



LIST OF HANS DINGER PRIZE WINNERS | 2006 – 2018

The Hans Dinger Prize | Young Researchers Award of the FVV

Since the 50th anniversary of the association, we have been awarding a prize every two years to promote young academics in research. In the foundation year 2006, the prize was initially awarded as » ETA Young Talent Award « before it was renamed in 2012, in recognition of the great achievements of Prof. Dr.-Ing. Dr.-Ing. E.h. Hans Dinger in » Hans Dinger Prize | The FVV Young Researchers Award «.

Hans Dinger was a German manager. He was Chairman of the Board of Management of MTU Munich and Friedrichshafen and a Member of the Board of Management of Daimler-Benz. Professor Dinger was awarded the Grand Cross first class of the Order of Merit of the Federal Republic of Germany for his commitment to business and society. He had been Honorary Senator of the University of Constance since 1987 and received the honorary medal of the city of Friedrichshafen in 1987. In 2007 he was awarded an honorary doctorate from the Faculty of Mechanical Engineering of the Technical University of Munich and appointed professor. Professor Dinger had been serving as Chairman of the Board of the Research Association for Combustion Engines from 1979 to 1988. From 1989 until his death in 2010 he had been Honorary President of the association.

With his outstanding engineering knowledge, Professor Dinger set technical milestones for his company and played a decisive role in shaping research and development. Early on, he recognized the opportunities of pre-competitive Industrial Collective Research (Industrielle Gemeinschaftsforschung – IGF) for the further development of the internal combustion engine and its special value for the training of young scientists, thus enabling networked thinking and action of science and industry.

Almost all of our research projects involve young people who are at the beginning of their scientific careers. Their commitment and willingness to learn are indispensable for successful research. The Hans Dinger Prize (HDP) is awarded to young talents who made an important contribution to the success of our projects with their student research project, diploma, bachelor or master theses.

The evaluation by the jury is based on three essential criteria:

- Scientific excellence of the research work
- Target achievement, usability and practical relevance of the research results
- Innovative character of the research findings.

2018 Winners of the Hans Dinger Prize | The Young Researchers Award of the FVV

1st Prize Winner | Fabian GOERGEN

RTD performer:	RWTH Aachen University, Chair of Machine Tools (WM), Laboratory for Machine Tools and Production Engineering (WZL)
Head of research:	Prof. Dr.-Ing. Christian Brecher
Research project:	Turbosteel: High-strength materials and material finishing systems for application in turbo transmissions for maximum power density requirements (FVV project no. 1176)
Scientific work:	Master thesis (as part of the research project)
Subject:	Experimental and computational analysis of tooth flank fatigue damage of conventional and novel material systems

2nd Prize Winner | Alexander KYRIAZIS

RTD performer:	Technische Universität Braunschweig, Department of Mechanical Engineering / Production and Systems Engineering, Institute of Adaptronics and Functional Integration (iaf)
Head of research:	Prof. Dr.-Ing. Michael Sinapius
Research project:	Foil Bearings II: Foil bearings as a solution for an oil-free rotor support (FVV project no. 1267)
Scientific work:	Student research project thesis (as part of the research project)
Subject:	Development of an analytical model based on laminate theory enabling an optimised modelling of the curvature of the bearing shell in an adaptive foil bearing

3rd Prize Winner | Marcus WIENS

RTD performer:	RWTH Aachen University, Institute for Combustion Engines (vka)
Head of research:	Univ.-Prof. Dr.-Ing. Stefan Pischinger
Research project:	Characteristic Fuel Numbers of Biofuels (PI / Alcohol Fuels) II: Development of suitable characteristic fuel numbers and correlations for the characterisation of gasoline and alternative (bio-)fuels for describing abnormal combustion phenomena (FVV project no. 1180)
Scientific work:	Bachelor thesis (as part of the research project)
Subject:	Development of reduced reaction mechanisms for gasoline fuels

2016 Winners of the Hans Dinger Prize | The Young Researchers Award of the FVV

1st Prize Winner | Lukas BERGER

RTD performer:	RWTH Aachen University, Institute for Combustion Technology (ITV)
Head of research:	Univ.-Prof. Dr.-Ing. Heinz Pitsch
Research project:	Emission Modelling (FVV project no. 1166)
Scientific work:	Master thesis (as part of the research project)
Subject:	Model development for subfilter soot-turbulence interactions in Large Eddy Simulations (LES) to enhance the prediction of soot emissions

2nd Prize Winner | Florian BÜHNER

RTD performer:	University of Stuttgart, Faculty of Energy, Process and Bio-Engineering, Institute of Chemical Process Engineering (ICVT)
Head of research:	Prof. Dr.-Ing. Ulrich Nieken
Research project:	Pt/Pd De-/Reactivation: Platinum/Palladium catalysts – Influence of composition, ageing and precious metal oxide formation on characteristic properties and reaction kinetic model parameters (FVV project no. 1141)
Scientific work:	Master thesis (as part of the research project)
Subject:	Experimental investigations and simulations of NO oxidation on various diesel oxidation catalysts

3rd Prize Winner | José URBANO

RTD performer:	Leibniz Universität Hannover, Faculty of Mechanical Engineering, Institute of Dynamics and Vibration Research (IDS)
Head of research:	Prof. Dr.-Ing. Jörg Wallaschek
Research project:	Mistuning and Aero-coupling: Mistuning of bladings with aerodynamic and structural couplings (FVV project no. 1164)
Scientific work:	Student research project thesis (as part of the research project)
Subject:	Reduced modelling of detuned bladings with a detailed view on aerodynamic preload, excitation and coupling



2014 Winners of the Hans Dinger Prize | The Young Researchers Award of the FVV

1st Prize Winner | Markus HOSBACH

RTD performer:	Technische Universität München, Department of Mechanical Engineering, Institute of Internal Combustion Engines (LVK)
Head of research:	Prof. Dr.-Ing. Georg Wachtmeister
Research project:	Piston Ring Oil Transport I: Oil transportation through piston rings (FVV project no. 1124)
Scientific work:	Master thesis (as part of the research project)
Subject:	Design and development of a measuring system to determine the rotation and impact loading of the piston ring

2nd Prize Winner | Paul SPRENGER

RTD performer:	Universität Leipzig, Faculty of Chemistry and Mineralogy, Institute of Chemical Technology (ITC)
Head of research:	Prof. Dr. Roger Gläser
Research project:	RapidCat Ageing: Investigations into the impact of biofuels on the ageing behaviour of diesel exhaust catalysts (FVV project no. 1057)
Scientific work:	Master thesis (as part of the research project)
Subject:	Targeted ageing of Diesel Oxidation Catalysts: Correlations between material properties and catalytic behaviour

3rd Prize Winner | Andreas GREMMINGER

RTD performer:	Karlsruhe Institute of Technology (KIT), Faculty of Chemistry and Bio-sciences, Institute for Chemical Technology and Polymer Chemistry (ITCP)
Head of research:	Prof. Dr. rer. nat. Olaf Deutschmann / Prof. Dr. Jan-Dierk Grunwaldt
Research project:	Catalytic Methane Decomposition: Survey of the mechanisms of catalytic methane reduction (FVV project no. 1134)
Scientific work:	Diploma thesis (as part of the research project)
Subject:	Experimental investigations on the influence of different gas components on the activity and ageing of a Pd-Pt/Al ₂ O ₃ methane oxidation catalyst

2012 Winners of the Hans Dinger Prize | The Young Researchers Award of the FVV

1st Prize Winner | Philipp SKARKE

RTD performer:	University of Stuttgart, Institute for Internal Combustion Engines and Automotive Engineering (IVK), Chair of Automotive Powertrains
Head of research:	Prof. Dr.-Ing. Michael Bargende
Research project:	Combustion Control: Model-based control of homogeneous compression-ignition engine combustion (FVV project no. 997)
Scientific work:	Diploma thesis (as part of the research project)
Subject:	Investigations on suitable control strategies for partially homogeneous compression-ignition engine combustion using a model-in-the-loop simulation

2nd Prize Winner | Stephan BEHRE

RTD performer:	RWTH Aachen University, Institute of Jet Propulsion and Turbomachinery (IST)
Head of research:	Univ.-Prof. Dr.-Ing. Peter Jeschke
Research project:	3D Turbine Design: Improvement of turbine stage efficiency by combination of endwall contouring and 3D airfoil design FVV project no. 1025)
Scientific work:	Diploma thesis (as part of the research project)
Subject:	Numerical flow analysis of the transient influences of 3D-designed turbine blades on efficiency

3rd Prize Winner | Matthias FISCHER

RTD performer:	University of Stuttgart, Faculty of Energy, Process and Bio-Engineering, Institute of Chemical Process Engineering (ICVT)
Head of research:	Prof. Dr.-Ing. Ulrich Nieken
Research project:	KASPar (Catalyst ageing fast parameterisation): Interaction between reactive and storage components at NSC with focus on deactivation and ageing (FVV project no. 1050)
Scientific work:	Bachelor thesis (as part of the research project)
Subject:	Development and parameterisation of a detailed 1+1D model of the NO _x storage catalyst



2010 Winners of the ETA Young Talent Award of the FVV

1st Prize Winner | Bastian LEHRHEUER

RTD performer:	RWTH Aachen University, Institute for Combustion Engines (vka)
Head of research:	Univ.-Prof. Dr.-Ing. Stefan Pischinger
Research project:	Airpath model for variable valve timing (FVV project no. 938)
Scientific work:	Student research project thesis (as part of the research project)
Subject:	Development of a real-time model for charge-cycle control with focus on ECU compatibility

2nd Prize Winner | Christoph BOSSUNG

RTD performer:	University of Stuttgart, Institute for Internal Combustion Engines and Automotive Engineering (IVK), Chair of Automotive Powertrains
Head of research:	Prof. Dr.-Ing. Michael Bargende
Research project:	Cylinder Module: Development of a highly-modular zero-dimensional engine process calculation code (FVV project no. 869)
Scientific work:	Student research project thesis (as part of the research project)
Subject:	Systematic investigations on the influence of the tumble on the turbulence level of a spark-ignition gasoline engine

3rd Prize Winner | Denise CHAN

RTD performer:	Karlsruhe Institute of Technology (KIT), Faculty of Chemistry and Bio-sciences, Institute for Chemical Technology and Polymer Chemistry (ITCP)
Head of research:	Prof. Dr. rer. nat. Olaf Deutschmann
Research project:	Catalyst Simulation: Catalyst conversion correlation and modelling, taking into account noble metal loadings and ageing progress (FVV project no. 953)
Scientific work:	Diploma thesis (as part of the research project)
Subject:	Development of a mechanism to convert NO to NO ₂ over platinum

2008 Winners of the ETA Young Talent Award of the FVV

1st Prize Winner | Stefan BAREISS

RTD performer:	Karlsruhe Institute of Technology (KIT), Institute of Internal Combustion Engines (IFKM)
Head of research:	Prof. Dr.-Ing. Ulrich Spicher
Research project:	Controlled Auto-Ignition (CAI): Analysis of the auto-ignition mechanisms for a gasoline HCCI mode with regard to NO _x and HC raw emissions and with a special view to engine operating map suitability (FVV project no. 831)
Scientific work:	Diploma thesis (as part of the research project)
Subject:	Optical investigations on a single-cylinder research engine unit with homogeneous compression-ignited (HCCI) combustion

2nd Prize Winner | Tobias BECK

RTD performer:	RWTH Aachen University, Institute of Plastics Processing (IKV)
Head of research:	Prof. Dr.-Ing. E.h. Walter Michaeli
Research project:	Development of a material model for simulation of the acoustic behaviour of plastic components (FVV project no. 899)
Scientific work:	Diploma thesis (as part of the research project)
Subject:	FEM simulation of the acoustic behaviour of technical plastic components taking into account the thermal and chemical conditioning of unfilled and filled polyamides

3rd Prize Winner | Anna HERZOG

RTD performer:	Leibniz Universität Hannover, Faculty of Mechanical Engineering, Institute of Dynamics and Vibration Research (IDS)
Head of research:	Prof. Dr.-Ing. Jörg Wallaschek
Research project:	Multiple Couplings: Systematic mistuning and multiple couplings of bladed disks in turbomachinery applications (FVV project no. 898)
Scientific work:	Student research project thesis (as part of the research project)
Subject:	Simulation and statistical evaluation of mistuning on the basis of principle-based models and a model blade ring

2006 Winners of the ETA Young Talent Award of the FVV

1st Prize Winner | Angéla FEHÉR

RTD performer:	Technische Universität Darmstadt, Institute of Steel Constructions and Material Mechanics (IFSW)
Head of research:	Prof. Dr.-Ing. Michael Vormwald
Research project:	Fatigue of high pressure components under variable amplitude loading (FVV project no. 880)
Scientific work:	Student research project thesis (as part of the research project)
Subject:	Determination of load sequence effects and residual stresses in cyclic crack propagation using the Dugdale model

2nd Prize Winner | Christoph BAYER

RTD performer:	RWTH Aachen University, Institute of Heat and Mass Transfer (WSA)
Head of research:	Prof. Dr.-Ing. Reinhold Kneer
Research project:	Contact Heat Transfer Coefficient: Thermal contact conductance under high temperatures and high pressure loads (FVV project no. 828)
Scientific work:	Diploma thesis (as part of the research project)
Subject:	Calculation of contact heat transfer coefficients from transient temperature measurements using the conjugate gradient method

3rd Prize Winner | Peter BLOCH

RTD performer:	University of Stuttgart, Institute for Internal Combustion Engines and Automotive Engineering (IVK), Chair of Automotive Powertrains
Head of research:	Prof. Dr.-Ing. Michael Bargende
Research project:	Efficiency-optimized Spark-Ignition Engine: Demonstration of the differences in efficiency between spark-ignition and compression-ignition engines. Evaluation of efficiency-increasing measures for SI engines (FVV project no. 875)
Scientific work:	Student research project thesis (as part of the research project)
Subject:	Evaluation and simplification of a 1-D flow model of the M271 gasoline engine to optimize simulation time



FVV Young Researchers Award

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