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## Two-layer distributed optimal control for energy system integration

Alkano, Desti

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# **Two-layer distributed optimal control for energy system integration**

Desti Alkano



The research described in this dissertation has been carried out in Discrete Technology and Production Automation at the Faculty of Mathematics and Natural Sciences, University of Groningen, The Netherlands.

# disc

This thesis has been completed in partial fulfillment of the requirements of the Dutch Institute of Systems and Control (DISC) for graduate study.



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# Two-layer distributed optimal control for energy system integration

**PhD thesis**

to obtain the degree of PhD at the  
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on the authority of the  
Rector Magnificus Prof. E. Sterken  
and in accordance with  
the decision by the College of Deans.

This thesis will be defended in public on

Friday 9 September 2016 at 12:45 hours

by

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in Kediri, Indonesia

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**Assessment committee**

Prof. J. Stoustrup

Prof. M.K. Camlibel

Prof. Siep Weiland

*To my family*



---

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Groningen, June 2016

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