



CGEx at KTH Royal Institute of Technology • [www.ccgex.kth.se](http://www.ccgex.kth.se)

## CGEx Research Days Program, 10-11 October 2019, Stockholm

Competence Center for Gas Exchange @ KTH

### Agenda - Day 1

10 October 2018

KTH Campus, KTH OpenLab, Valhallavägen 79, 114 28 Stockholm

Subway station: Tekniska Högskolan

09:00-09:30 **Registration, Coffee, and Introductions**

09:30-10:00 **Opening by CCGEx Director**  
CGEx Summary Report on Research Activities

10:00-10:40 *Keynote Speaker 1:* Prof. Clemens Biet: *"Practical approaches for measuring and modeling turbochargers"*, TU Berlin, Germany

#### Part 1 **Ongoing Projects**

10:45-11:45 **Research Area: integrated Cold side (iCOLD)**

- Mihai Mihaescu: intro + overview (10+5 minutes).
  - o Emelie Trigell, KTH-Mek (10+5 min). *"Turbocharger Compressor response to downstream perturbations using Large Eddy Simulations."*
  - o Stefan Sack, KTH-MWL (10+5 min). *"Experimental acoustic characterization of compressors in turbochargers."*
  - o Asuka G. Pietroniro, Ind. PhD Student, Volvo Cars (10+5 min). *"On the aerodynamically generated sound in Turbocharger Compressors."*

11:45-13:00 **LUNCH**

13:00-13:30 *Keynote Speaker 2:* Dr. Johan Engström: *"Challenge and Requirements for the Future – Truck Perspective"*, VOLVO Group

13:30-14:45 **Research Area: integrated HOTSIDE (iHOT)**

- Mihai Mihaescu: intro + overview (10+5 minutes).
  - o Ted Holmberg, KTH-ICE (10+5 min). *"On-engine investigation of exhaust valve flow during dynamic conditions."*
  - o Roberto Mosca, KTH-Mek (10+5 min). *"Aerothermodynamics of radial turbines under engine like conditions."*
  - o Yushi Murai & Varun Venkataraman, iSYS+iHOT, KTH-Mek & KTH-ICE (20+10 min). *"Evaluation of measurement techniques for instantaneous exhaust gas temperature on engine."*



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**14:45-15:30 Research Area: Engine After Treatment (EAT)**

- Mikael Karlsson: intro + overview (10+5 minutes).
  - o Ghulam M. Majal, KTH-MWL/Mek (10+5 min). *"Agglomeration of Particles in Exhaust Gases by flow manipulation."*
  - o Arun Prasath, KTH-ICE (10+5 min). *"Effect of Exhaust Systems on Particles."*

**15:30-15:45 Meet and Mingle Coffee Break**

**15:45-17:00 Research Area: Power Train System Integration (SYSINT)**

- Anders Christiansen Erlandsson /Hanna Bernemyr: intro + overview (15 minutes)
  - o Sandhya Thantla, KTH-ICE (10+5 min). *"Low Temperature Waste Heat Recovery (WHR) in IC Engines."*
  - o Jianhua Zhou and Mikael Karlsson, KTH-MWL (10+5 min). *"Understanding and Modeling thermo-acoustic engines for Automotive Waste Heat Recovery."*
  - o Senthil Krishnan Mahendar, KTH-ICE (10+5 min). *"Mitigation Knock in Heavy Duty Spark Ignition Engines."*
  - o Beichuan Hong (10+5 min.) *"Exergy analysis for high efficiency ICE gas exchange system."*

**17:00 Closing Day 1**

End of Day 1

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## Agenda - Day 2

11 October 2019

KTH Campus, KTH OpenLab, Valhallavägen 79, 114 28 Stockholm

Subway station: Tekniska Högskolan

08:00-08:15 **Coffee**

08:15-08:20 **Day 2 Agenda presentation by CCGEx Director**

08:20-08:50 **CCGEx Associated Projects:**

Zhe Zhang and Mats Åbom, KTH-MWL (10+5 min.). *"Optimal Damping and Slow Sound in ducts."*

Mihai Mihaescu and Shyang Maw Lim, KTH-Mek (10+5 min.). *"VISION x-EV: an EU research effort towards future green vehicles."*

**Part 2 Interviews (two parallel sessions)**

09:00-10:15 **IAB interviews with PhD Students**

09:00-10:15 **Interaction between senior researchers /faculty at CCGEx & Industrial Partners**

10:15-10:30 **Break (meet & mingle)**

10:30-11:45 **IAB interviews with senior researchers and faculty at CCGEx**

10:15-11:45 **Interaction between industry partners**

11:45-12:45 **LUNCH & Posters presentations**

12:45-14:00 **IAB meets industry partners**

14:00-15:00 **IAB meets CCGEx leadership team**

- Summary of impressions

15:00-16:30 **Optional Lab Tour (CICERO & Machine Design)**

End of Day 2

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