Consortium on Trust in Media and Technology

Core Mission

We believe that the crisis of trust affecting the nation and world is, because of its complexity, best addressed through a multiplicity of disciplines, approaches, systems, and tools by a leading educational institution that is impartial to the current platforms.

Research – both theoretical and applied -- is key to addressing future impacts of technology on an informed society. This can't be effectively tackled in verticals; it must be a lateral endeavor, looking across disciplines at human behavior, social networks, technological applications, and the emergence of new policy and law. As digital technology and social networks become more integrated into our daily lives, trust and verifiability are forthcoming issues that very few technologists are equipped to address. Yet we believe that a collaboration of technologists with social scientists – working in areas such as communications, anthropology, psychology, political science, medicine and law – can open up these issues to new discoveries and perspectives.

Because of its comprehensiveness, UF is uniquely qualified to take the lead in doing work at the intersections of diverse disciplines. **Our mission is to foster a diverse community of scholars and thought leaders who will a) build an unparalleled ecosystem for the study of how media and technology can become more trustworthy, and b) develop programs for the application of new knowledge and tools and the creation of new policy and law.**

Course of Research

In October, the University of Florida awarded $1.25 million over a two-year startup phase to launch the *Consortium on Trust in Media and Technology*. This initiative was proposed by the College of Journalism and Communications (CJC), in partnership with the Wertheim College of Engineering, the College of Liberal Arts and Sciences, the Informatics Institute, the George Smathers Libraries and the Division of Student Services. Additional partners are coming onboard, including most recently the Institute of Food and Agricultural Sciences. Other colleges that will be recruited are the Levin College of Law, the College of Medicine and the Warrington College of Business. Over time, every unit of the University will play a role in establishing UF as a beacon of trust scholarship.

We are currently in the early stages of organizing the Consortium around four pillars:

1) Media and Communication
2) Cognition and Behavior
3) Technology and Networks
4) Policy and Law

Steps taken thus far include an inventory of the work related to trust that is already being done on UF's campus. Our preliminary assessment of research on trust has affirmed these four pillars. We have developed a concept map (attached) that shows how individual research topics are connected to one of more of these pillars. This formative assessment showed numerous areas of related research interests and potential for collaboration.

We also have begun the process of recruiting an executive director and planning for a campus-wide event on Feb. 19, 2018 that will introduce this initiative to UF faculty and staff and recruit their active participation.

Our approach will be manifold. It will include curation of existing relevant research to build an unparalleled repository of research and best practices on trust and truth; the acceleration of new directions in research that will illuminate the dynamics of trust in media and technology; collaboration with dozens of scholars and experts around the world; development of trust-building technologies and monitoring systems; applied research and experimentation; testing of tools and approaches using UF's own suite of media properties; engagement of an external advisory board of experts in media, industry, government and nonprofits; involvement of world-renowned trust advocates through a fellowship program; partnerships with major media and technology companies; thought leadership through the use of strategic communications; and curriculum and training to develop the next generation of trustworthy practitioners.

Here are just a few examples of the more than 100 research projects related to trust that have been conducted at the University of Florida over the last three years. Each of these researchers are enthusiastic participants in the Consortium concept and their work is representative of other investigations under way at UF:

Kevin Butler, Ph.D., Computer & Information Science & Engineering

As news sources become increasingly decentralized and trust in existing organizations erodes, we are left with difficult questions about how to re-establish trustworthiness. Dr. Butler's research focuses on how to establish the trustworthiness of data, and how to assure that it can remain trustworthy from the time it is generated to when it is used as a fact during reportage. For example, much of the Climategate controversy had to do with the cavalier and unwise tone regarding data processing that was taken by some scientists. Had they been able to demonstrate that regardless of their ill-advised emails, that all data was verifiably processed from collection to reporting, much of the damage could have been mitigated. A similar solution could be helpful for the news media: being able to demonstrate the trustworthiness of data from the time it is generated to when it is processed and finally reported on, and being able to establishing a verifiable proof of this trustworthiness (e.g., consider the equivalent of a cryptographic lock on a story that contains chains of data a reader could verify), could provide a formal means of demonstrating trust. Dr. Butler has spent a decade working on systems to establish the secure provenance of data and such research would be highly applicable in this setting.

Juan E. Gilbert, Ph.D., Computer & Information Science & Engineering

Dr. Gilbert is conducting research on the design, implementation and evaluation of human-centered computing (HCC) systems. His research contexts are voting, automobiles/transportation and others. Within the voting and elections context, his team is interested in designing, building and evaluating technologies for their accuracy, security, usability, accessibility and privacy. Likewise, in the automotive context, their work aims to address driver distraction, privacy and security. Additionally, they work on AI or machine learning algorithms in specific contexts such as hiring and admissions decisions. Their work in this area also encompasses explainable AI. Therefore, they are interested in privacy and bias in machine learning and AI algorithms. Finally, they work on designing persuasive interfaces that influence use. These interfaces may violate privacy, so they are interested in privacy preserving interfaces.

Myiah Hutchens, Ph.D., Department of Public Relations

Part of understanding what individuals judge as trustworthy, especially in an emerging media context, requires that we understand how individuals process information. Dr. Hutchens's research focuses explicitly on understanding how people respond to political information they disagree with in a variety of contexts. This deals with questions such as what is the variety of information that people encounter in social media contexts, and how that information shapes our reactions to different online news outlets. Her research has examined the consequences of this information seeking and processing on our levels of political polarization and knowledge, both of which are inextricably linked to perceptions of trustworthiness.

Ben Lok, Ph.D., Computer & Information Science & Engineering

Dr. Lok's research group studies how people react to virtual environments and virtual humans. With computing technologies capable of presenting realistic virtual places and virtual people that are authorable, it will be critical to study, educate, and shape the impact that virtual technologies have on trust in media and technology. In the near future, it will be possible to generate media that present a life-like version of any person saying and doing anything. How this capability will shape society and how develop trust in the media presented to the public will be profound.

Frank D. LoMonte, J.D., Professor and Director, The Brechner Center for Freedom of Information

Secrecy breeds distrust and cynicism. Transparency can be an antidote to the corrosive climate of suspicion in which conspiracy theories flourish. As a practicing media lawyer and researcher, LoMonte has spent the past 10 years developing public-policy solutions that address the most pressing community information needs. His research areas include strategies for promoting greater public involvement in governance through improved access to data from law-enforcement agencies, the justice system, and educational institutions. The Brechner Center is working to identify the "data deserts" of civically essential information that government fails to reliably gather and report. The goal is to modernize the way government manages information to instill a "disclosure mindset" so that documents and data are created from inception with the objective of maximizing quick, reliable and cost-free public access.

T. Franklin Waddell, Ph.D., Department of Journalism

Readers often seek out news that is consistent with their political beliefs. When a news source publishes news that conflicts with one's prior attitudes, the source is perceived to be biased. Over time, this perception of bias in mainstream media can undermine trust in the institution of journalism as a whole. At the same time that trust is waning in journalism, new technological trends in news reporting are becoming more common. Algorithms (e.g., "robot reporters") are producing thousands of stories a day both autonomously and through collaboration with traditional journalists in a "man-machine" marriage. Dr. Waddell's program of research is exploring how the use of automated news affects perceptions of news bias, particularly for news that is politically polarized. Results from this program of work has begun to reveal that skeptical audiences are more trusting of news when journalists use automation to supplement their work. Automated journalism may thus hold promise for re-building trust in journalism, especially among audiences who are prone to distrust news that is inconsistent with their personal or political beliefs.

Raffaele Vacca, Ph.D., Sociology and Criminology & Law, and Abdoulaye Kane, Ph.D., Anthropology

Drs. Vacca and Kane collaborate on a project that investigates the use of instant messaging and VoIP technology (WhatsApp) to build community and trust in transnational networks among Senegalese migrants in the U.S. and Europe, and their family and friends in Senegal. One of the research aims is studying how WhatsApp is used (1) by Senegalese migrants to monitor the management and implementation of development projects funded by migrant hometown associations and carried out in Senegal; and (2) by hometown associations to reinforce trust among its participants around the world that development projects are properly conducted in their home country.

Daisy Wang, Ph.D., Computer & Information Science & Engineering

Dr. Wang's current interest related to Trust in Media and Technology is around developing technology to provide *transparency to counter bias in data and algorithms*. She currently has two related projects:
1. *Query Answering with Alternatives*: Generating multiple hypotheses to answer queries over a knowledge graph automatically constructed from news and social media, which contains alternative interpretations of events, situations, and trends from sometimes noisy, biased, subjective, conflicting, and potentially deceptive information environments. (DARPA AIDA)
2. *Explainable Prediction Analytics*: Perform prediction and analytics such as link prediction using explainable machine learning models over knowledge graphs.

Scholarship

Original research will be conducted in all areas of trust in media and technology, including a focus on such areas as the role of social media, relationship between cognitive and emotional influences, and the relationship between humans and technology. The Consortium will conduct original research and serve as an aggregator of research in this arena.

We intend to encourage and support a new generation of scholars and leaders, through infrastructure and pilot funding for research. These strategic initiatives will lay the foundation for an ecosystem of collaboration and mutual discovery that will benefit researchers whose work already touches on issues and circumstances related to trust. Research funds will reward collaboration.

We also intend to build a curriculum that will develop the next generation of scholars and professionals who are focused on trust, and will encourage undergraduate research as well as research at the master's, doctoral and post-doctoral levels. New graduates might continue their work in either academia or industry, engendering a sensibility to matters of trust and trustworthiness that are essential to both business success and a healthy democracy.

We will organize mini-symposia to focus on specific aspects of trust scholarship and its translation to societal application. Once a year, we will organize the Summit on Trust, a high-visibility event that will serve as a forum for the exchange of ideas and solutions among the Consortium members and broader academic, industry and community stakeholders.

Application

Carrying this knowledge into industry and the public realm will be a key priority. This will be accomplished through translational and strategic communications, strategic partnerships, the development of educational programs and tools, and an annual Trust Summit. This summit will be intentional about bringing together researchers and practitioners for the purposes of knowledge exchange and co-creation. It will be sited in a major city, ideally in partnership with a large media organization or foundation doing work in this space, and will feature prominent speakers, presentations, workshops, and facilitated discussions.

The Consortium will work with national and state policymakers to create new policies regarding oversight of social media platforms. Both the College of Journalism and Communications (CJC) and the College of Liberal Arts and Sciences (CLAS) are well-positioned to deliver these recommendations through existing centers. CLAS has the **Bob Graham Center for Public Service**, the **Bureau of Economic and Business Research** and the **Public Policy Research Center**. CJC has the **Brechner Center**, the **Center for Public Interest Communications** and the **STEM Translational Communication Center**, and is home to the **National Freedom of Information Coalition**.

UF offers extraordinary experiential venues. For example, the College of Journalism and Communications (CJC) houses seven media properties, including the PBS and NPR affiliates for 20 counties in North Central Florida, the ESPN affiliate, a 24-hour cable channel for news and weather, the Florida Public Radio Emergency Network, a commercial country music station, and a digital top-40 station that experiments with digital apps in partnership with Futuri. Content for each of these media outlets and associated digital channels is produced by students working in the Innovation News Center under the guidance of seasoned news professionals. In addition, The Agency is a full-service strategic communication agency staffed by students and led by professionals.

Each of these venues are potential test beds for research and outlets for experimentation.

CJC has two centers that will be partners in the Consortium and will play key roles in connecting the research with application:

The Center for Public Interest Communications (PIC), established in 2017, is the first center in the U.S. dedicated to developing, translating and applying the science of strategic communication to drive social change. The focus on PIC has grown since 2009 and its primary focus is building a curriculum, fostering PIC research (CJC publishes the only academic journal for this discipline), helping to grow the field, and working with for-profit and non-profit organizations on using effective storytelling, and insights from science from a range of disciplines, to advance their causes.

The Center provides a variety of training to help scientists, scholars, foundations and other organizations build relationships and communicate the value of their work to funders, collaborators, policymakers, and members of the news media. For example, the Center is working with the United Nations High Commissioner on Refugees Innovation Service to explore how communication strategies can accelerate the spread of innovative approaches to providing care and protection to the more than 66 million refugees in the world. The Center collaborates with the UF Training & Organizational Development unit to provide strategic communication training to UF leaders and scholars.

The STEM Translational Communication Center (STCC) was established in 2016 to help make findings from basic, translational and applied science useful for practical application, to enhance human wellbeing. Trust in the source of scientific information is essential to its effective dissemination and adoption. Properly translated and communicated to various audiences, complex science can inform decisions about any number of areas, including the environment, technology, engineering, health, and policy. Partnerships formed between STEM and communication researchers bridge academia, industry and communities to disseminate consequential science and health knowledge to stakeholder groups.

The messages, techniques and strategies resulting from these collaborations can foster improved science and health literacy, which in turn can yield enhanced engagement, support, prestige and visibility in areas UF and its stakeholders want to advance. The STCC is housed within the College ofJournalism and Communications with connections across the UF Health campus, including the Clinical and Translational Sciences Institute and UF Health Cancer Center. The STCC fosters strategic communication partnerships across diverse disciplines at UF and internationally.

Both centers have the capacity to guide the development of strategies for communicating discoveries in ways that will resonate with the public and will help to develop programs for educating practitioners about these discoveries, along with tools for trustworthiness.

Innovation

In this multi-disciplinary consortium, engineers and computer scientists will work with media scholars and social scientists to develop products and systems that may be used 1) in conjunction with existing platforms and/or 2) as stand-alone products/systems in the areas of trust, verification, data literacy, and more.

UF's infrastructure for innovation is substantial. Just a few examples are *UF Innovate|The Hub* for startup ventures, the Innovation Academy for undergraduate education, the Entrepreneurship and Innovation Center at Warrington College of Business, and the Innovation News Center at CJC for experience and experimentation in storytelling.

Experimentation and application will be guided by the investigations of our researchers and the input of external stakeholders, including business and industry.

Additional Efforts

Expertise and capacity for data collection and analysis for the Consortium is supported by the partnership with the Informatics Institute (UFII). The UFII supports integrative informatics research and education studies at the University of Florida. This institute brings together preeminent researchers that explore contemporary application areas across the university (e.g., those arising in science and medicine, the humanities, social sciences, and engineering) with UF experts developing the tools and technologies that support and complement these studies. UFII leverages the explosion of data in understanding people, culture, political development, education, and human behavior and applies data science methods to the study of interconnectivity on our persons and in our homes, the capabilities of high-performance computers, the emergence of smart infrastructure, and the "Internet of everything".

Concept Map of the University of Florida Research on Trust