

# **Science and Technology Challenges for Robotics**

George Bekey

Vijay Kumar

Matt Mason

Robotics Science and Systems

Philadelphia, 2006

# Yet another workshop?

Surely we know we should know what problems, technologies to work on?

## Forum for engaging the community in a techno-political discussion

- Opportunity to evaluate the field, research directions for the field
- Do we know where we want the field to go? And do we have adequate resources for robotics research?

# Broad Goals

- Identify achievements/impact of robotics
- Identify shortcomings
- Do we need more resources for robotics research?
  - How much?
  - For what?
- Should we have a ten-year plan? Roadmap?

Caveat

Somewhat U.S. centric ...

# Agenda

Challenges, *Bekey*

Impacts, *Mason*

National Networks, *Christensen, Durrant-Whyte, Bekey (Yuh)*

U.S. Robotics Industry, *Dietsch, Dugan, Marsh, Ostrowski, Tansley, Townsend*

Beyond Robotics, *Koditschek, Parker, Thrun*

The Washington Perspective, *Krotkov, Lumelsky, Volpe, Xiao*

The Next Steps, *Chirikjian, Cutkosky, Trinkle*

Wrap up, *Bekey*

# Science and Technology Challenges Workshop

1:30	Introduction	Vijay Kumar (UPenn)
1:35	Challenges for Robotics Research	George Bekey (USC)
1:50	Broader Impacts	Matt Mason (CMU)
2:05	National Networks	H. Christensen (KTH/GT), H. Durrant-Whyte (AFRC), G. Bekey (USC); Moderator: V. Kumar
2:20	U.S. Robotics Industry	J. Dietsch (Mobilerobots), J. Dugan (Kiva Systems), J. Marsh (Lockheed Martin), J. Ostrowski (Evolution), S. Tansley (Microsoft), W. Townsend (Barret Tech.); Moderator: G. Bekey
3:00	Beyond Robotics	D. Koditschek (UPenn), L. Parker (Tennessee), S. Thrun (Stanford); Moderator: M. Mason
3:30	Break: <i>Coffee, Pretzels and Water Ice</i>	
3:50	The Washington Perspective	E. Krotkov (Griffin), V. Lumelsky (NASA), R. Volpe (JPL), J. Xiao (UNC); Moderator: V. Kumar
4:20	The Next Steps	G. Chirikjian (JHU), M. Cutkosky (Stanford), J. Trinkle (RPI); Moderator: M. Mason
4:45	Wrap up	George Bekey (USC)