

An Introduction to Policy Informatics

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Abstract

In a complex world generating copious amounts of knowledge, new perspectives are needed to understand, deliberate, and organize collectively to build public goods. This workshop provides an interactive introduction to the theory, methods, and actionable applications of policy informatics. Policy informatics is the study of how advances in computation, information, and communication technologies are leveraged to understand and address complex policy and administrative problems and realize innovations in governance processes and institutions. Participants will engage with content and other participants. Four themes are covered: 1) theories useful to understanding policy informatics, 2) information, tools, and changing norms in the public sector, 3) interactive simulations and models, 4) participatory platforms – design, governance, and outcomes. There will be a presentation - interaction format using cutting edge examples and activities, and participants will learn techniques and methods for solving problems in the context of the values and objectives of government.

Keywords: policy informatics, governance, research methods

In a complex world that generates copious amounts of knowledge, new perspectives are needed for individuals and publics to understand, deliberate, and organize collectively to build public goods. One reason government is focused on information management and analysis is that the interactions norms present in open information environments, such as crowdsourcing and collective intelligence, are aligned with civic values present in public service. Another reason is that people are becoming used to interacting with both public and private organizations through technological platforms. For government to increase its legitimacy and sustainability there must be an understanding of how people interact in a technology mediated world and governments must leverage these advances to develop strong relationships with the public. This half day workshop will provide participants an interactive introduction to the theory, methods, and actionable applications of the emerging field of policy informatics. Policy informatics is the study of how advances in computation, information, and communication technologies are leveraged to understand and address complex policy and administrative problems and realize innovations in governance processes and institutions. It is built on the fundamental premise that information can be efficiently and effectively mobilized to enable evidence-driven policy design, implementation, and analysis. Policy informatics advances the goal of building public institutions that are transparent, collaborative, and participatory.

Policy informatics is inherently interactive and the workshop participants will have the opportunity to engage with each other and the material throughout. The workshop will cover four themes: 1) theories useful to understanding policy informatics, 2) information, tools, and changing norms in the public sector, 3) interactive simulations and models, and 4) participatory platforms – design, governance, and outcomes. There will be a presentation - interaction format for each theme, using cutting edge examples and activities occurring at all levels of government.

- ***Theories useful to policy informatics***

In this section we will show how policy informatics builds on theories from multiple disciplines to form a common set of principles. These theories including decision theory, rational choice, game theory, public administration, data mining, modeling and simulation, model validation, probability, behavioral economics, organizational behavior, complex adaptive systems, information visualization, human computer interaction, and more.

- ***Information, tools, and changing norms***

There is a great deal of publicly available information available that should be considered a natural resource, and if left dormant, a wasted government resource. There will be a discussion of the current state of online government and identification of information repositories. There are tools available to process information apart from traditional methods of analysis. Participants will learn about data processing tools, such as visualizations, that provide researchers, practitioners, and members of the public new understanding of the dynamics of an issue. There will be a discussion about how access to open information has been changing government, research, and public norms of interaction.

- ***Interactive simulations***

Policy informatics incorporates more than accessing and processing publicly available data. Simulations can give researchers and participants new insights into a problem or situation that can inform current and future actions. An agent-based model about building collaborations will be presented to illustrate how simulations complement more traditional research approaches. Participants will learn how interacting and building models changes how systems are articulated. Participants will have a structured interaction with a model to deliberate on water policy in arid climates under uncertain conditions.

- ***Participatory platforms- design, governance and outcomes***

The public sector is particularly well suited to creating and supporting interactions that can contribute to the overall welfare of the public. Participatory platforms like Challenge.gov, 10,000 Solutions, and our work designing the White House Policy Challenge are useful examples for creating new avenues for direct and productive interactions. We explore the emergence of participatory platforms and highlight the importance of research for informing decisions about motivations, design choices, and building communities of participants that can be used to create meaningful participatory interactions between government and the public.

This workshop is relevant to the iConference by outlining how the policy informatics is producing actionable research to increase understanding, improve effectiveness, and build a collaborative community of research and practice. Participants will learn a variety of methods and techniques used for processing information and solving problems in the context of the values and objectives of government. It also demonstrates how informatics technologies can lead to meaningful, interactive, multi-directional relationships across disciplines. The workshop should target around 30-40 participants.