Stochastic Methods for Long-Term Prediction

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Set-based prediction of traffic participants [1]

Predicted occupancies for $t \in [1.5 \text{ s}, 2.0 \text{ s}]$.

Combination of non-formal and formal prediction

**Non-formal, long-term prediction** ($t \in [0, t_{long}]$)

- **Ego vehicle**
- **Other vehicle**
- **Intended trajectory**
- **Under-approx. occupancy at** $t = t_{long}$

**Formal, short-term prediction** ($t \in [0, t_{short}]$, $t_{short} < t_{long}$)

- **First part of intended trajectory**
- **Fail-safe trajectory**
- **Over-approx. occupancy at** $t = t_{short}$
Non-formal, long-term prediction

- Literature research on stochastic prediction
  - Which prediction methods are suitable for long-term prediction?
  - Start with e.g. [2] and [3]
  - Understand stochastic motion prediction methods

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