

## **IDAES Stakeholder Workshop**

**Hotel Washington** 515 15<sup>th</sup> St NW | Washington, DC | 20004 September 26-28, 2022

Monday, September 26, 2022	
6:00-9:00 PM	Individual partnership discussions with IDAES leadership
	Details TBD
Tuesday, September 27, 2022	
8:30	Registration and Continental Breakfast
9:00	Welcome and Discussion of Meeting Agenda
	John Shinn, Coordinator Stakeholder Advisory Board, IDAES
9:10	DOE Keynote
9:45	IDAES Overview
	David Miller, Technical Director, IDAES
10:15	Morning Break
10:45	Optimization of Grid-Integrated Processes for Decarbonization
	Speaker: Alex Dowling and John Siirola
11:05	Integrated Energy Systems for Power and Hydrogen
	Speaker: Anthony Burgard
11:25	Flexible Carbon Capture for Dynamic Systems
	Speaker: Jaffer Ghouse
11:45	Mitigating Technical Risk with Robust Design and Uncertainty Quantification
	Speaker: Chrysanthos Gounaris
12:05	Application to Water Management, Treatment, and Desalination: WaterTAP and Pareto
10.00	Speakers: Timothy Bartholomew and Markus Drouven
12:30	Lunch and Poster Session 1
	Posters with team leads for in-depth technical discussions
	Poster Flash Presentations during lunch 1 slide, 1 minute presentations to provide an overview of posters
2:00	Growth and Development of the IDAES Integrated Platform
2:00	Speakers: Andrew Lee and John Siirola
2:20	User Interfaces and User Support
2.20	Speaker: Dan Gunter
2:40	Surrogate Modeling for Improved Design and Operations
2.40	Speaker: Carl Laird
3:00	Optimal Long-Term Expansion of Power Generation Systems
	Speaker: Ignacio Grossmann
3:20	Partner Applications
	Speakers: TBD
3:40	Afternoon Break
4:00	Stakeholder Panel
	Panel speakers: TBD
	IDAES experiences, feedback, recommendations
5:00-9:00 PM	Technical Poster Session and Reception
	Hors d'oeuvres, No host bar
Wednesday, September 28th	
9:00-12:00 AM	Individual Partnership Dialogues with IDAES Leadership
	Details TBD















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## **Poster Topics**

- 1. Managing Growth of the IDAES Integrated Platform Keith Beattie
- 2. Process Modeling with IDAES Andrew Lee
- 3. IDAES User Interfaces and Usability Dan Gunter
- 4. Dynamic Model Convergence, Reliability, and Diagnostics Bethany Nicholson
- 5. Process/Market Analysis of Low Carbon, Integrated Energy Systems for Power and Hydrogen Tony Burgard
- 6. Dynamics and Control of SOEC-based Hydrogen Production System Steve Zitney, Debangsu Bhattacharyya, Larry Biegler
- 7. Dynamic Degradation Modeling of Energy Systems Debangsu Bhattacharyya
- 8. Multiperiod Generalized Disjunctive Programming Optimization in IDAES: Simultaneous Design and Operation of an Integrated Energy System Soraya Rawlings
- 9. Optimal Approaches for Design and Deployment of Modular Process Families Georgia Stinchfield, Carl Laird
- 10. Flexible Carbon Capture System Design and Operations Jaffer Ghouse
- 11. Design of Flexible Systems for Enhanced Operability Michael Bynum
- 12. Two-Stage Robust Optimization of Energy Systems Under Economic and Renewables Uncertainty Jason Sherman, Natalie M. Isenberg, Xian Gao, Jaffer H. Ghouse, Alexander W. Dowling, John D. Siirola, Carl D. Laird, and Chrysanthos E. Gounaris
- 13. Enabling Process-Materials Co-Optimization Via Surrogate Modeling for Adsorption-Based Gas Separations Xiangyu Yin, Larry Biegler, Chrysanthos E. Gounaris
- 14. AI / ML for Integrated Systems for Decarbonization Nick Sahinidis
- 15. IDAES Capabilities for Integrated Process / Market Design and Operations Alex Dowling
- 16. Optimal Expansion Planning of Reliable Power Generation Systems Seolhoo Cho, Ignacio Grossmann
- 17. WaterTAP Tim Bartholomew
- 18. PARETO Markus Drouven
- 19. Process Optimization and Modeling for Minerals Sustainability (PrOMMiS) Miguel Zamarripa, Ana Torres, Morgan Summers, Alison Fritz











