

The Alan Turing Institute

Impact story

Predicting conflict – a year in advance

Ground-breaking technology developed at The Alan Turing Institute could revolutionise the prediction of global conflict, boosting peacekeeping efforts and saving lives.

- From 2011 to 2016, armed conflict around the world resulted in over 100,000 deaths per year, on average – triple the previous five years.
- If peacekeepers such as the UN had a reliable way of predicting conflict breaking out in any given city or region 12 months in advance, and deploy pre-emptive peacekeeping efforts, the savings in lives and financial resources could be great.
- Turing Group Leader Weisi Guo and Sir Alan Wilson, director of special projects at the Turing, are leading the development of such predictive technology as part of the Institute's Defence and Security programme.
- The project – Global Urban Analytics for Resilient Defence (GUARD) – is supported by the UK Government's defence and security agencies.
- By taking in wide-ranging data on phenomena that affect conflict, and combining complex networks and spatial-interaction theory with AI, the team has developed a system with remarkable predictive power.
- In tests on recent historical data, the system is 82-94% accurate at predicting, 12 months in advance, which peaceful regions will erupt into conflict and which conflicted regions will find peace – anywhere in the world.

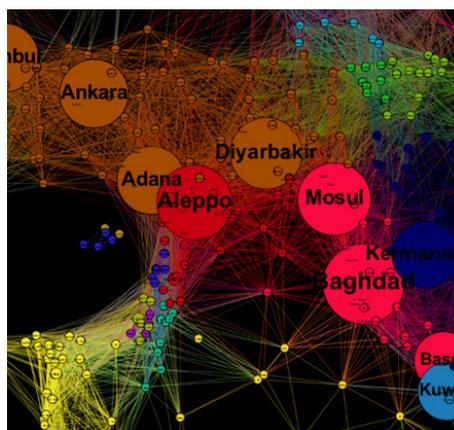
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- Project could provide the basis of a unified, global early warning system for conflict which everyone can work with.
- This technology is not only about prediction, but can also reveal the combination of conditions that escalate the risk of violence and the (sometimes unexpected) relationships between them.

“When Weisi briefs the Defence community, I see stakeholders who have worked in this challenging space for years sit up straight with fascination.”

Veronica Wardman, Technical Partner for GUARD, Dstl



Interaction network between cities in the Middle East. Weak or 'fuzzy' community boundaries at choke points in the network correspond to regions prone to instability and violence.