



Networking session on calls 2017 - 25 May 2016

**Transport and Air Pollution conference
24-26 May 2016**

Recommendations for the presentations (5mn)



MINISTÈRE
DE L'ENSEIGNEMENT SUPÉRIEUR
ET DE LA RECHERCHE

Czech Technical University Prague & Technical University of Liberec

Fuels, combustion & emissions

Adaptation of engines to novel fuels

Real driving emissions (RDE)

Portable on-board emissions monitoring
systems (PEMS)

Exhaust toxicity studies

Green vehicles GV-02-2016

Technologies for low emission light
duty powertrains

Green vehicles GV-01-2017

Optimisation of heavy duty vehicles for
alternative fuels use

LCE-08-2016-2017

Development of next generation
biofuel technologies

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TECHNICAL UNIVERSITY OF LIBEREC
Faculty of Mechanical Engineering



Czech Technical University in Prague
Faculty of Mechanical
Engineering



Evaluation of real driving emissions (RDE) with portable on-board emissions monitoring systems (PEMS)

Type-approval grade:

AVL – gaseous pollutants

NanoMet 3 – particle number (PN)

In-house built research-grade:

“Mini-PEMS” (13 kg, 60 W)

On-board portable FTIR

(non-regulated compounds)

On-board particle counters and particle classifier (EEPS)

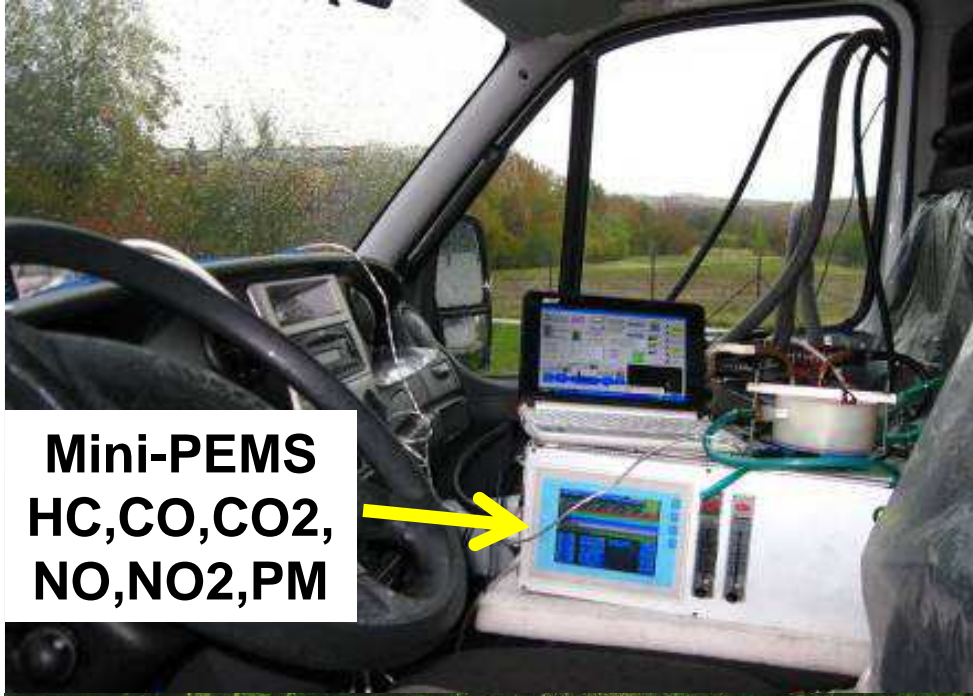
Services: PEMS & laboratory testing

Test design and facilitation

Data analysis and interpretation

Staff: Michal Vojtisek designed the first commercially available PEMS
20 years PEMS & RDE in USA & EU





Mini-PEMS
HC,CO,CO₂,
NO,NO₂,PM

Portable on-board exhaust
emissions monitoring system
HC, CO, CO₂, NO, NO₂,
PM mass, PM length
Calculated exhaust flow
"Motorcycle to locomotive"
Full-flow dilution tunnel
with particle sampling
for small non-road engines

