

## Research

My research interests are combustion in engines in general how to control the combustion in particular. In order to control the combustion accurately and robustly it is essential to extract detailed information about the combustion from in-cylinder measurements, e.g. cylinder pressure measurement. Once this information has been extracted it can be used as feedback information for both cycle-to-cycle and intra-cycle control of the combustion.

Per Tunestål

Combustion Engines

Department of Energy Sciences

LTH Profile Area: Aerosols

LTH Profile Area: The Energy Transition

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## Employment

### Professor

Combustion Engines

Lund University

Sweden

2000 Apr 1 → present

### Director of third cycle studies

Department of Energy Sciences

Lund University

Lund, Sweden

2021 Sept 2 → present

### Profile area member

LTH Profile Area: Aerosols

Lund University

Sweden

2022 Jun 28 → present

### Profile area member

LTH Profile Area: The Energy Transition

Lund University

Sweden

2022 Jul 5 → present

### PhD student

University of California, Berkeley

Berkeley, United States  
1994 Jan 1 → 2000 Jan 1

## Recent research output

### **Performance and emissions of diesel-biodiesel-ethanol blends in a light duty compression ignition engine**

Shamun, S., Belgiorno, G., Di Blasio, G., Beatrice, C., Tunér, M. & Tunestål, P., 2018 Dec 25, In: *Applied Thermal Engineering*. 145, p. 444-452 9 p.

### **Effect of the engine calibration parameters on gasoline partially premixed combustion performance and emissions compared to conventional diesel combustion in a light-duty Euro 6 engine**

Belgiorno, G., Dimitrakopoulos, N., Di Blasio, G., Beatrice, C., Tunestål, P. & Tunér, M., 2018 Oct 15, In: *Applied Energy*. 228, p. 2221-2234 14 p.

### **In-Cycle Closed-Loop Combustion Controllability with Pilot-Main Injections**

Jorques Moreno, C., Stenlääs, O. & Tunestål, P., 2018 Sept 12, *THIESEL 2018: Conference on Thermo-and Fluid Dynamic Processes in Direct Injection Engines*.

### **Analyzing Factors Affecting Gross Indicated Efficiency When Inlet Temperature Is Changed**

Lam, N., Tunestål, P. & Andersson, A., 2018 Sept 10, In: *SAE Technical Papers*. 2018-September, 19 p., 2018-01-1780.

### **Start of low temperature reactions detection based on motoring pressure prediction for partially premixed combustion**

Fang, C., Ouyang, M., Yin, L., Tunestal, P., Yang, F. & Yang, X., 2018 Aug 1, In: *Applied Thermal Engineering*. 141, p. 1101-1109 9 p.

### **Cylinder Pressure Based Virtual Sensor for In-Cycle Pilot Mass Estimation**

Jorques Moreno, C., Stenlaas, O. & Tunestal, P., 2018 Apr 3, In: *SAE International Journal of Engines*. 11, 6, p. 1167-1182 16 p.

### **Performance and emissions of diesel-gasoline-ethanol blends in a light duty compression ignition engine**

Belgiorno, G., Di Blasio, G., Shamun, S., Beatrice, C., Tunestål, P. & Tunér, M., 2018 Apr 1, In: *Fuel*. 217, p. 78-90 13 p.

### **Detailed numerical simulation of transient mixing and combustion of premixed methane/air mixtures in a pre-chamber/main-chamber system relevant to internal combustion engines**

Qin, F., Shah, A., Huang, Z. W., Peng, L.-N., Tunestal, P. & Bai, X. S., 2018 Feb 1, In: *Combustion and Flame*. 188, p. 357-366 10 p.

### **Double Compression Expansion Engine Concepts: Efficiency Analysis over a Load Range**

Lam, N., Andersson, A. & Tunestal, P., 2018 Jan 1, In: *SAE Technical Papers*. 2018-April

### **The Potential of SNCR Based NO<sub>x</sub> Reduction in a Double Compression Expansion Engine**

Muric, K., Tunestal, P., Andersson, A., Andersson, L. & Oom, K., 2018 Jan 1, In: *SAE Technical Papers*. 2018-April

### **Closed-loop combustion phase control for multiple combustion modes by multiple injections in a compression ignition engine fueled by gasoline-diesel mixture**

Fang, C., Ouyang, M., Tunestal, P., Yang, F. & Yang, X., 2018, In: *Applied Energy*. 231, p. 816-825 10 p.

### **Effect of Piston Geometry on Stratification Formation in the Transition from HCCI to PPC**

Li, C., Xu, L., Bai, X. S., Tunestal, P. & Tuner, M., 2018, *SAE 2018 International Powertrains, Fuels and Lubricants Meeting, FFL 2018*. Vol. 2018-September. 2018-01-1800. (SAE Technical Papers).

### **In-Cycle Closed-Loop Combustion Control with Pilot-Main Injections for Maximum Indicated Efficiency**

Carlos, J. M., Ola, S. & Per, T., 2018, In: *IFAC-PapersOnLine*. 51, 31, p. 92-98 7 p.

**Medium and high load performance of partially premixed combustion in a wave-piston multi-cylinder engine with diesel and PRF70 fuel**

Muric, K., Tunestal, P. & Magnusson, I., 2018, *Large Bore Engines; Fuels; Advanced Combustion*. American Society Of Mechanical Engineers (ASME), Vol. 1. ICEF2018-9568

**Modeling and control of gasoline PPC engine approaching high efficiency with constraints**

Yang, T., Yin, L., Long, W., Tunestål, P. & Tian, H., 2018, In: *IFAC-PapersOnLine*. 51, 31, p. 442-447 6 p.

**Partially Premixed Combustion (PPC) Stratification Control to Achieve High Engine Efficiency**

Yin, L., Turesson, G., Yang, T., Johansson, R. & Tunestål, P., 2018, In: *IFAC-PapersOnLine*. 51, 31, p. 694-699 6 p.

**Predictive Pressure Control with Multiple Injections**

Turesson, G., Yin, L., Johansson, R. & Tunestål, P., 2018, In: *IFAC-PapersOnLine*. 51, 31, p. 706-713 8 p.

**SCR-catalyst utilisation and mixing comparison using a novel biomimetic flash-boiling injector**

Larsson, P., Ravenhill, P., Larsson, L. U. & Tunestål, P., 2018, *Emissions Control Systems; Instrumentation, Controls, and Hybrids; Numerical Simulation; Engine Design and Mechanical Development*. American Society Of Mechanical Engineers (ASME), Vol. 2. p. 1-7 7 p. ICEF2018-9763

**Experimental investigation of methanol compression ignition in a high compression ratio HD engine using a Box-Behnken design**

Shamun, S., Haşimoğlu, C., Murcak, A., Andersson, Ö., Tunér, M. & Tunestål, P., 2017 Dec, In: *Fuel*. 209, p. 624-633

**Impact of diesel pilot distribution on the ignition process of a dual fuel medium speed marine engine**

Garcia, P., Tunestål, P., Monsalve-Serrano, J., García, A. & Hyvönen, J., 2017 Oct 1, In: *Energy Conversion and Management*. 149, p. 192-205 14 p.

**Evaluation of Different Turbocharger Configurations for a Heavy-Duty Partially Premixed Combustion Engine**

Svensson, E., Yin, L., Tunestal, P., Thern, M. & Tuner, M., 2017 Sept 4, In: *SAE International Journal of Engines*. 10, 5, 2017-24-0164.

**Parametric Analysis of the Effect of Pilot Quantity, Combustion Phasing and EGR on Efficiencies of a Gasoline PPC Light-Duty Engine**

Belgiorno, G., Dimitrakopoulos, N., Di Blasio, G., Beatrice, C., Tuner, M. & Tunestal, P., 2017 Sept 4, In: *SAE Technical Papers*. 2017-September, September, 2017-24-0084.

**Proportional-Integral Controller Design for Combustion-Timing Feedback, from n-Heptane to iso-Octane in Compression-Ignition Engines**

Ingesson, G., Yin, L., Johansson, R. & Tunestål, P., 2017 Sept 1, In: *Journal of Dynamic Systems, Measurement, and Control*, ASME. 054502.

**Simultaneous Control of Soot Emissions and Pressure Rise Rate in Gasoline PPC Engine**

Yang, T., Yin, L., Ingesson, G., Tunestål, P., Johansson, R. & Long, W.-Q., 2017 Aug 27, *Proceedings of the 2017 IEEE Conference on Control Technology and Applications (CCTA)*. IEEE - Institute of Electrical and Electronics Engineers Inc., p. 572-577 6 p.

**Nonlinear Air-Path Control of a Heavy-Duty Diesel Engine—A Receding Horizon Sliding Control Approach**

Yin, L., Ingesson, G., Johansson, R., Tunestal, P. & Hedrick, J. K., 2017 Jun 29, *2017 American Control Conference, ACC 2017*. IEEE - Institute of Electrical and Electronics Engineers Inc., p. 3619-3624 6 p. 7963507

**Control-Oriented Modeling of Soot Emissions in Gasoline Partially Premixed Combustion with Pilot Injection**

Yang, T., Yin, L., Ingesson, G., Tunestal, P., Johansson, R. & Long, W., 2017 Mar 28, In: *SAE Technical Papers*. 2017-March, March

### **Influence of Small Pilot on Main Injection in a Heavy-Duty Diesel Engine**

Jorques Moreno, C., Stenlås, O. & Tunestål, P., 2017 Mar 28, *SAE Technical Paper*. 2017-01-0708. (SAE Technical Paper Series).

### **Investigation of Small Pilot Combustion in a Heavy-Duty Diesel Engine**

Jorques Moreno, C., Stenlaas, O. & Tunestal, P., 2017 Mar 28, In: *SAE International Journal of Engines*. 10, 3

### **Analysis of Exhaust PM Composition Emitted from Non-Sooting Volatile Alcohols**

Novakovic, M., Shamun, S., Malmborg, V., Preger, C., Shen, M., Pagels, J., Messing, M., Tunér, M. & Tunestål, P., 2017 Mar 21. 1 p.

### **An Investigation on Ignition-Delay Modelling for Control**

Ingesson, G., Yin, L., Johansson, R. & Tunestål, P., 2017, In: *International Journal of Powertrains*. 6, 3, p. 282-306 25 p.

### **A Study on the Effect of Elevated Coolant Temperatures on HD Engines**

Singh, V., Tunestal, P. & Tuner, M., 2017, In: *SAE Technical Papers*. 2017-October

### **Combined Low and High Pressure EGR for Higher Brake Efficiency with Partially Premixed Combustion**

Svensson, E., Yin, L., Tunestal, P. & Tuner, M., 2017, In: *SAE Technical Papers*. 2017-01-2267.

### **Comparison of Gasoline and Primary Reference Fuel in the Transition from HCCI to PPC**

Li, C., Tunestal, P., Tuner, M. & Johansson, B., 2017, In: *SAE Technical Papers*. 2017-October, 2017-01-2262.

### **Detailed characterization of particulate matter in alcohol exhaust emissions**

Shamun, S., Novakovic, M., Malmborg, V. B., Preger, C., Shen, M., Messing, M. E., Pagels, J., Tunér, M. & Tunestål, P., 2017, *COMODIA 2017 - 9th International Conference on Modeling and Diagnostics for Advanced Engine Systems*. Japan Society of Mechanical Engineers

### **Efficiency Optimal, Maximum Pressure Control in Compression Ignition Engines**

Ingesson, G., Yin, L., Johansson, R. & Tunestål, P., 2017, *2017 American Control Conference*. IEEE - Institute of Electrical and Electronics Engineers Inc., p. 4753-4759 7 p. 7963690. (IEEE Xplore Digital Library).

### **Humid Air Motor: A Novel Concept to Decrease the Emissions Using the Exhaust Heat**

Arunachalam, P., Tuner, M., Tunestal, P. & Thern, M., 2017, In: *SAE Technical Papers*. 2017-October, 2017-01-2369.

### **International Journal of Powertrains: Special Issue on: Vehicle Powertrain Research**

Tunestål, P. (Guest editor) & Shahbakhti, M. (Guest editor), 2017, In: *International Journal of Powertrains*. 6, 3, p. 201-202 2 p.

### **Partially Premixed Combustion Multi-Cylinder Engine Cycle-to-Cycle-Oriented Temperature Estimation and Control**

Yin, L., Ingesson, G., Johansson, R., Tunestål, P. & Johansson, B., 2017, In: *International Journal of Powertrains*. 6, 1, p. 5-22 18 p.

### **PPC operation with low ron gasoline fuel. A study on load range on a euro 6 light duty diesel engine**

Dimitrakopoulos, N., Belgiorno, G., Tuner, M., Tunestal, P., Di Blasio, G. & Beatrice, C., 2017, *COMODIA 2017 - 9th International Conference on Modeling and Diagnostics for Advanced Engine Systems*. Japan Society of Mechanical Engineers

### **Preface**

Tunestål, P. & Shahbakhti, M., 2017, In: *International Journal of Powertrains*. 6, 3, p. 201-205 5 p.

## **Preface**

Tunestål, P. & Shahbakhti, M., 2017, In: International Journal of Powertrains. 6, 3, p. 201-202 2 p.

## **Exhaust PM Emissions Analysis of Alcohol Fueled Heavy-Duty Engine Utilizing PPC**

Shamun, S., Shen, M., Johansson, B., Tunér, M., Pagels, J., Gudmundsson, A. & Tunestål, P., 2016 Oct 17, In: SAE International Journal of Engines. 9, 4, p. 2142-2152 11 p.

## **Control of the Low-Load Region in Partially Premixed Combustion**

Ingesson, G., Yin, L., Johansson, R. & Tunestål, P., 2016 Oct 3, *Journal of Physics: Conference Series: proceedings of 13th International Conference on Motion and Vibration Control (MOVIC 2016)*. 1 ed. IOP Publishing, Vol. 744. 15 p. 012106

## **Exhaust particulate matter emissions of ethanol in comparison with gasoline and diesel fuels in a heavy-duty compression ignition engine**

Shen, M., Shamun, S., Malmberg, V., Tunér, M., Tunestål, P., Johansson, B., Pagels, J. & Gudmundsson, A., 2016 Sept 5, p. P1-AT-CA-019.

## **Control Design Based on FMI: A Diesel Engine Control Case Study**

Nylén, A., Henningsson, M., Cervin, A. & Tunestål, P., 2016 Jun 20, *8th IFAC Symposium on Advances in Automotive Control AAC 2016*. Tunestål, P. & Eriksson, L. (eds.). IFAC, p. 231–238 ( IFAC-PapersOnLine; vol. 49, no. 11).

## **An Experimental Investigation of a Multi-Cylinder Engine with Gasoline-Like Fuel towards a High Engine Efficiency**

Yin, L., Ingesson, G., Tunestål, P., Johansson, R. & Johansson, B., 2016 Apr 5, *SAE 2016 World Congress and Exhibition*. April ed. Society of Automotive Engineers, Vol. 2016-April.

## **A Double-Injection Control Strategy For Partially Premixed Combustion**

Ingesson, G., Yin, L., Johansson, R. & Tunestål, P., 2016, In: IFAC-PapersOnLine. 49, 11, p. 353-360 8 p.

## **A Droplet Size Investigation and Comparison Using a Novel Biomimetic Flash-Boiling Injector for AdBlue Injections**

Larsson, P., Lennard, W., Andersson, O. & Tunestål, P., 2016, In: SAE Technical Papers. 2016-October

## **Analysis of Dual-Fuel CNG-Diesel Combustion Modes Towards High Efficiency and Low Emissions at Part Load**

Garcia, P. & Tunestål, P., 2016. 9 p.

## **Effects of Intake Manifold Conditions on Dual-Fuel CNG-Diesel Combustion in a Light Duty Diesel Engine Operated at Low Loads**

Garcia, P. & Tunestål, P., 2016, *SAE Technical Papers*. Society of Automotive Engineers, 2016-01-0805

## **Evaluation of Nonlinear Estimation Methods for Calibration of a Heat-Release Model**

Ingesson, G., Yin, L., Johansson, R. & Tunestål, P., 2016, In: SAE International Journal of Engines. 9, 2, p. 1191-1200

## **Influence of Injection Timing on Exhaust Particulate Matter Emissions of Gasoline in HCCI and PPC**

Shen, M., Tuner, M., Johansson, B., Tunestål, P. & Pagels, J., 2016, In: SAE Technical Papers. 2016-October

## **Model-Based Partially Premixed Combustion (PPC) Timing Control**

Yin, L., Ingesson, G., Johansson, R., Tunestål, P. & Johansson, B., 2016, In: IFAC-PapersOnLine. 49, 11, p. 340-346 7 p.

## **NOx-Conversion and Activation Temperature of a SCR-Catalyst Whilst Using a Novel Biomimetic Flash-Boiling AdBlue Injector on a LD Engine**

Larsson, P., Lennard, W., Dahlström, J., Andersson, O. & Tunestål, P., 2016, In: SAE Technical Papers. 2016-October

## **Scalability Aspects of Pre-Chamber Ignition in Heavy Duty Natural Gas Engines**

Shah, A., Tunestål, P. & Johansson, B., 2016, *SAE Technical Papers*. Society of Automotive Engineers, 2016-01-0796

**Experimental Investigation on CNG-Diesel Combustion Modes under Highly Diluted Conditions on a Light Duty Diesel Engine with Focus on Injection Strategy**

Garcia, P. & Tunestål, P., 2015 Sept 6, In: SAE International Journal of Engines. 8, 5, p. 2177 2187 p., 2015-24-2439.

**Double Compression Expansion Engine Concepts: A Path to High Efficiency**

Lam, N., Tunér, M., Tunestål, P., Arne, A., Lundgren, S. & Johansson, B., 2015 Apr 14, In: SAE International Journal of Engines. 8, 4, p. 1562 1578 p., 2015-01-1260.

**Effect of Pre-Chamber Volume and Nozzle Diameter on Pre-Chamber Ignition in Heavy Duty Natural Gas Engines**

Shah, A., Tunestål, P. & Johansson, B., 2015 Apr 14, *SAE Technical Paper*. Society of Automotive Engineers, 10 p. (SAE Technical Paper Series).

**Sensitivity Analysis of Partially Premixed Combustion (PPC) for Control Purposes**

Yin, L., Ingesson, G., Shamun, S., Tunestål, P., Johansson, R. & Johansson, B., 2015 Apr 14, *SAE Technical Paper*. 2015-01-0884. (SAE Technical Paper Series).

**A Model-Based Injection-Timing Strategy for Combustion-Timing Control**

Ingesson, G., Yin, L., Johansson, R. & Tunestål, P., 2015, In: SAE International Journal of Engines. 8, June 2015; 8 (3), p. 1012-1020

**CFD Simulations of Pre-Chamber Jets' Mixing Characteristics in a Heavy Duty Natural Gas Engine**

Shah, A., Tunestål, P. & Johansson, B., 2015, [*Host publication title missing*]. Society of Automotive Engineers, 9 p.

**Simultaneous Control of Combustion Timing and Ignition Delay in Multi-Cylinder Partially Premixed Combustion**

Ingesson, G., Yin, L., Johansson, R. & Tunestål, P., 2015, In: SAE International Journal of Engines. 8, 5

## Recent activities

### Tianjin University

Tunestål, P. (Visiting lecturer)  
2018 Nov 30 → 2018 Dec 3

### IFAC conference on Engine Control, Simulation and Modelling 2018

Tunestål, P. (Organiser)  
2018 Sept 20 → 2018 Sept 22

### System Control Technology for Smart Mobility of Cyber-Social Environment

Tunestål, P. (Participant)  
2018 Sept 17

### Sophia University

Tunestål, P. (Visiting lecturer)  
2018 Aug 19 → 2018 Aug 25

### Combustion control - an enabler for clean, efficient combustion engines

Tunestål, P. (Keynote/plenary speaker)  
2018 Jun 27

### SAE World Congress Experience 2018

Tunestål, P. (Organiser)  
2018 Apr 10 → 2018 Apr 12

**Droplet size, concentration, and temperature mapping in sprays using SLIPI-based techniques**

Tunestål, P. (Commissioned member of Examining committee)

2018 Feb 16

**Combustion control – an enabler for high-efficiency clean combustion engines**

Tunestål, P. (Invited speaker)

2017 Nov 30

**Robust Diesel Engine Performance: An approach based on multi-pulse fuel injection control**

Tunestål, P. (Commissioned member of Examining committee)

2017 Nov 29

**Advanced Engine Control Symposium, 2017**

Tunestål, P. (Organiser)

2017 Oct 21 → 2017 Oct 22

**Combustion control – an enabler for high-efficiency clean combustion engines**

Tunestål, P. (Invited speaker)

2017 Oct 21

**Humid Air Motor: a novel concept to decrease the emissions using the exhaust heat**

Tunestål, P. (Speaker)

2017 Oct 16

**SAE Powertrains, Fuels & Lubricants Meeting, 2017**

Tunestål, P. (Organiser)

2017 Oct 16 → 2017 Oct 19

**Lean homogeneous combustion for SI-engines**

Tunestål, P. (Commissioned member of Examining committee)

2017 Sept 29

**In-cylinder pressure resonance analysis for trapped mass estimation in automotive engines**

Tunestål, P. (External reviewer)

2017 Sept 14

**Combustion control – an enabler for high-efficiency clean combustion engines**

Tunestål, P. (Keynote/plenary speaker)

2017 Jul 27

**Sophia University**

Tunestål, P. (Visiting lecturer)

2017 Mar 23 → 2017 Mar 25

**Cheng Fang**

Tunestål, P. (Host)

2017 Mar 1 → 2022 Mar 14

**Spark Ignition Combustion of Direct Injected Alternative Fuels**

Tunestål, P. (Commissioned member of Examining committee)

2016 Dec 2

**Estimation of torque in heavy duty vehicles with focus on sensor hysteresis**

Tunestål, P. (Commissioned member of Examining committee)

2016 Oct 21

**Miao Zhang**

Andersson, Ö. (First/primary/lead supervisor) & Tunestål, P. (Second supervisor)  
2016 Sept 19 → ...

**Kenan Muric (Double Compression Expansion Engine)**

Tunestål, P. (First/primary/lead supervisor) & Tunér, M. (Second supervisor)  
2016 Jul 4 → 2018 Nov 1

**Waste Heat Recovery from Combustion Engines based on the Rankine Cycle**

Tunestål, P. (Commissioned member of Examining committee)  
2016 Mar 11

**Vikram Singh (Waste Heat Recovery 2)**

Tunér, M. (First/primary/lead supervisor), Tunestål, P. (Joint second supervisor) & Thern, M. (Joint second supervisor)  
2016 Mar 1 → ...

**Carlos Jorques Moreno (Closed-Loop Diesel Control - Part 2)**

Tunestål, P. (First/primary/lead supervisor) & Stenláås, O. (Second supervisor)  
2016 Jan 1 → ...

**SCR Aftertreatment Control based on a Grey Box Virtual Sensor Approach**

Tunestål, P. (External reviewer)  
2015 Dec 10

**Tianhao Yang**

Tunestål, P. (Host)  
2015 Oct 1 → 2017 Sept 30

**Tianhao Yang (KCFP Control)**

Tunestål, P. (First/primary/lead supervisor) & Johansson, R. (Second supervisor)  
2015 Oct 1 → 2017 Sept 30

**Optimal Control of Electrified Powertrains**

Tunestål, P. (Commissioned member of Examining committee)  
2015 Jun 5

**Optimal Predictive Control of Wheel Loader Transmissions**

Tunestål, P. (Commissioned member of Examining committee)  
2015 Mar 20

**Sam Shamun (MOT-2030)**

Tunér, M. (First/primary/lead supervisor) & Tunestål, P. (Second supervisor)  
2015 Mar 1 → ...

**Michael Denny (GenDies)**

Andersson, Ö. (First/primary/lead supervisor), Tunestål, P. (Joint second supervisor) & Persson, H. (Joint second supervisor)  
2014 Oct 7 → ...

**Nikolaos Dimitrakopoulos (KCFP PPC-LD)**

Tunestål, P. (Second supervisor) & Tunér, M. (First/primary/lead supervisor)  
2014 Oct 1 → ...



**Changle Li (KCFP PPC-HD)**

Tunér, M. (First/primary/lead supervisor) & Tunestål, P. (Second supervisor)  
2014 Aug 1 → ...

**Nhut Lam (Double Compression Expansion Engine)**

Tunestål, P. (Joint first/primary/lead supervisor), Johansson, B. (Joint first/primary/lead supervisor) & Tunér, M. (Second supervisor)  
2013 Nov 1 → ...

**Lianhao Yin (PhD student)**

Tunestål, P. (First/primary/lead supervisor) & Johansson, R. (Second supervisor)  
2013 Aug 9 → 2018 Jun 7

**Pablo Garcia (PhD student)**

Tunestål, P. (First/primary/lead supervisor), Andersson, Ö. (Joint second supervisor) & Garcia, A. (Joint second supervisor)  
2013 Jul 1 → 2018 Jun 15

**Slavey Tanov (KCFP PPC-LD Optical)**

Andersson, Ö. (First/primary/lead supervisor) & Tunestål, P. (Second supervisor)  
2013 Jul 1 → 2017 Jun 16

**Peter Larsson (Biomimetic injection of AdBlue)**

Tunestål, P. (First/primary/lead supervisor) & Andersson, Ö. (Second supervisor)  
2013 Apr 1 → ...

**Ted Lind (GenDies)**

Andersson, Ö. (First/primary/lead supervisor) & Tunestål, P. (Second supervisor)  
2013 Jan 21 → ...

**Gabriel Turesson (PhD student)**

Johansson, R. (First/primary/lead supervisor) & Tunestål, P. (Second supervisor)  
2012 Nov 5 → 2018 Jun 1

**Prakash Narayanan (Waste Heat Recovery)**

Tunér, M. (First/primary/lead supervisor), Tunestål, P. (Joint second supervisor) & Thern, M. (Joint second supervisor)  
2011 Oct 1 → 2016

**Ashish Shah (KCFP Gas Engine)**

Tunestål, P. (First/primary/lead supervisor) & Johansson, B. (Second supervisor)  
2011 Jun 1 → 2015 Dec 16

**Maja Novakovic (HD-PPC and KCFP PPC-HD)**

Tunestål, P. (First/primary/lead supervisor), Tunér, M. (Joint second supervisor) & Johansson, B. (Joint second supervisor)  
2011 Apr 1 → ...

**Mengqin Shen (KCFP PPC-HD)**

Tunestål, P. (First/primary/lead supervisor), Johansson, B. (Joint first/primary/lead supervisor) & Tunér, M. (Second supervisor)  
2010 Aug 1 → 2016 Jun 15

**Mengqin Shen (PhD student)**

Tunestål, P. (First/primary/lead supervisor), Tunér, M. (Second supervisor) & Johansson, B. (First/primary/lead supervisor)

2010 Aug 1 → 2016 Dec

## Prizes and distinction

### Chairman of SAE Control and Calibration Committee

Tunestål, P. (Recipient), 2008 Apr 15

### Chair of IFAC Technical Committee on Automotive Control

Tunestål, P. (Recipient), 2017 Jul 10

### Excellence in Oral Presentation

Tunestål, P. (Recipient), 2014

## Awards

### Utveckling av en ny biomimetisk AdBlue-insprutare

Tunestål, P. (PI)

Swedish Energy Agency: SEK1,475,334.00

2017/03/06 → 2018/03/05

## Projects

### Bio-Inspired AUS-32 Dosing and NOx Conversion: using A Biomimetic Effervescent Injector

Larsson, P. (Researcher), Tunestål, P. (Supervisor), Andersson, Ö. (Assistant supervisor) & Larsson, L.-U. (PI)

Swedish Energy Agency, Swedish Government Agency for Innovation Systems (Vinnova)

2013/02/11 → 2019/03/28

### Closed-Loop Diesel Control - Part 2

Tunestål, P. (PI), Stenläås, O. (PI) & Jorques Moreno, C. (Research student)

2014/01/01 → 2017/12/31

### Closed Loop Diesel Control part 3

Tunestål, P. (PI), Stenläås, O. (Project coordinator) & Jorques Moreno, C. (Research student)

2018/09/01 → 2021/05/01

### Development of a new biomimetic AdBlue injector

Ravenhill, P. (PI), Tunestål, P. (Supervisor) & Larsson, P. (Research student)

2017/03/06 → 2018/03/05

### Diesel Assisted Gas Engine

Tunestål, P. (PI) & Garcia, P. (Research student)

Swedish Energy Agency

2012/10/30 → 2016/12/31

### Diesel HCCI in a Multi-Cylinder Engine

Tunestål, P. (PI), Henningsson, M. (Research student) & Johansson, R. (Supervisor)

2009/02/06 → 2011/12/31

### Dual fuel combustion modelling

Merts, M. (Research student), Verhelst, S. (Supervisor) & Tunestål, P. (Assistant supervisor)

2018/04/01 → 2022/04/01

### FFI - Biomimetics

Tunestål, P. (PI)

2013/01/01 → 2016/12/31

### **HCCI Control**

Tunestål, P. (PI), Johansson, R. (Col), Strandh, P. (Research student) & Bengtsson, J. (Research student)  
2001/01/01 → 2003/12/31

### **KCFP: KCFP, Closed-Loop Combustion Control**

Johansson, R. (Researcher), Turesson, G. (Researcher), Tunestål, P. (Researcher), Yin, L. (Researcher) & Widd, A. (Researcher)  
2010/01/01 → 2019/12/31

### **LCCC**

Holmqvist, A. (Researcher), Andersson, N. (Researcher), Cervin, A. (Researcher), Mannesson, A. (Researcher), Gattami, A. (Researcher), Ghulchak, A. (Researcher), Papadopoulos, A. V. (Researcher), Rantzer, A. (Researcher), Robertsson, A. (Researcher), Sootla, A. (Researcher), THEORIN, A. (Researcher), Bernhardsson, B. (Researcher), Olofsson, B. (Researcher), Wittenmark, B. (Researcher), Grussler, C. (Researcher), Johnsson, C. (Researcher), MADJIDIAN, D. (Researcher), Johannesson, E. (Researcher), Magnusson, F. (Researcher), Ståhl, F. (Researcher), Como, G. (Researcher), Chasparis, G. (Researcher), Turesson, G. (Researcher), Dressler, I. (Researcher), Åkesson, J. (Researcher), Cho, J. H. (Researcher), Årzén, K.-E. (Researcher), Åström, K. J. (Researcher), Sou, K. C. (Researcher), Mårtensson, K. (Researcher), Berntorp, K. (Researcher), Soltész, K. (Researcher), Lessard, L. (Researcher), Hast, M. (Researcher), Rönn, M. (Researcher), Ansbjerg Kjær, M. (Researcher), Maggio, M. (Researcher), Kristalny, M. (Researcher), Garpinger, O. (Researcher), From, P. J. (Researcher), Larsson, P.-O. (Researcher), Giselsson, P. (Researcher), Johansson, R. (Researcher), Hägglund, T. (Researcher), Vladimerou, V. (Researcher), Romero Segovia, V. (Researcher), Aurelius, A. (Researcher), Cedersjö, G. (Researcher), Bür, K. (Researcher), Dellkrantz, M. (Researcher), Du, M. (Researcher), Amani, P. (Researcher), Larsson, R. (Researcher), Tärneberg, W. (Research student), Li, Z. (Researcher), Yin, L. (Researcher), Tufvesson, F. (Researcher), Höst, S. (Researcher), Nilsson, B. (Researcher), Stenström, S. (Researcher), Andersson, J. A. (Researcher), Diehl, S. (Researcher), Dürango, J. (Researcher), Ghazaei Ardakani, M. (Researcher), Forsberg, P.-O. (Researcher), Bengtsson, F. (Researcher), Jörntell, H. (Researcher), Arévalo, C. (Researcher), Führer, C. (Researcher), Andersson, C. (Researcher), Mohammadi, F. (Researcher), Ödling, P. (Researcher), Andersson, M. (Researcher), Kihl, M. (Researcher) & Tunestål, P. (Researcher)  
2008/07/01 → 2018/06/30

### **Microwave-Assisted Ignition System for Reduced CO2 Emission**

Tunestål, P. (PI) & Dahlström, J. (Research student)  
Swedish Government Agency for Innovation Systems (Vinnova)  
2010/02/01 → 2014/01/31

### **MC2: Motorkoncept 2**

Tunestål, P. (PI), Lam, N. (PI), Muric, K. (PI) & Johansson, B. (PI)  
Swedish Energy Agency  
2013/01/01 → ...

### **Motorkoncept 2**

Lam, N. (Research student) & Tunestål, P. (Supervisor)  
2013/11/01 → ...

### **Partially Premixed Combustion Heavy Duty**

Novakovic, M. (Research student), Tunestål, P. (Supervisor) & Tunér, M. (Supervisor)  
2011/04/01 → 2020/03/01

### **Pneumatic Hybrid Engine**

Tunestål, P. (PI), Johansson, B. (PI), Trajkovic, S. (Research student) & Carlsson, U. (Project coordinator)  
Swedish Energy Agency  
2007/01/01 → 2010/12/31