# Overview of Collision Checking Algorithms for Mobile Robots

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#### Motivation

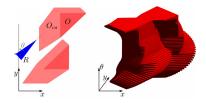
• How to detect a potential collision with an obstacle?



Figure: First crash of a self-driving vehicle

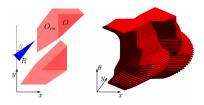
## **Topic**

• Example: collision check within the configuration space



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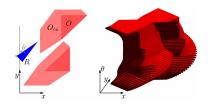
Example: collision check within the configuration space



- Your task:
  - Literature research on collision checking algorithms for mobile robots
  - Comparison of the approaches
  - Limitations? Improvements? Usage?
  - Describe algorithm of your choice in detail

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Example: collision check within the configuration space



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- ⇒ Any questions? Interested? Feel free to contact me! christian.pek@tum.de