Dear Colleagues,

Fiscal Year 2021 posed remarkable challenges for all of us. For the NIRR, the challenge included how to (resiliently) navigate an expanding array of collaborative research projects in the context of a persistent (and risky) pandemic. Like much of the country, the pandemic forced us to adapt and shift our operations to remote work, but despite these challenges, our projects and partnerships grew rapidly, funded by an array of federal and state agencies as well as university partners.

NIRR’s level of funding, research output and visibility all increased over the prior year. A few notable accomplishments from this FY include:

- Publication of a major book (Cambridge University Press) on the implications of public trust in public health experts for societal resilience during the COVID-19 pandemic;
- Completion of Oklahoma’s 2021 Energy Assurance Plan, written while the State struggled with a polar vortex that threatened energy supplies and grid stability; and
- Provision of multiple online tools for tracking and understanding public responses to the risks of severe weather, COVID-19, and hazardous facilities

In the next year we anticipate many new challenges and adventures. We are rebranding and re-organizing our institute, changing our name to the Institute for Public Policy Research and Analysis (IPPRA). We are eager to bring our energy and expertise to the OU Vice President for Research’s strategic vision and do our part in implementing OU’s strategic plan.

As should be expected of a team that is focused on risk and resilience, NIRR persevered and thrived despite of all the obstacles that 2021 could throw at us. We are proud to be part of this amazing group and look forward to new challenges and adventures in the year to come.

DR. CAROL SILVA & DR. HANK JENKINS-SMITH
Co-Directors, OU NIRR
OU's National Institute for Risk & Resilience integrates social, physical, and engineering sciences to reduce risk and enhance resilience by addressing complex societal problems that span natural, human, and technical systems.

Our faculty, professional research staff, students, and academic and practitioner collaborators together build partnerships and conduct research that integrates the social, physical, and engineering sciences to increase human well-being, improve our social choice infrastructure, and enhance resilience by addressing complex societal problems that span natural, technological, and social systems.

The research capacity and institutional culture at NIRR is grounded in transdisciplinary thinking and collaboration.

The NIRR culture emphasizes finding new ways to bridge basic and applied research, thereby bringing fundamental knowledge to bear on urgent societal problems.

The NIRR team brings insights drawn from the social and behavioral sciences into collaborations with researchers in the physical, biological, and engineering disciplines to find innovative solutions to complex problems.
The National Institute for Risk & Resilience offers a unique blend of core disciplinary competencies that lie at the intersection of the four vertical pillars of the OU Vice President for Research & Partnerships' Strategic Framework.
NIRR employs a diverse range of modeling and state of the art social science methods to achieve a common systems perspective, seeking to integrate the social, natural, and technological components of a problem area.

Our applications range from local to international in scope.

**OUR RESEARCH MAKES AN IMPACT**

**OUR RESEARCH ENABLES**

effective societal responses to risks and opportunities, grounded in transdisciplinary sciences.

**OUR RESEARCH PROVIDES**

understanding of how individuals, groups, and decision-makers perceive and respond to an array of threats and opportunities.

**OUR RESEARCH FOCUSES**

on the human element in complex systems by generating and utilizing state of the art theory development, data collection and modeling of social perceptions, belief systems, social valuation, public choice, decisionmaking, and human behavior.

**APPLIED PROJECTS: MULTIPLE DOMAINS AND TRANSFORMATIVE IMPACTS**

- Enhancing Communities' Preparedness and Resilience to Post-Wildfire Hydrology in Mountainous Areas
- Mis-Information About the COVID-19 Outbreak
- Research Guided Recommendations for Communicating Uncertainties and Probabilities
- Organizational Problem Solving and the Use of Research in Education Policy
- Oklahoma Energy Assurance Plan
- UNSA/OU Alianza
- Communicating Forecast Uncertainty and Probabilistic Information

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FY 2021 Highlights

**RESEARCH**

- $2 Million in Sponsored Research Expenditures
- $2.1 Million in New Sponsored Awards
- $200K in Faculty Summer Research

**PEOPLE**

- 2 New Research Scientists
- 9 Graduate Research Assistants
- 12 Undergraduate Research Fellows
- Full Tuition Waivers for Graduate Students

**PRODUCTS**

- 19 New Peer Reviewed Publications
- 1 book (Cambridge University Press)
- 35 New Citations
- 8 Presentations
- 4 Technical Reports
FY 2021 brought significant growth for NIRR. During this fiscal year, NIRR secured $2.1 million in new sponsored research awards. These awards represent diverse funding sources, including the National Oceanic and Atmospheric Administration, the National Science Foundation, the State of Oklahoma, the United States Department of Agriculture, and the Universidad de Nacional de San Augustin. These new awards are expected to generate over $550,000 in indirect costs returns to the University of the life of the awards.
NIRR had a record year in sponsored research expenditures for FY 2021, totaling just over $2 million. These expenditures supported a combination of projects, both ongoing and new. Our FY 2021 expenditures also provided significant support to the University's larger research infrastructure through generation of over $500,000 in direct cost returns to the University during the fiscal year.
In FY 2021, NIRR expended nearly $2.4 million, approximately 85% of which was research expenditures in support of sponsored research. In addition, our organization utilized approximately 9 percent of total expenditures for operational support, 5.5 percent of total expenditures for research support and development work, and 0.5 percent of total expenditures for non-sponsored student support.
In Fiscal Year 2021, NIRI significantly advanced our research enterprise, contributing new knowledge to various academic and applied fields, augmenting our research infrastructure, and providing research and salary support as well as training and career development opportunities for students, staff, and faculty.

**New Knowledge...**

- 8 Presentations
- 19 Publications
- 4 Technical Reports
- 35 New Citations
- 34,277 Lifetime Citations

**Workforce and Leaders of the Future...**

- 12 Undergraduate Research Fellows
- 9 Graduate Research Assistants
- 3 Research Scientists
- 1 Post-Doc

**Research Enterprise Development...**

- Large scale data collection and storage infrastructure
- Classification, statistics, and machine learning
- Real-time insights from interactive applications

**Societal Impacts...**

- Podcasts, blog posts, social media engagement
- Policy briefings and reports
- Risk reduction, policy change, and learning

**Support for People and Projects...**

- $181K Student Salaries for Sponsored Research
- Full Tuition Waiver Support for All GRAs
- $12K Graduate Student Fee Support
- $129K Faculty Academic Year Salary for Sponsored Research
- $224K Faculty Summer Salary for Sponsored Research
- $42K in Salaries for Strategic Initiative Leadership Efforts
- $9K in Salaries to Conduct Research Seed Projects
- $525K Professional Research Staff Salaries
As we look to the future, NIRR remains on a strong growth trajectory. Our network of collaborators, funders, and affiliates continues to expand and we are engaged in strategic planning to further broaden our opportunities for partnerships. Our growth planning utilizes a multi-layered approach that not only maintains existing relationships with research sponsors, subcontractors, and long-standing academic collaborators, but also involves conducting development work to position us for collaborations and funding with new sponsors.

In the next three years, NIRR plans to initiate larger-scale interdisciplinary projects, significantly grow our current funding sources and increase our research expenditures, and expand our research infrastructure to support our growth.

FY 22 will also bring a new name; NIRR will be re-named the Institute for Public Policy Research & Analysis (IPPRA)!