 30/2019
Job advertisement Nr. 30/2019

**Essential:**
- The successful applicant needs to possess:
  - Demonstrated prior work in large-scale observational studies of networks and social systems.
  - Demonstrated Experience in writing scientific papers in network science and computational social science.
  - Extensive experience in collection, filtering, and analysis of mass media as well as social media data is required.
  - Deep Knowledge in working with Social Media APIs as well as state-of-the-art data privacy and data anonymization techniques.
  - Knowledge of state-of-the-art literature in Artificial Intelligence and Machine Learning.
  - Demonstrated understanding of causal inference methodologies.
  - Outstanding experience in data science, as demonstrated by a track record of publications in top scientific journals.
  - Excellent programming skills in Python, as well as proficiency with libraries for data manipulation and analysis.
  - High proficiency in English.

**Preferable:**
- Proficiency also in one (or more) of the following skills will be advantageous to the successful applicant:
  - Expertise in building software tools to track mass and social media.
  - Expertise in modelling the propagation of hashtags, cultural memes and related informational units, and estimation of its real-world impact on the reached audience.
  - Expertise in Information Theory and Algorithmic Information Theory.
  - Expertise in Evolutionary Modeling and Cultural Evolution.
  - Expertise in phylogenetic models and tree-like datasets.
  - Expertise in Advanced Statistics and Complex Stochastic Models.
  - Expertise in Algorithmic Game Theory.
  - High ability to work independently.

The Max Planck Society strives for gender and diversity equality. We welcome applications from all backgrounds.

The Max Planck Society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals.
To apply, please send (as ONE FILE and via email, with the sentence “Postdoc application in Machine Culture” in the subject line) a statement of research interests, a CV, a copy of relevant certificates, (p)reprints of three publications lead by the applicant, and a list of four references to Prof. Dr. Iyad Rahwan, MPI for Human Development, Lentzeallee 94, 14195 Berlin (sekrahwan@mpib-berlin.mpg.de). We are kindly asking you to submit your application without a photo. Applications will be evaluated on a first-come-first-serve basis, and will continue to be received until the positions are filled.

Signed Dr. Brigitte Merz