



SEEEP



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## Program SEEEP High Level Summer School

"Energy Transition: Pathways towards net zero"

Summer school for PhD Candidates  
Stockholm & Eindhoven  
August 16 – August 27, 2021

### Week 1: Royal Institute of Technology (KTH) Stockholm, Sweden

<b>Monday, 16 August</b>		
09.00-9.30	Registrations & Practical information	
9.30-10.30	Welcome by KTH & TU/e	Vice President KTH, tbc
10.30-11.00	Practical information	
11.00-12.00	Opening Key note	
12.00-13.00	Break	
13.00-15.00	Challenges, group work and group formation	"Format Per Alvfors"
15.00-18.00	Establishment of the project groups	

<b>Tuesday, 17 August</b>		
09.00-10.00	Lecture and Q&A: Electricity Production, Transmission and Balancing	Prof. Lennart Söder (KTH)
10.00-11.00	Lecture and Q&A: CCUS Technology in China, Opportunities and Challenges	Prof. Tao Wang (ZJU)
11.00-12.00	Lecture and Q&A: Heat and Cold Storage in the Energy System	Prof. Viktoria Martin (KTH)
12.00-13.00	Break	
13.00-16.30	Group projects	
16.30-19.00	Group presentations	

<b>Wednesday, 18 August</b>		
09.00-10.00	Lecture and Q&A: The Role of Buildings for Storage	Prof. Joachim Claesson (KTH)
10.00-11.00	Energy brain in smart city for carbon neutrality: an ordered and coordinated complex energy system	Prof. Wei Zhong (ZJU)
11.00-12.00	Lecture and Q&A: Battery Storage Systems	Prof. Raket Lindström (KTH)
12.00-13.00	Break	
13.00-14.00	Lecture and Q&A: Flow in porous media in the energy transition	Prof. Qingyang Lin (ZJU)
14.00-16.30	Group projects	
16.30-19.00	Group presentations	



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<b>Thursday, 19 August</b>		
09.00-10.00	Lecture and Q&A : The Role of AI in the Energy System	Prof. Lars Nordström (KTH)
10.00-11.00	Lecture and Q&A: Pathways towards net zero	Prof. David Smeulders (TUE)
11.00-12.00	Lecture and Q&A: Energy modeling in the built environment	Prof. Jan Hensen (TUE), tbc
12.00-13.00	Break	
13.00-16.00	group projects	

<b>Friday, 20 August</b>		
09.00-12.00	Research at KTH: overview presentations	
12.00-13.00	Break	
13.00-15.00	Company presentations	
15.00-17.00	Mid-term presentations	



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**Week 2: Eindhoven University of Technology (TU/e), Eindhoven, Netherlands**

**Monday, 23 August**

09.00-10.00	Lecture and Q&A: Electricity: the sustainable energy carrier	Prof. Guus Pemen (TUE), tbc
10.00-11.00	Lecture and Q&A: Developments in CO2 capture using adsorbents	Prof. Tianshu Ge (SJTU)
11.00-12.00	Lecture and Q&A: Hydrogen; the way forward	Prof. Per Alvfors (KTH)
12.00-13.00	Break	
13.00-16.00	Group work	
16.00-18.00	Group presentations	

**Tuesday, 24 August**

09:00-12:00	Research at TU/e: overview presentations	
12:00-13:00	break	
13:00-14:00	Lecture & Q&A: negative emissions	Dr. Maja Rücker (TUE)
14:00-17:00	Company presentations	

**Wednesday, 25 August**

09.00-10.00	Lecture and Q&A SJTU: Absorption heat pumps for the efficient utilization of low grade heat: Innovation and application	Prof. Zhenyuan Xu (SJTU)
10.00-11.00	Lecture and Q&A: Concentrated Solar Power	Prof. Björn Laumert (KTH)
11.00-12.00	Lecture and Q&A: The North Sea Energy Transition	Apostolos Georgiadis (Shell)
12.00-13.00	Break	
13.00-14.00	Lecture and Q&A: Developments in solar energy design	Prof. Reinders (TUE), tbc
14.00-18.00	Group work	

**Thursday, 26 August**

09.00-12.00	Group work and interaction possibilities	
12.00-13.00	Break	
13.00-15.30	Group work and interaction possibilities	
15:30-18.00	Cultural activity	

**Friday, 27 August**

09.00-12.00	Final group presentations	
12.00-13.00	Break	
14.00-15.00	Closing ceremony	