## **Program DISC Summer School**

Planning, Learning and Control of Multi-Robot and Multi-Agent Systems

## 3 days Online + 1 day <u>Domstad</u> Utrecht 8<sup>th</sup> June - 11<sup>th</sup> June, 2021 Organizers: J. Alonso-Mora (TUD), O. Arslan (TU/e) and M. Cao (U. Groningen)

Tuesday 8th June	2021 [ONLINE]	Who	Title
08.45 - 9.00	Opening	Organizers	Opening Summer School - Introduction
09.00 - 10.00	Lecture	M. Dorigo	tbd
10.00 - 12.00	Lecture (w/ breaks)	JJ. Chung	Learning for MRS
12.00 - 13.00	Lunch break		
13.00 - 14.00	Short presentations	Participants	
14.00 - 14.30	Coffee-break interaction		
14.30 - 15.30	Short presentations	Participants	
15.30 - 16.00	Coffee-break interaction		
16.00 - 17.00	Lecture	D. Rus	MRS Control
Wednesday 9th June 2021 [ONLINE]		Who	Title
09.00 – 10:00	Lecture	D. Dimarogonas	
10.00 – 12.00	Lecture (w. breaks)	E. Montijano	Distributed consensus
12.00 – 13.00	Lunch break	L. Monthano	Distributed consensus
13.00 – 14.00	Lecture	B. Besselink	Performance of MAS: string stability of vehicle
13.00 – 14.00	Lecture	b. bessellik	platoons
14.00 - 15.30	Group work		Assignment 1 by E. Montijano
15.30 – 16.30	Lecture	N Leonard	Distributed multi-agent decision-making
			dynamics
16.30 - 17.30	Discuss assignment 1	E. Montijano	
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	_	Who	Title
	nne 2021 [ONLINE] Lecture	-	
Thursday 10 <sup>th</sup> Ju	ne 2021 [ONLINE]	Who	Title  Monotone game theory for multi-agent dynamical systems
Thursday 10 <sup>th</sup> Ju	ne 2021 [ONLINE]	Who	Monotone game theory for multi-agent
<b>Thursday 10</b> <sup>th</sup> Ju 09.00 – 10:00	nne 2021 [ONLINE] Lecture	<b>Who</b> S. Grammatico	Monotone game theory for multi-agent dynamical systems
Thursday 10 <sup>th</sup> Ju 09.00 – 10:00 10.00 – 12.00	ne 2021 [ONLINE] Lecture Lecture (w. breaks)	<b>Who</b> S. Grammatico	Monotone game theory for multi-agent dynamical systems
Thursday 10 <sup>th</sup> Ju 09.00 – 10:00 10.00 – 12.00 12.00 – 13.00	ne 2021 [ONLINE] Lecture Lecture (w. breaks) Lunch break	Who S. Grammatico D. Halperin	Monotone game theory for multi-agent dynamical systems  Motion planning
Thursday 10 <sup>th</sup> Ju 09.00 – 10:00 10.00 – 12.00 12.00 – 13.00 13.00 – 14.00	Lecture (w. breaks) Lunch break Lecture	Who S. Grammatico D. Halperin	Monotone game theory for multi-agent dynamical systems Motion planning  Decision-making
Thursday 10 <sup>th</sup> Ju 09.00 – 10:00 10.00 – 12.00 12.00 – 13.00 13.00 – 14.00 14.00 – 15.30	Lecture (w. breaks) Lunch break Lecture Group work	Who S. Grammatico D. Halperin F. Oliehoek	Monotone game theory for multi-agent dynamical systems Motion planning  Decision-making Assignment 2 by D. Halperin
Thursday 10 <sup>th</sup> Ju 09.00 – 10:00  10.00 – 12.00 12.00 – 13.00 13.00 – 14.00 14.00 – 15.30 15.30 – 16.30 16.30 – 17.30	Lecture (w. breaks) Lunch break Lecture Group work Lecture Discuss assignment 2	Who S. Grammatico D. Halperin F. Oliehoek V. Kumar D. Halperin	Monotone game theory for multi-agent dynamical systems Motion planning  Decision-making Assignment 2 by D. Halperin MRS Control
Thursday 10 <sup>th</sup> Ju 09.00 – 10:00  10.00 – 12.00 12.00 – 13.00 13.00 – 14.00 14.00 – 15.30 15.30 – 16.30 16.30 – 17.30  Friday 11 <sup>th</sup> June	Lecture (w. breaks) Lunch break Lecture Group work Lecture Discuss assignment 2	Who S. Grammatico D. Halperin F. Oliehoek V. Kumar	Monotone game theory for multi-agent dynamical systems Motion planning  Decision-making Assignment 2 by D. Halperin
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Thursday 10 <sup>th</sup> Ju 09.00 – 10:00  10.00 – 12.00 12.00 – 13.00 13.00 – 14.00 14.00 – 15.30 15.30 – 16.30 16.30 – 17.30  Friday 11 <sup>th</sup> June 10.00 – 10:30 10.30 – 11.30	Lecture (w. breaks) Lunch break Lecture Group work Lecture Discuss assignment 2  2021 [UTRECHT) Arrival/check in Lecture	Who S. Grammatico D. Halperin F. Oliehoek V. Kumar D. Halperin	Monotone game theory for multi-agent dynamical systems Motion planning  Decision-making Assignment 2 by D. Halperin MRS Control
Thursday 10 <sup>th</sup> Ju 09.00 – 10:00  10.00 – 12.00 12.00 – 13.00 13.00 – 14.00 14.00 – 15.30 15.30 – 16.30 16.30 – 17.30  Friday 11 <sup>th</sup> June 10.00 – 10:30 10.30 – 11.30 11.30 – 13.30	Lecture (w. breaks) Lunch break Lecture Group work Lecture Discuss assignment 2  2021 [UTRECHT) Arrival/check in Lecture Lunch & interaction	Who S. Grammatico D. Halperin F. Oliehoek V. Kumar D. Halperin Who M. Mazo	Monotone game theory for multi-agent dynamical systems Motion planning  Decision-making Assignment 2 by D. Halperin MRS Control  Title  Networked MAS
Thursday 10 <sup>th</sup> Ju 09.00 – 10:00  10.00 – 12.00 12.00 – 13.00 13.00 – 14.00 14.00 – 15.30 15.30 – 16.30 16.30 – 17.30  Friday 11 <sup>th</sup> June 10.00 – 10:30 10.30 – 11.30	Lecture (w. breaks) Lunch break Lecture Group work Lecture Discuss assignment 2  2021 [UTRECHT) Arrival/check in Lecture	Who S. Grammatico D. Halperin F. Oliehoek V. Kumar D. Halperin Who	Monotone game theory for multi-agent dynamical systems Motion planning  Decision-making Assignment 2 by D. Halperin MRS Control  Title  Networked MAS  Distributed and cooperative coordination of
Thursday 10 <sup>th</sup> Ju 09.00 – 10:00  10.00 – 12.00 12.00 – 13.00 13.00 – 14.00 14.00 – 15.30 15.30 – 16.30 16.30 – 17.30  Friday 11 <sup>th</sup> June 10.00 – 10:30 10.30 – 11.30 11.30 – 13.30 13.30 – 14.30	Lecture (w. breaks) Lunch break Lecture Group work Lecture Discuss assignment 2  2021 [UTRECHT) Arrival/check in Lecture Lunch & interaction Lecture	Who S. Grammatico D. Halperin F. Oliehoek V. Kumar D. Halperin Who M. Mazo Z. Sun	Monotone game theory for multi-agent dynamical systems Motion planning  Decision-making Assignment 2 by D. Halperin MRS Control  Title  Networked MAS  Distributed and cooperative coordination of multiple UAV systems
Thursday 10 <sup>th</sup> Ju 09.00 – 10:00  10.00 – 12.00 12.00 – 13.00 13.00 – 14.00 14.00 – 15.30 15.30 – 16.30 16.30 – 17.30  Friday 11 <sup>th</sup> June 10.00 – 10:30 10.30 – 11.30 11.30 – 13.30	Lecture (w. breaks) Lunch break Lecture Group work Lecture Discuss assignment 2  2021 [UTRECHT) Arrival/check in Lecture Lunch & interaction	Who S. Grammatico D. Halperin F. Oliehoek V. Kumar D. Halperin Who M. Mazo	Monotone game theory for multi-agent dynamical systems Motion planning  Decision-making Assignment 2 by D. Halperin MRS Control  Title  Networked MAS  Distributed and cooperative coordination of