

# 3<sup>rd</sup> NSF Millimeter-Wave RCN Workshop

## Panel 2:

### Academic-Industry Collaboration for “Moonshot” mmW RCN Contributions

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# Panel Goals

- 1. Identify big-impact problems & applications that could greatly benefit from RCN industry/academia collaboration in the next 3-5 years**
- 2. Discuss obstacles/challenges facing such collaboration**

Panel discussion should build on activities of Day 1, keynotes, and readouts from discussion groups

# Notable Responses From Last RCN

## Big-Impact Problems:

1. Integration of communication & computing to meet delay and energy requirements
2. Bandwidth/latency tradeoffs that vary with use cases
3. Exploring higher frequency bands (above 100 GHz)
4. Sustained (rather than peak) Gbps data rates
5. Business models and economic considerations
6. Cross-layer and inter-operability issues for verticals
7. New uses cases for driving innovation

E.g.: Autonomous vehicles that require high rates and low latency, and can could benefit from integrated communication and sensing

# Panelists

- 1. Dr. Carlos Cordiero (Intel)**
- 2. Dr. Amitava Ghosh (Nokia Bell Labs)**
- 3. Dr. Upamanyu Madhow (UC Santa Barbara)**
- 4. Dr. Ali Niknejad (UC Berkley)**
- 5. Dr. Sarah Yost (National Instruments)**

# Follow-up Questions

- How can collaboration between industry, academia, and national research labs be more effective?  
What mechanisms can best achieve that?
- Clarity regarding the individual & collective expertise of various academia/industry research groups within mmW-RCN
- Are IP issues a big obstacle for industry/academia collaboration? What about confidentiality concerns?

# Follow-up Questions

- How about joint collaboration that involves multiple companies and universities?
- Small vs. large projects (any multiplicative effects seen?)
- Examples of success stories

# Ideas for Moonshot Projects

- How about joint collaboration that involves multiple companies and universities?