

Engineering and Public Administration at Syracuse University

Robert Bifulco, Associate Dean & Chair, Public Administration and
International Affairs

Laura Steinberg, Professor, Civil & Environmental Engineering



Natural Affinities

Focus on designing solutions to problems.

Naturally cross paths

Lot to learn from each other



I-81 Viaduct in downtown Syracuse

Areas of Collaboration

Curriculum
Courses
Certificate

Research
Centers
Projects



Courses and teaching

- Graduate:
 - Climate Change: Science, Perception, Policy
 - Smart Grid: Security, Privacy, Economics
 - Management and Planning of Public Infrastructure
 - Public Management of Technological Development
- Undergraduate:
 - Energy and Its Impacts
 - Environment, Sustainability, and Policy
- Internships, fellowships:
 - Focused on data analytics



Certificates

Public Infrastructure Management and Leadership

The Certificate of Advanced Study in Public Infrastructure Management and Leadership is geared toward midcareer professionals interested in building upon their body of experience, expanding his or her skills and knowledge in infrastructure planning, engineering, management and administration. Students will develop skills and knowledge that will assure awareness and competency for functional, financial, environmental and social sustainability concerns of public infrastructure. It addresses the planning, design, construction, maintenance, security, capital and operating budgets, environmental and social sustainability impacts and public policy considerations of public infrastructure.

Four Required Courses

PAI 895 Managerial Leadership

PAI 734 Public Budgeting **OR** PAI 731 Financial Management in State and Local Governments

MAE 548 Engineering Economics and Technology Valuation

ECS 636 Infrastructure Engineering and Management

One Career Elective selected from:

PAI 601 Fundamentals of Conflict Studies

PAI 709 Public Organizations and Management

PAI 730 Managing Individual, Group, and Systemic Conflicts

PAI 730 Environmental Conflicts and Collaboration

PAI 757 Economics of Development

PAI 777 Economics of Environmental Policy

CIE 570 Water and Wastewater Treatment Plant Design

CIE 600 Construction Engineering and Project Management

CIE 570 Water and Wastewater Treatment Plant Design

CIE 600 Construction Engineering and Project Management

CIE 643 Transportation Engineering

CIE 643 Transportation Engineering

CIE 678 Rehabilitation of Civil Infrastructure

Certificates

Public Management and Policy.

Preparing graduate students in technical fields to better understand the non-technical elements that affect a career in government and nonprofits.

SYRACUSE UNIVERSITY

EMPOWER:

EDUCATION MODEL PROGRAM ON WATER-ENERGY RESEARCH

EMPOWER is an interdisciplinary graduate education program focused on research at the interface of water and energy cycles. The program provides students with the technical knowledge and professional skills needed to compete for careers in energy, environmental consulting, government, nonprofits, academia, and beyond.





CENTER FOR ENVIRONMENTAL POLICY & ADMINISTRATION

- **Highly interdisciplinary research:**

- Social sciences
- Natural sciences
- Engineering
- Law

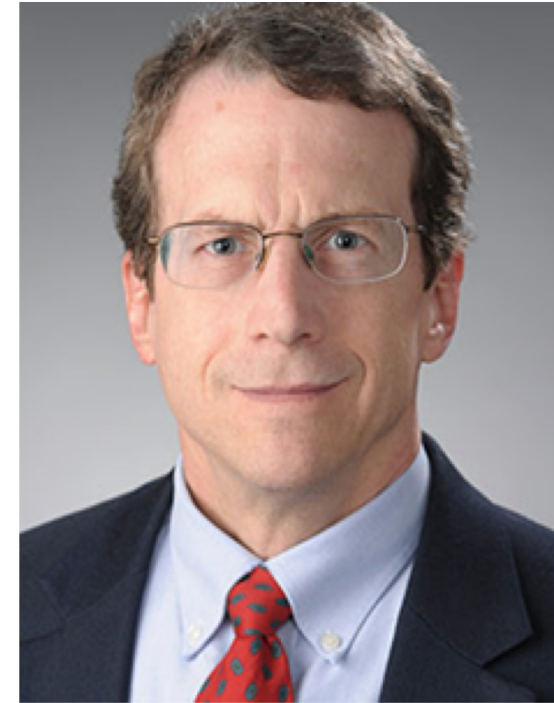
- **Experiential learning for data analytics:**

- Very large datasets
- Python, R, SQL
- Web APIs
- GIS

Ajello Professorship



James Ajello, former chairman of the U.S. Department of Energy Environmental Management Board



Pete Wilcoxon, Director of CEPA, recently named Ajello Professor of Energy and Environmental Policy

Center for Environmental Policy and Administration

Main areas of work

1. Enhancing the electric grid

- Integration of renewables
- Reduce carbon and conventional pollution
- Reduce peak loads
- Improve reliability

2. Community resilience and climate adaptation

- Reduce vulnerability to flooding
- Improve planning for water, sewer, road and grid infrastructure
- Improve planning for long term land use

Current projects

- I. Cybersecurity risks to distributed electric markets
- II. Affordability of flood insurance in Syracuse
- III. Northeast Residential Energy Usage

III. Northeast Residential Electricity

How do people use electricity?



Photo: electrek.co