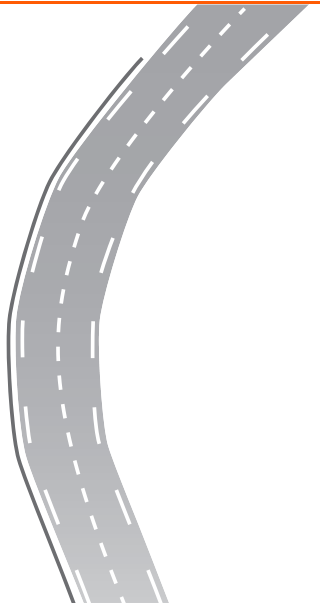
Course introduction

Sensor fusion & nonlinear filtering

Lars Hammarstrand

Sensor fusion and (nonlinear) filtering

- Use a sequence of noisy observations from one or more sensors to better estimate some unknown quantity of interest (state) and associated uncertainty measures at the current time instance.



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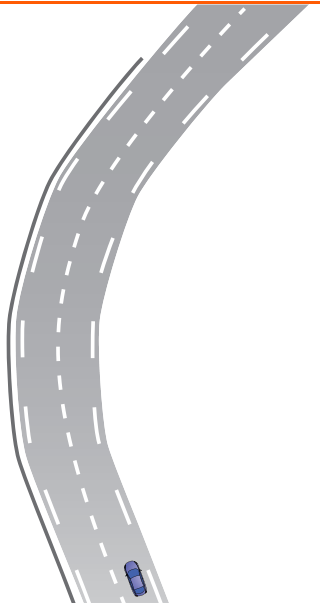

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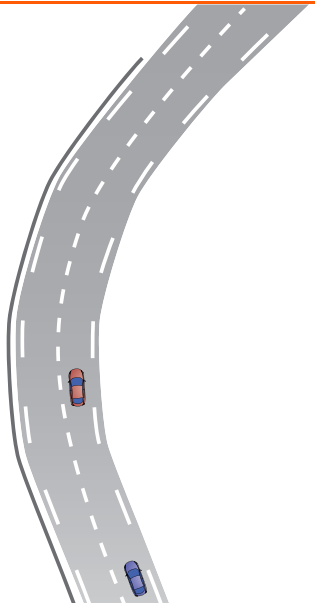

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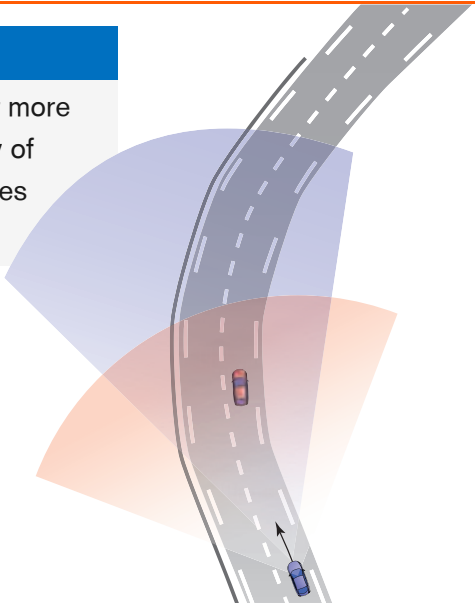

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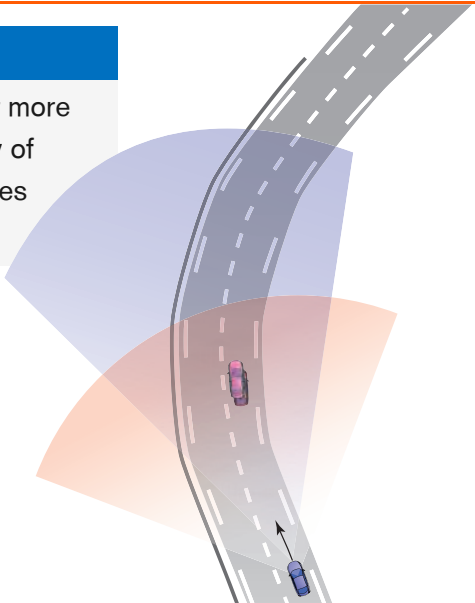

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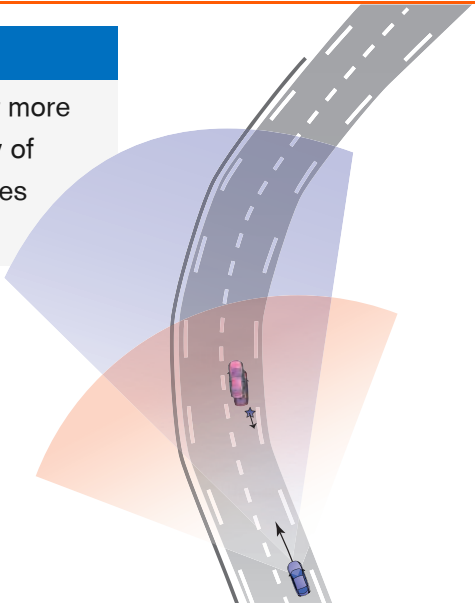

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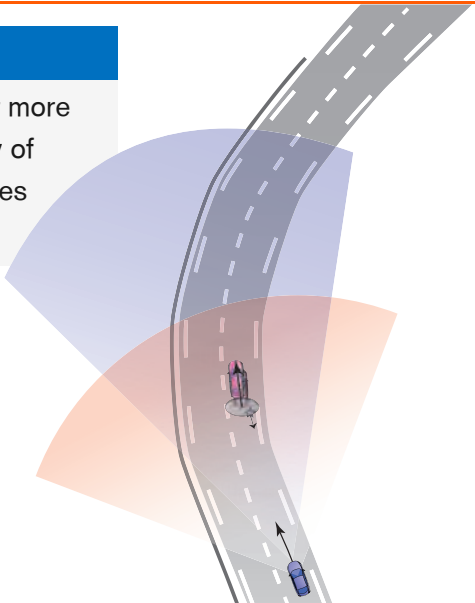

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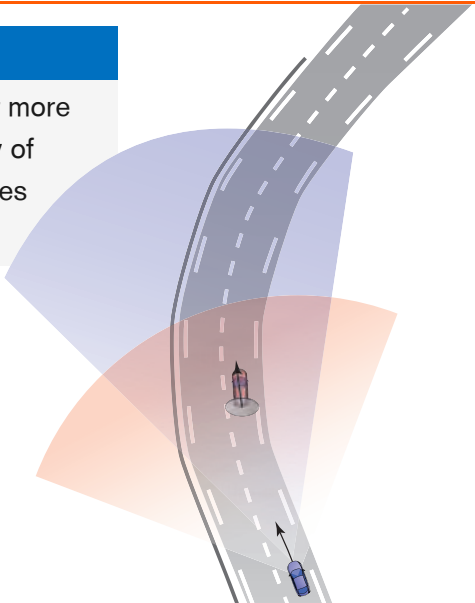

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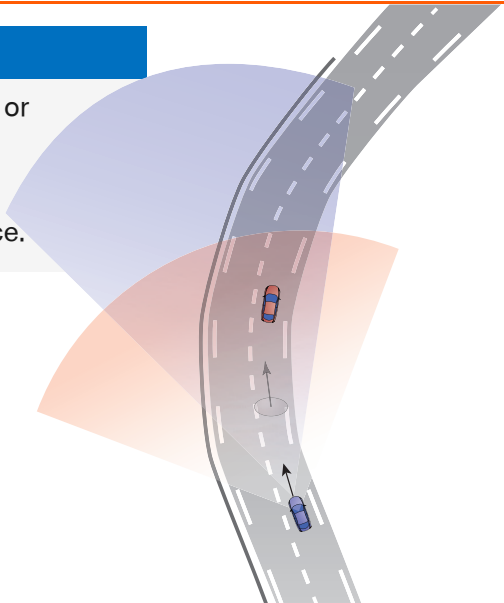

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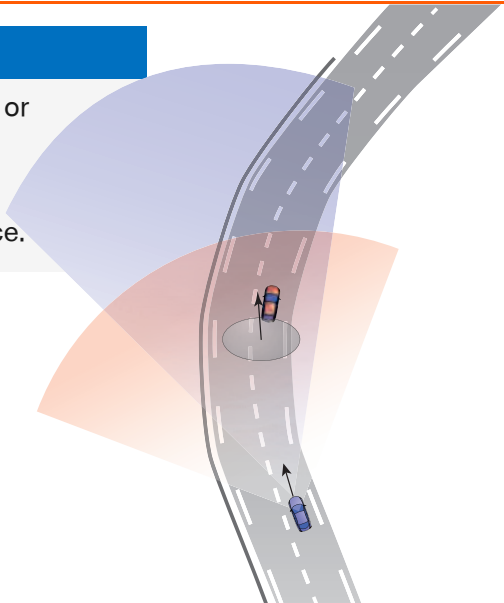

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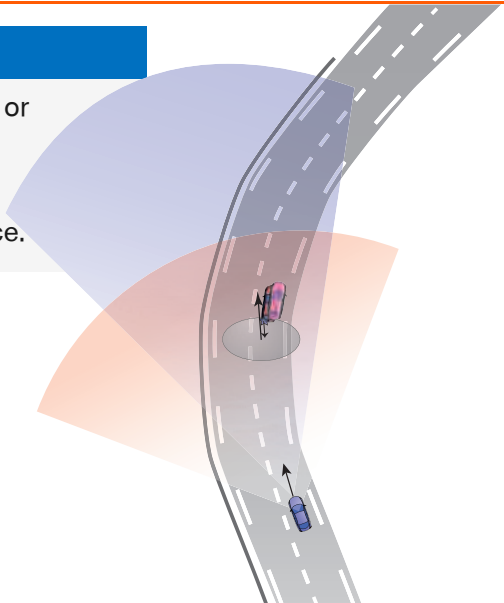

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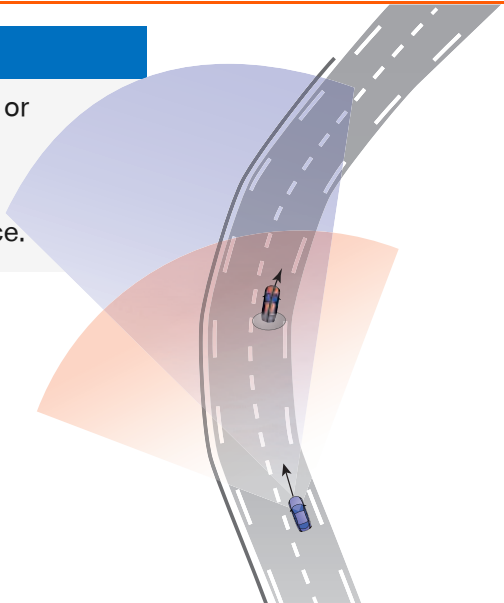

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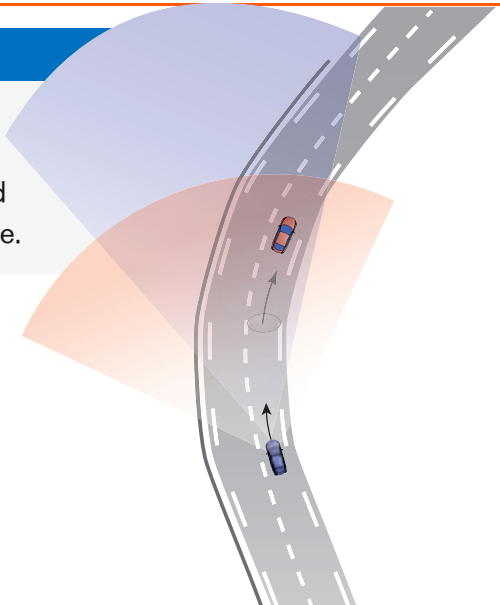

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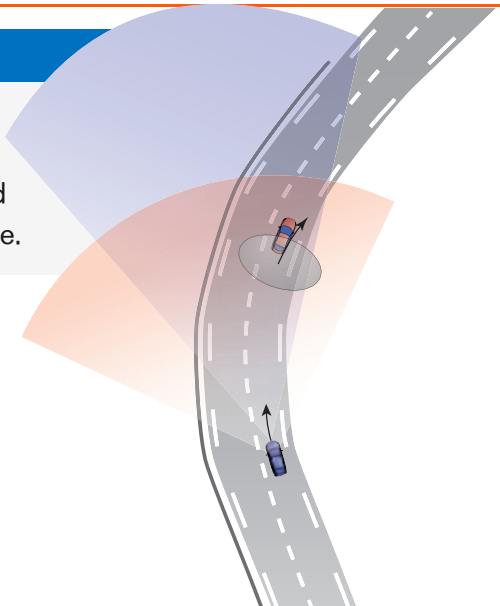

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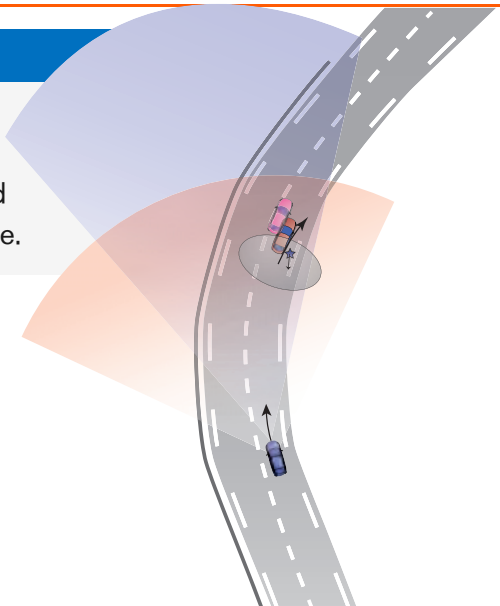

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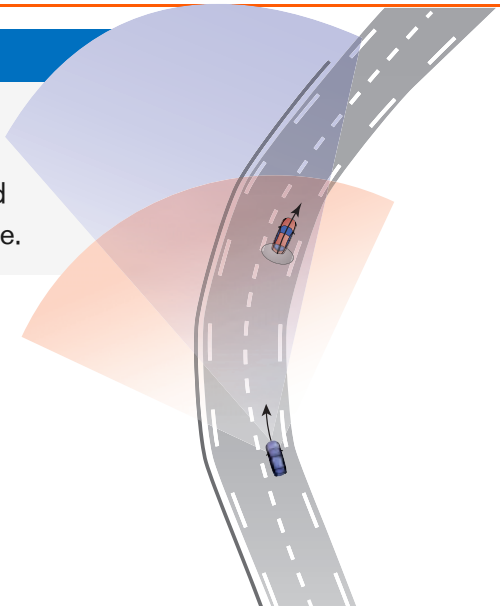

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Note:

- In this course we will not consider the data association problem or handle multiple objects
- Although we will mainly give examples related to automotive applications, the theory and methods learned in this course are much more general than that!