

## **ISODARCO**

since 1966 - Italian Pugwash Group INTERNATIONAL SCHOOL ON DISARMAMENT AND RESEARCH ON CONFLICTS

30<sup>th</sup> Winter Course

**Director of the School: Carlo Schaerf** (ISODARCO, Rome, Italy). **Directors of the Course: Giampiero Giacomello** (Department of Political and Social Sciences, University of Bologna, Italy); **Riccardo Antonini** (Technical Scientific Expert, Presidency of the Italian Council of Ministers, Rome, Italy).

## ADVANCED AND CYBER WEAPONS SYSTEMS: TECHNOLOGY AND ARMS CONTROL ANDALO (TRENTO) – ITALY, 8-15 JANUARY 2017

The search for the ultimate weapon has always motivated military planners and engineers to exploit for military purposes new scientific discoveries and technological advances, thereby causing qualitative arms races. The breadth and pace of development in computers, networks, robotics and artificial intelligence suggests the emergence of new generations of weapons, in cyberspace and in the physical world, that will be compact, unmanned and, perhaps, with independent decision-making capability. Could the speed of action-reaction in future conflicts require to put humans "out-of-the-loop". This conclusion would be quite dangerous, because

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This conclusion would be quite dangerous, because autonomous weapon systems, in cyber and real space, will inevitably be prone to serious hardware limitations and unreliability, design and programming errors, deception, tampering or, simply, hacking. This ISODARCO Course aims at understanding modern autonomous weapons technology as well as the possibilities and prospects of related arms control limitations.

## **Principal Lecturers**

Jürgen Altmann, Experimentelle Physik III, Technische Universität Dortmund, Germany; Peter Asaro, The New School, New York, NY, USA; Michele Colajanni, University of Modena and Reggio Emilia, Italy; Sarah Kreps, Cornell University, Ithaca, NY, USA; Steven Miller, Belfer Center, Harvard University, Cambridge, MA, USA; Judith Reppy, Science & Technology Studies, Cornell University, Ithaca, NY, USA; Wolfgang Rudischhauser, WMD Non-Proliferation Centre, NATO, Brussels1; Frank Sauer, Bundeswehr University Munich, Germany; Marco Schaerf, Department of Computer, Control, and Management Engineering, Sapienza University of Rome, Italy; Ali A. Soltanieh, Ambassador, Atomic Energy Organization, Teheran, Iran; Guglielmo Tamburrini, University of Naples "Federico II", Italy; Carlo Trezza, Ambassador, Ministry of Foreign Affairs (ret), Rome, Italy; Tybor Toth, Ambassador, Former Executive Secretary CTBTO, Vienna, Austria; Steve Wright, Leeds Beckett University, UK.