



## Prof. Songhwai Oh

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### Education

- Ph.D. in EECS, University of California, Berkeley, 2006
- M.S. in EECS, University of California, Berkeley, 2003
- B.S. in EECS, University of California, Berkeley, 1995

### Experiences

- 2009-Present: Professor, Department of Electrical and Computer Engineering, Seoul National University
- 2007-2009: Assistant Professor, University of California, Merced, CA
- 2007-2007: Postdoctoral Researcher, EECS, University of California, Berkeley, CA
- 1998-2000: Senior Software Engineer, Synopsys Inc., Mountain View, CA
- 1996-1998: Microprocessor Design Engineer, Intel Corporation, Santa Clara, CA

### Research Interests

- Robotics
- Computer vision
- Machine learning

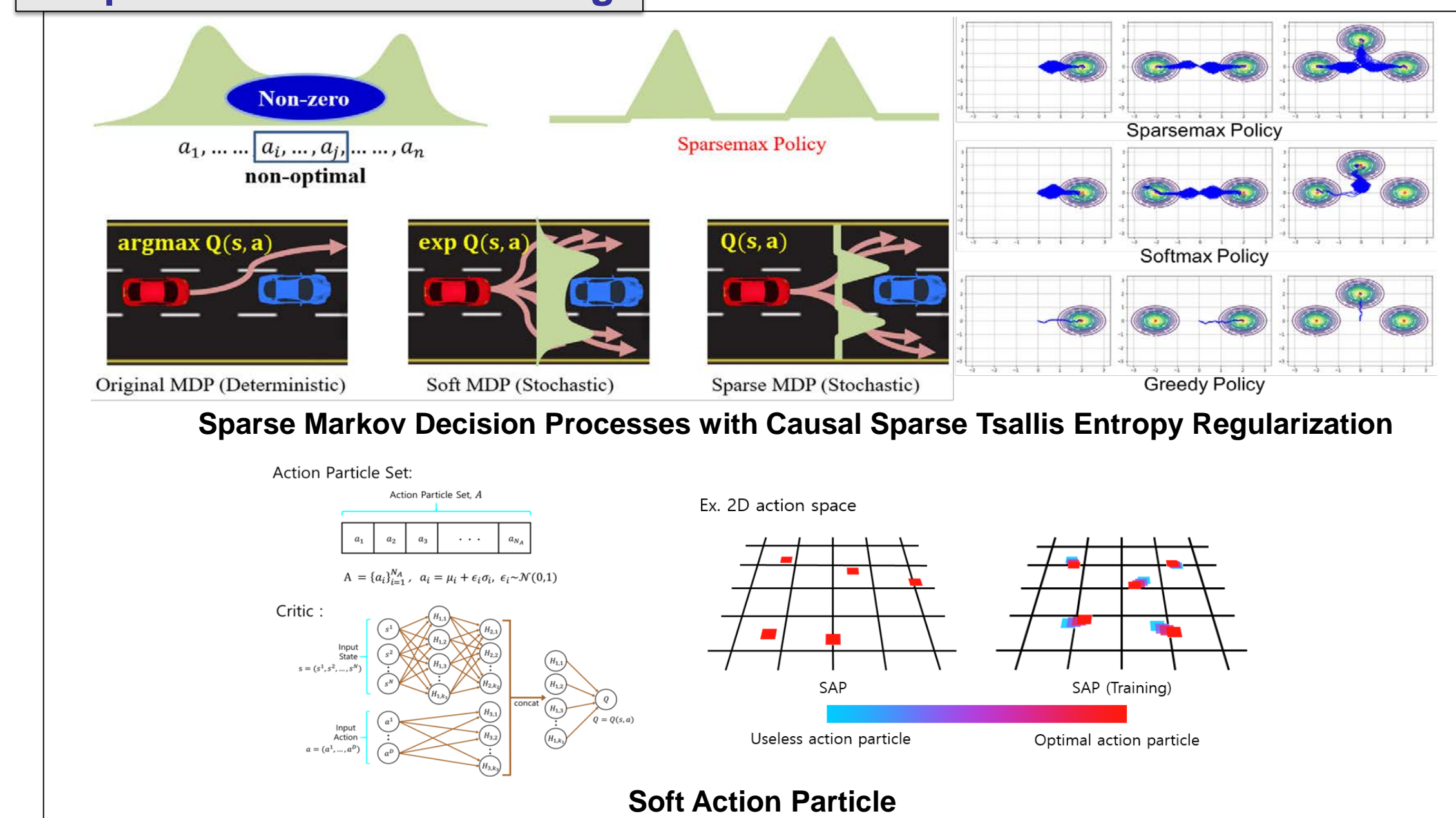
## Robot Learning

- Robot learning** is practical machine learning methods which are applied to physical systems, such as robots.
- In robot learning, the difficulties lie in the study of influence of robot action on the environment and learning with sensory values which has causal relationship with robot's action.
- Robot learning** can be considered as a new machine learning technology to overcome the difficulties in applying machine learning to physical systems.
- Development of robot learning technology for autonomous robots**
  - Safety-guaranteed machine learning
  - Social-friendly interaction learning for robotics
  - Sustainable machine learning
- Main applications**
  - Service robots
  - Autonomous driving for unmanned vehicles
  - Vision for robots
  - Dexterous manipulation
  - Intelligent industrial robots

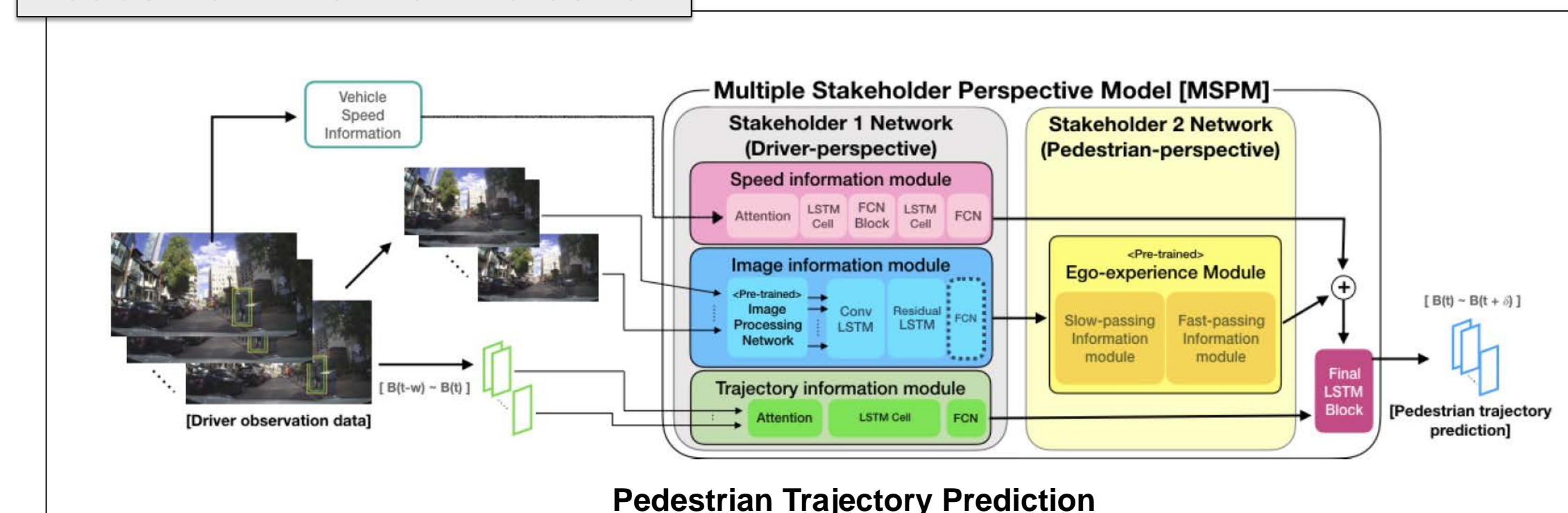
## Research @ RLLAB

- To enhance intelligence in robotics**
  - Robot learning
  - Computer vision
  - Socially-acceptable robots
  - Theory and new applications

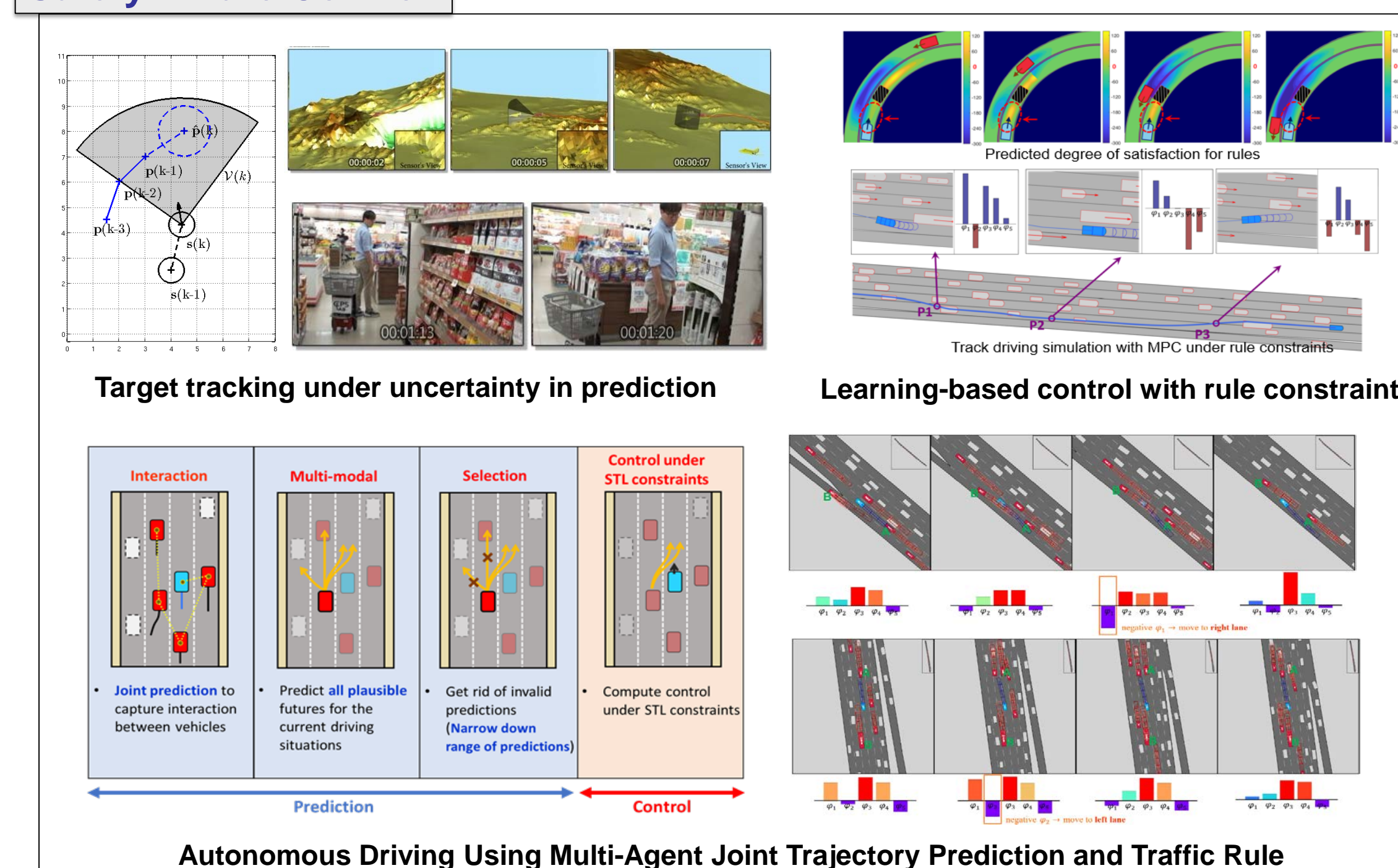
## Deep Reinforcement Learning



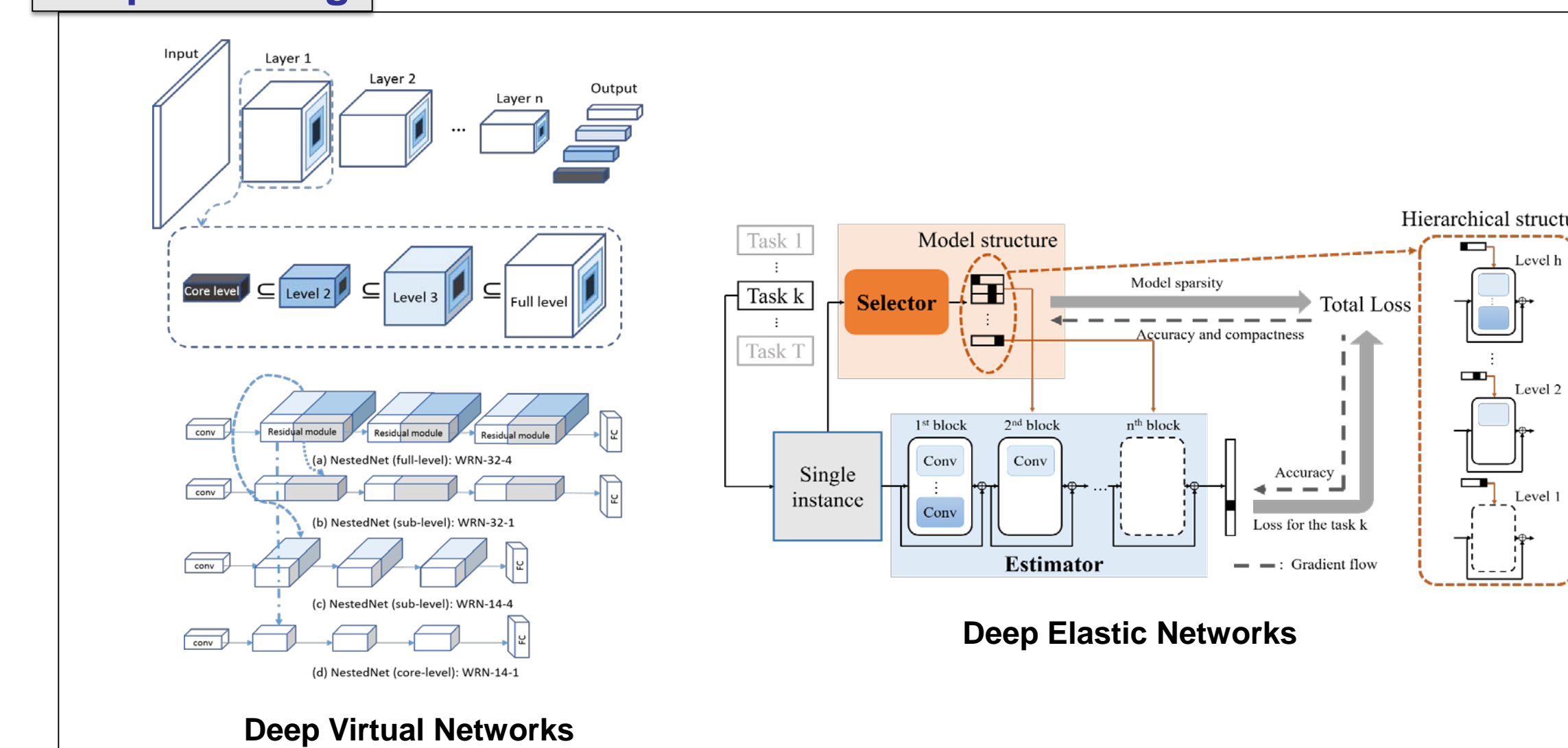
## Pedestrian Intention Detection



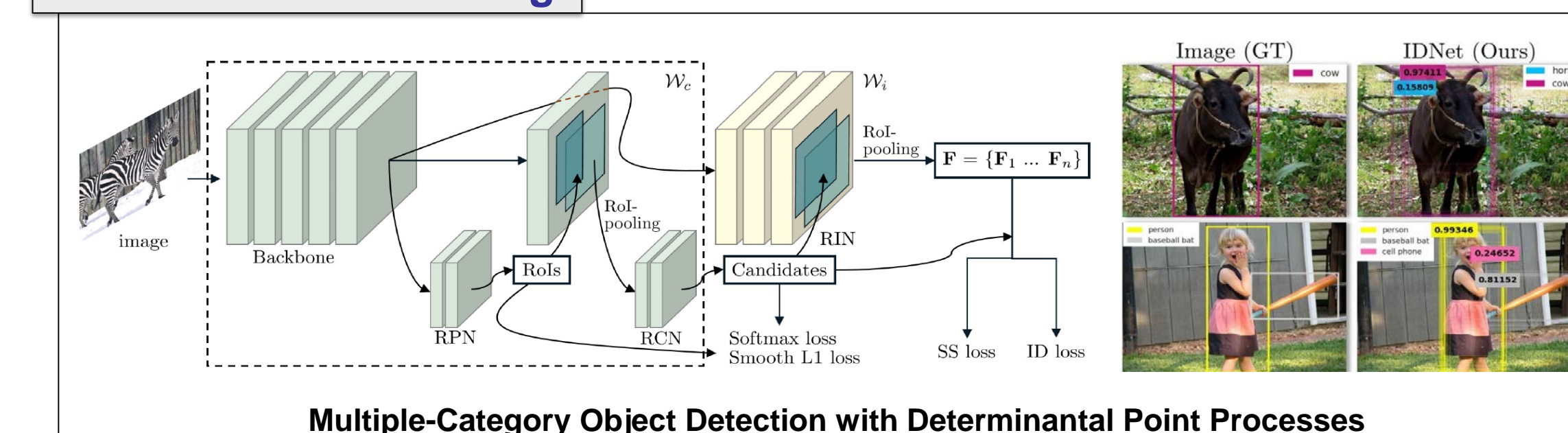
## Safety-Aware Control



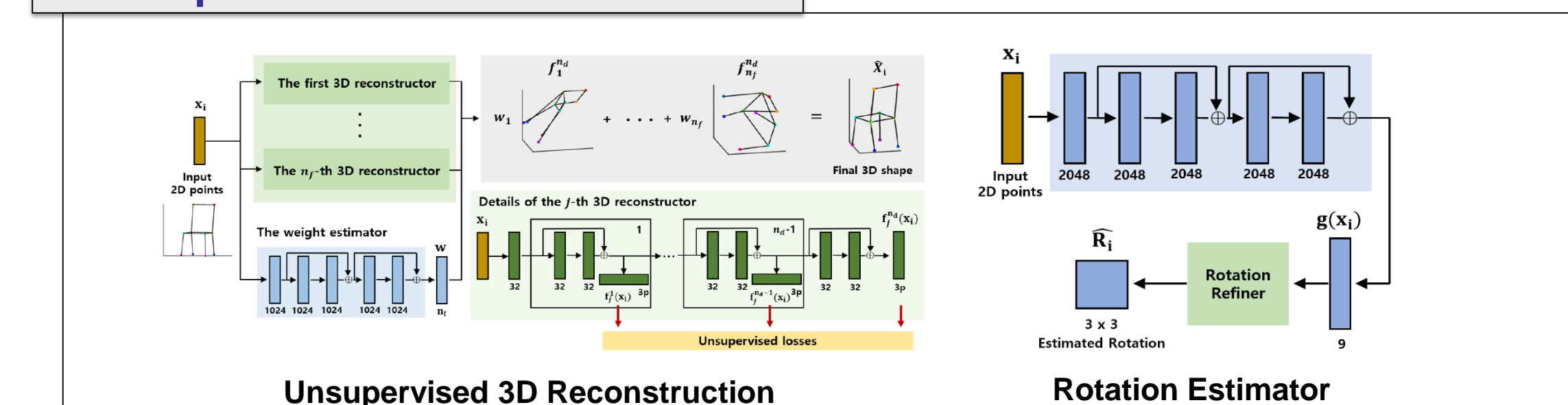
## Deep Learning



## Situation Understanding



## 3D Shape & Action Reconstruction



## Human Robot Interaction

