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C1340/040  HyBoost – An intelligently electrified optimised downsized gasoline engine concept  
J King, M Heaney, E Bower, N Jackson, N Owen, Ricardo; J Saward, A Fraser, Ford Motor Company; G Morris, P Bloore, Controlled Power Technologies, UK; T Cheng, J Borges-Alejo, M Criddle, Valeo, France

C1340/072  Turbo-Discharging for improved engine torque and fuel economy  
A M Williams, A T Baker, C P Garner, Loughborough University, UK

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C1340/073  Boost system selection for a heavily downsized spark ignition prototype engine  
C Copeland, University of Bristol; R Martinez-Botas, Imperial College London; J Turner, R Pearson, N Luard, Lotus Engineering; C Carey, S Richardson, Jaguar Cars Limited; P Di Martino, P Chobola, Honeywell Turbo Technologies, UK

C1340/069  R2S™ – modelling and consequences for the boost control  
O Weber, R Christmann, V Gauckler, R Sauerstein, BorgWarner Turbo Systems Engineering GmbH, Germany

C1340/031  Application of two stage turbocharging systems on large engines  
E Codan, T Huber, ABB Turbo Systems Ltd, Switzerland
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TURBINE FATIGUE AND STRUCTURAL

C1340/056 A new approach to thermo mechanical fatigue shown on turbocharger housings
M Nagode, University of Ljubljana, Slovenia; F Längler, BorgWarner Turbosystems Engineering GmbH; M Hack, LMS Deutschland, Germany

C1340/010 On the influence of thermal boundary conditions on the Thermo Mechanical Analysis of turbine housing of a turbocharger

C1340/022 Compressor wheel low cycle fatigue calculations for off highway applications – an approach to accurately calculate application duty cycle
K Ohri, IPSD Caterpillar; K Shoghi, BorgWarner Turbo Systems Ltd, UK

SESSION 3A: COMPRESSOR AERO-DESIGN OPTIMISATION (CFD)

C1340/030 Variable trim compressor – a new approach to variable compressor geometry
P Grigoriadis, S Müller, A Benz, M Sens, IAV GmbH, Germany

C1340/021 Design optimisation of an impeller with CFD and Meta-Model of optimal Prognosis (MoP)
F Frese, Voith Turbo Aufladungssysteme; J Einzinger, ANSYS; J Will, Dynardo, Germany

C1340/074 Development of advanced centrifugal compressor for turbocharger, applying control of internal unsteady flow structure
M Ebisu, T Shiraishi, J Tomita, Mitsubishi Heavy Industries, Ltd; M Furukawa, Kyushu University, Japan
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ROTOR DYNAMICS AND VIBRATIONS

C1340/048 Shaft coking resolution using multiple variable bearing system design optimization for commercial vehicle turbochargers
A Bhattacharya, M A Hake, T V Barbarie, Honeywell Turbo Technologies, USA; J-M Geoffroy, Honeywell Turbo Technologies, France

C1340/075 Advanced rotodynamic simulation of turbochargers using coupled multibody and finite element models
M Busch, L Esmaeili, D Lu, B Schweizer, University of Kassel; P Koutsovasilis, U Tomm, BorgWarner Turbo Systems Engineering GmbH, Germany

C1340/011 Turbocharger blade vibration: Measurement and validation through laser tip-timing
J M Allport, M L Jupp, Cummins Turbo Technologies; A Pezouvanis, G W Janicki, A I Piorończyk, A J Day, P Olley, B Mason, M K Ebrahimi, University of Bradford, UK

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C1340/018 On wide mapping of a mixed flow turbine with regard to compressor heat flows during turbocharger testing
B Lüddecke, D Filsinger, IHI Charging Systems International GmbH; M Bargende, Universität Stuttgart, Germany

C1340/067 Turbocharger matching methodology for improved exhaust energy recovery
A Pesiridis, W S-I W Salim, R F Martinez-Botas, Imperial College London, UK

C1340/038 Experimental investigation under unsteady flow conditions on turbocharger compressors for automotive gasoline engines
S Marelli, M Capobianco, University of Genoa, Italy
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C1340/051 Development of a common dual axle VNT™ for single- and two-stage off-highway applications
J Wilson, M Avila, P Davies, N Theiss, B Zollinger, Honeywell International, Honeywell Turbo Technologies, USA and France

C1340/007 An experimental assessment of the effects of stator vane clearance location on an automotive turbocharger turbine
J R Walkingshaw, S W T Spence, D Thornhill, Queen’s University Belfast, UK; J Ehrhard, IHI Charging Systems International GmbH, Germany

C1340/055 Testing turbine expanders for high efficiency diesels
E Halliwell, Cummins Turbo Technologies, UK

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C1340/057 The role of turbocompound in the era of emissions reduction
R W Kruiswyk, Caterpillar Inc., USA

C1340/061 Characterization of a low pressure turbine for turbocompounding applications in a mild-hybrid gasoline engine
A M I Bin Mamat, A Romagnoli, R F Martinez-Botias, Imperial College London, UK

C1340/019 The transient response of turbocharger turbines
H Chen, Honeywell UK Ltd, UK; T Cai, P Li, Honeywell Integrated Technology (China) Ltd, China

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R Numakura, IHI Corporation, Japan

C1340/024 Effect of diffuser width and tip clearance on the static pressure distributions in a vaneless diffuser of a high-speed centrifugal compressor
A Jaatinen, A Grönman, T Turunen-Saaresti, Lappeenranta University of Technology, Finland
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