

# Model-Based Development of an Underwater Vehicle

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- Model-based design development
- Control system

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## Model-Based Development of an Underwater Vehicle

- Model-based design development
- Control system

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Model-Based Development of an Underwater Vehicle

ROV Platform

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## Model-Based Development of an Underwater Vehicle

## └─ Modelling the ROV

what is a model and be used for damping - linear quadratic Coriolis  
restoring forces added mass and added moment of inertia  
simplifications and why they are needed

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## Model-Based Development of an Underwater Vehicle

## └ Parameter Estimation

What is parameter estimation and why is it needed pem and  
problems kalman smoother pem results kalman estimation kalman  
results discussion

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└ Controllers

what is automatic control open-loop control exact linearisation  
attitude angular velocity depth results discussion

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Model-Based Development of an Underwater Vehicle

Conclusion

what is automatic control open-loop control exact linearisation  
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