Video series explores the state and future of technological convergence

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You may have come across the acronyms—NBIC (nano-bio-info-cogno) or BANG (bits-atoms-neurons-genes)—but what exactly do these grammatical mash-ups mean for our economy and society? They refer to "technological convergence," a concept where different scientific disciplines and communities collaborate to promote discovery and innovation.

In a new series of videos, leading scientists from across the United States discuss the idea of convergence and how it affects their work. The series was produced by the Science and Technology Innovation Program of the Wilson Center and supported by the National Science Foundation (NSF).

"Convergence of knowledge and technology allows society to answer questions that isolated capabilities and disciplines cannot," says Mihail Roco, Senior Advisor for Nanotechnology at NSF. "At the same time, it can also create entirely new technologies and knowledge. We hope this set of videos will help explain this concept to a larger group of stakeholders and interested members of the public." Roco and William Bainbridge of the Division of Information and Intelligent Systems at NSF were the coordinators of a 2013 study on the issue, "Convergence of Knowledge, Technology and Society: Beyond Convergence of Nano-Bio-Info-Cognitive Technologies."

The scientists interviewed for the video series discuss their definition of technological convergence, how other scientific fields are affecting their work and what obstacles must be addressed to reach convergence's full

potential.

Interview subjects include George Whitesides of Harvard University, Paul Alivisatos of the Lawrence Berkeley National Laboratory, Bruce Tonn of the University of Tennessee-Knoxville, Jian Cao of Northwestern University, Mark Lundstrom of Purdue University, Robert Urban of the Johnson & Johnson Boston Innovation Center, Piotr Grodzinski of the National Cancer Institute, Stanley Williams of Hewlett-Packard Laboratories, Aude Oliva of the Massachusetts Institute of Technology, Eli Yablonovitch of the University of California-Berkeley, Sangtae Kim of ProWD Sciences, Clement Bezold of the Institute for Alternative Futures and Roger Howe of Stanford University

More information: — Video series: wilsoncenter.org/convergence

— "Convergence of Knowledge, Technology and Society: Beyond Convergence of Nano-Bio-Info-Cognitive Technologies (M.C. Roco, W.S. Bainbridge, B. Tonn and G. Whitesides; Springer, 2013) www.wtec.org/NBIC2/Docs/FinalR … -FinalReport-WEB.pdf

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