68th Annual Forum & Technology Display Preliminary Technical Schedule. Paper order subject to change.

Technical Session A, Tuesday, 1 May 2012 -- Morning

	Adv Vertical Flight	Aerodynamics I	History	HUMS I	Mfg. Tech.	Systems Engineering I	Test and Eval. I	UAV I
0800-0830	Advanced Vertical Flight Development Of A Micro Flapping Wing VTOL Aircraft Nano Hummingbird (286) Matthew Keennon and Karl Klingebiel, AeroVironment Inc.	Flow Environment and Organized Turbulence Structures at the Ground Below a Hovering Rotor (138) Juergen Rauleder and Gordon Leishman, University of Maryland	Gustave de Ponton d'Amecourt, Gaspard Félix Tounachon and Gabriel de la Landelle: A Re-evaluation of the Contributions of the "Triumvirat Hélicoptèroidal" to the Early History of Rotary-wing Flight (003) Bruce Charnov, Hofstra University	OPERATIONS SUPPORT AND SUSTAINMENT TECHNOLOGY PROGRAM (329) Brian Tucker and William Girard, Bell Helicopter Textron	Spring-In Behavior of Thick Composites - Experimental Investigations (289) Pin Lin Chiou and Kathleen Boszak, Bell Helicopter Textron	Systems Engineering Evolution in Rotorcraft Industry (307) Theodora Saunders, Sikorsky Aircraft Corp. and Daniel Schrage, Georgia Institute of Technology	Flight Testing the OH-58 Block II Concept Demonstrator (243) Eric Carlson, Bell Helicopter Textron	Characterization of Millimeter-scale Flapping Wings Driven by Two Orthogonally Oriented PZT Actuators (170) Christopher Kroninger, ARL
0830-0900	Innovative Rotary-Wing Aircraft Concept H.E.R.O. (186) Nils Nohturfft and Sonya Zierhut, Pankl Aerospace Systems	Analytical and Experimental Study of Tip Vortex Aperiodicity in Hover (212) Anand Karpatne, Jayant Sirohi, Swathi M. Mula and Charles Tinney, University of Texas, Austin	The Work of Spanish Helicopter Pioneer Federico Cantero Villamil, and a Design and Performance Study of the Helicopter Libélula Española (107) Erasmo Piñero	Technology Development to Enable Capability-Based Operations and Sustainment (383) Preston Bates, Sikorsky Aircraft Corp	Evaluation of Titanium Bonding Surface Preparation Method: Sol-gel AC-130-2 (182) John T. Wong, Sikorsky Aircraft Corporation	Systems Engineering Application for Rotorcraft Systems (118) Sylvester Ashok, Daniel Schrage and Apinut Sirirojvisuth, Georgia Institute of Technology	ALLFlight: a full scale pilot assistance test environment (257) Robin Lantzsch, DLR	Development and Flight Testing of Flight Control Laws for Autonomous Operations Research on the RASCAL JUH-60A (350) Marc Takahashi, US Army; Matthew Whalley, Jay Fletcher, Ernesto Moralez and MAJ Carl Ott, US Army AFDD and Gregory Schulein and Chad Goerzen, San Jose State University
0900-0930	Design and Control of a Dual Tilt-Wing-Rotor Micro Air Vehicle in Hover (387) Vikram Hrishikeshavan and Inderjit Chopra, University of Maryland	Vortex Jitter in Hover using Various Vortex Methods (339) Swathi Mula, Charles Tinney, Jayant Sirohi and and James Stephenson, University of Texas at Austin	1907 Cornu Helicopter Concept Revisited - Performance Measurements of a 1/6-Scale Model of the Rotor (079) J. Gordon Leishman, Ben Hance and Joe Milluzzo, University of Maryland	Architecture for a Low Cost/Light Weight HUMS (268) Mike Augustine, IVHM Inc; Eric Bechhoefer, Green Power Monitoring Systems and Michael Kingsley, Sikorsky Aircraft Company	Process Developments for Applying Erosion Resistant Coatings to Rotorcraft Blades (183) Matthew Trexler and Victor Champagne, US Army Research Laboratory and Jack Kopchik, Sikorsky Aircraft Corp	INTEGRATING THE MANUFACTURING CONTEXT INTO NEXT-GENERATION REQUIREMENTS MANAGEMENT (208) David Smith and Gabriel Massey , Bell Helicopter, Textron Inc.	FLIGHT TEST EVALUATION OF CIFER®, CONDUIT, AND NRC NONLINEAR MATH MODELS (387) Jack Shue, John Schillings and Paul Wilson, Bell Helicopter Textron Inc.	Control System Design and Flight Testing of the Tiger Moth UAV (207) Brian Fujizawa and Mark Tischler, US Army Aerflightdynamics Directorate and Paul Arlton and Dave Arlton, Lite Machines Corporation
0930-1000	COFFEE BREAK							
1000-1030	Design and Development of a Bio-Inspired Flapping Wing Micro Air Vehicle (437) Paul Samuel, Daedalus Flight Systems, LLC and Sean Humbert, University of Maryland	Comprehensive Analysis Predictions of Helicopter Rotor Airloads using a Fast Loose-Coupled Aerodynamics Solution (157) Daniel Wachspress and Ke Yu, Continuum Dynamics, Inc.; Jimmy Ho, AFDD at Ames Research Center; Hossein Saberi, Advanced Rotorcraft Technology and Hyeonsoo Yeo, AMRDEC	Knight, Dutton, Castles, and the Early Rotorcraft Researchers at Georgia Tech (331) Robert Scott, Georgia Institute of Technology	Rotor Load Prediction Using Coupled Rotor/Fuselage Model and Sensor Data (287) Gang Wang, University of Alabama in Huntsville; Abhishek Abhishek and Inderjit Chopra, University of Maryland; Ashish Purekar and Peter Chen, Techno-Sciences, Inc.; Nam Phan, Roberto Semidey, and Daniel Liebschutz, Naval Air Systems Command	UH-60A2L Lessons Learned For Remanufacturing "Non-Standard" Models (281) Richard Allard, Jr, Sikorsky Aircraft	System Requirements Decomposition and Allocation: Achieving Satisfactory R&M (196) Loan Pham and Theodora Saunders, Sikorsky Aircraft Corporation	MEASUREMENT OF SHIP AIR WAKE IMPACT ON A REMOTELY PILOTED AERIAL VEHICLE (074) Jason Metzger, US Naval Academy	Risk Control in Tiltrotor UAV Development (374) Jai Moo Kim, Seongwook Choi, Soojung Hwang, Osung Ahn, Youngshin Kang and Samok Koo, Korea Aerospace Research Institute

1030-1100	Experimental Investigation of Forward Flight Performance of the Revolutionary Cycloidal-Rotor Concept (222) Tejaswi Jarugumilli, Moble Benedict and Inderjit Chopra, University of Maryland	An Assessment of Comprehensive Code Prediction State-of-the-Art Using the HART II International Workshop Data (058) Berend van der Wall, German Aerospace Center (DLR); Joon W. Lim, US Army AFDD (AMRDEC); Marilyn Smith, Georgia Institute of Technology; Sung N. Jung, Konkuk University; Joelle Bailly, Onera, The French Aerospace Lab; Mathieu Amiraux,University of Maryland and D. Douglas Boyd, Jr., NASA	Reflections on Professor Kurt Hohenemser's Pioneering Contributions to Helicopters and Wind Turbines (150) Gopal Gaonkar, Florida Atlantic University	Development of a Fatigue Life Management System for Dynamic Components on the OH-58D Kiowa (338) Brian Tucker, Joshua Mochache, Ron Hobbs, Rebecca Yu, Nick Walton, Bell Helicopter Textron and Terry Baker, U. S. Army Aviation Engineering Directorate	Rotor Blade Manufacturing Process Tradeoffs (301) Daniel Schrage, Georgia Institute of Technology	System Readiness Level (SRL) Assessment Tool (260) Theodora Saunders, Sikorsky Aircraft Corp.	Evaluation of Wind Tunnel and Scaling Effects with the UH-60A Airloads Rotor (106) Thomas Norman and Randall Peterson, NASA Ames Research Center and Thomas Maier and Hyeonsoo Yeo, U.S. Army AFDD	Weaponization Challenges for the VTUAV (MQ-8B Fire Scout) System (068) Ajay Sehgal, Wyle Aerospace Group and Ernest Tavares, NAVAIR
1100-1130	Computations and Experiments on Flow Physics of Edgewise Ducted Fan Air Vehicles (236) Jason Halwick and Dennis McLaughlin, The Pennsylvania State University and Jules Lindau, The Applied Research Laboratory at Penn State	An Examination of Unsteady Airloads on a UH-60A Rotor: Computation vs. Measurement (083) Robert Biedron and Elizabeth Lee-Rausch, NASA Langley Research Center	An Interview with the First Army Aviation Branch Chief: MG Carl H. McNair, Jr., USMA '55 (055) Paul Fardink, U.S. ARMY (Retired)	An Integrated Approach for Gear Health Prognostics (353) David He, University of Illinois-Chicago; Eric Bechhoefer, NRG Systems and Paula Dempsey, NASA	Cold Spray Technology for Repair of Helicopter Components (188) James Sullivan and Robert Guillemette, Sikorsky Aircraft Corp. and Victor Champagne, Aaron Nardi and Brian Gabriel, U.S. Army Research Laboratory	Integrated Product/Process Development Approach (304) Daniel Schrage, Georgia Institute of Technology	COLLECTIVE LIMIT CHARACTERIZATION OF THE CH-53D HELICOPTER (141) Emanuel Perez and Casey Gaines, NAVAIR and Frederic Neubert, USMC	Autonomous Control and Path Planning for Autorotation of Unmanned Helicopters (334) Thanan Yomchinda, Joseph Horn and Jacob Langelaan, The Pennsylvania State University
1130-1200		Detached Eddy Simulation of the UH-60 Rotor Wake Using Adaptive Mesh Refinement (166) Neal Chaderjian and Jasim Ahmad, NASA Ames Research Center		In-Flight Seeded-Fault Monitoring of URV Components under Operating and Extreme Maneuvering Conditions (315) James Ayers, US Army Research Laboratory	Direct Manufacturing for the Aerospace Industry (249) Greg Sabin, Southeastern Tool and Die	Rotorcraft Service System Design (401) José António Corrêa de Sá and Donizeti de Andrade, Instituto Tecnológico de Aeronáutica (ITA) and Valderez F. Fraga, Universidade Federal do Rio de Janeiro		Stringent Safety Design and Verification Methods for VTOL Unmanned Aerial Vehicles (298) Alessandro Pinto, United Technologies Research Center

Technical Session B, Wednesday, 2 May 2012 -- Morning

	Acoustics	Aircraft Design I	Crash Safety I	Dynamics I	Handling Qualities I	HUMS II	Operations I	Struct. & Materials I
0800-0830	Understanding In-Plane Helicopter Blade-Vortex Interaction (BVI) Noise (265) Sudarshana Koushik and Fredric Schmitz, University of Maryland	A Comparative Study of Different Weight Formulations Affecting Preliminary Sizing of Rotorcraft (255) Tarandeep Kalra, Vengalattore Nagaraj, James Baederand and Inderjit Chopra, University of Maryland	A Systems Approach to Crash Protection (416) John Crocco, U.S. Army AATD	Simultaneous BVI Noise and Vibration Reduction in Rotorcraft Using Microflaps Including the Effect of Actuator Saturation (223) Ashwani Padthe and Peretz Friedmann, University of Michigan	Design and Flight Test of a Cable Angle/Rate Feedback Flight Control System for the RASCAL JUH-60 Helicopter (162) Christina Ivler, Mark Tischler, Jay Fletcher and Carl Ott, US Army and J. David Powell, Stanford University	Evaluation of a Novel Adaptive Thresholding and Trend Alert Generation Technology on a HUMS Equipped Fleet (263) Daniel Wade and Steven Krick, US Army Aviation Engineering Directorate and Kenneth Pipe, Humaware	MQ-8B Fire Scout Vertical Lift UAS Operations in Afghanistan (115) Terry Parisher, Northrop Grumman	Service Damage Assessment of Composite Rotorcraft Blades: A Methodology to Predict Internal Damage from Surface Dents (049) Mark Gurvich and Kumar Rajesh , United Technologies Research Center and Marcus Cappelli and Michael Urban, Sikorsky Aircraft Corporation

0830-0900	**CFD/CSD Prediction of BVI Noise Reduction Using Active Twist Control (129)** David Fogarty, National Institute of Aerospace; Matthew Wilbur, U.S. Army Research Laboratory; Martin Sekula and D. Douglas Boyd Jr., NASA Langley Research Center	**A Framework for Cost-Benefit Analysis of Tiltrotor Aircraft Configurations (270)** Robert Scott, Daniel Schrage, Sylvester Ashok, Apinut Sirirojvisuth and Mike Roberts, Georgia Institute of Technology	**Multi-Dimensional Calibration and Validation of Airframe and Occupant Finite Element Models for Crash Analysis (132)** Lucas Horta and Martin Annett, NASA Langley Research Center and Michael Polanco, ATK Space Systems	**Trailing-Edge Flap Control for Minimum Vibrations Using CFD/CSD Analysis (361)** Brian Wake, United Technologies Research Center and Stephen Makinen, Sikorsky Aircraft Corporation	**In Flight Evaluation of Active Inceptor Force Feel Characteristics and Handling Qualities (235)** Jeff Lusardi, Chris Blanken and MAJ Carl Ott, U.S. Army; Carlos Malpica, NASA and Wolfgang von Gruenhagen, DLR	**A Data Mining Based Approach for Gear Fault Diagnostics Using Vibration Sensors (371)** David He and Ruoyu Li, The University of Illinois at Chicago and Praneet Menon, Goodrich SIS	**Using Operations Analysis to Effectively and Efficiently Apply Link16 Datalink to AH-64 Apache (155)** Michael Leong, Boeing AH-64 Apache	**Modeling and Assessment of Skin/Core Debonding in Composite Rotor Blades (052)** Mark Gurvich, Rajesh Kumar and Xuemei Wang, United Technologies Research Center and Marcus Cappelli and Michael Urban, Sikorsky Aircraft Corporation
0900-0930	**Fundamental Experimental Studies Supporting On-Blade Tip Air Blowing Control of In-Plane Rotor Harmonic Noise (78)** D. Caleb Sargent and Fredric Schmitz, University of Maryland	**Aerodynamic Design Optimization of Proprotors for Convertible Rotor Concepts (195)** Conor Stahlhut and J. Gordon Leishman, University of Maryland	**Simulation of Water Impact Tests of a 20-inch Hemisphere and Correlation with Test Results (009)** Gregory Vassilakos and David Stegall, AS&M/NASA and Lindley Bark, MSC Software	**Dynamics of a High-Authority Active Flap Rotor (224)** Joseph Andrews, Jonathan Wong and Mikel Brigley, Sikorsky Aircraft Corporation	**CH-53K CONTROL LAW RISK REDUCTION FLIGHT TESTING ON THE RASCAL JUH-60A IN-FLIGHT SIMULATOR (152)** Aaron Greenfield and Vineet Sahasrabudhe, Sikorsky Aircraft; Jay Fletcher, AFDD and Sean Roark, NAVAIR	**Blind source separation and blind equalization for vibration based diagnostics of rotorcraft bearings (109)** Mulugeta Haile, Anindya Ghoshal and Brian Dykas, US Army Research Laboratory	**An Examination of Temperature and Altitude Design Point Criteria for Army Helicopters (189)** Steven Millner, US Army Aviation Center of Excellence	**Effect of High Temperature Coatings on Rotor Blade Residual Stress (069)** Dean Nguyen, Sikorsky Aircraft
0930-1015	COFFEE BREAK							
1015-1045	**Localized, Non-Harmonic Active Flap Motions for Low Frequency In-Plane Rotor Noise Reduction (84)** Ben W Sim and Mark Potsdam, US Army AFDD; Cahit Kitaplioglu, NASA Ames Research Center; Philip LeMasurier, Peter Lorber and Joseph Andrews, Sikorsky Aircraft Corporation	**Design Optimization of Gamera II: a Human Powered Helicopter (335)** Ben Berry, Joseph Schmaus, Graham Bowen-Davies, Zak Kaler, William Staruk and Kyle Gluesenkamp, University of Maryland	**Analysis and Control of a Magnetorheological Landing Gear System for a Helicopter (413)** Norman M. Wereley, Young-Tai Choi, Ryan Robinson and Wei Hu, University of Maryland; Terence S. Birchette and Akif Bolukbasi, The Boeing Co. and Jin Woodhouse, U.S. Army	**Active Cabin Vibration Control for Light Single and Twin Engine Helicopters (027)** Martijn Priems, Eurocopter Deutschland GmbH	**ADS-33 Handling Qualities Evaluation of the UH-60 Fly-by-Wire Aircraft (130)** Frank Luria, F. Scott Smith and Jeffrey Harding, US Army Aviation Engineering Directorate	**Measurement of Gearbox Surface Frequency Response Functions for HUMS Algorithm Improvement (259)** Daniel Wade, Aviation Engineering Directorate and Chris Larsen, Etegent Technologies Ltd	**Aircraft Survivability Advances Against Hard to Detect Small Arms, RPG and MANPADS Threats (345)** Torrey Deas, US Army RDECOM AATD	**Ice Phobic Coatings on Controlled and Covered Surfaces (156)** Brian Burkitt, NuSil Technology
1045-1115	**A Semi-Empirical Noise Modeling Method for Helicopter Maneuvering Flight Operations (86)** Eric Greenwood, NASA Langley Research Center and Fredric Schmitz and Richard Sickenberger, University of Maryland	**Design, Development and Flight Testing of a Shrouded Quad Rotor Micro Air Vehicle (110)** Vikram Hrishikeshavan, James Black and Inderjit Chopra, University of Maryland	**APPLYING FEM FOR DEVELOPMENT OF AN IMPACT RESISTANT AIRCRAFT WINDSHIELD (143)** Zi Lu, Jeremy Schadlerand Cheng-Ho Tho, Bell Helicopter Textron	**In-flight Demonstration of LORD Active Vibration Control on the Bell 429 (072)** Douglas Ivers and Raheel Mahmood, Lord Corporation	**Development of a Fly-By-Wire Flight Control System to Achieve Level 1 Handling Qualities on a BLACK HAWK Helicopter (279)** Igor Cherepinsky, Joe Driscoll and Steve Silder, Sikorsky Aircraft and Sean Magonigal, Aviation Flight Test Directorate	**Natural Fatigue Crack Initiation and Detection in High Quality Spur Gears (284)** David Stringer and Kelsen LaBerge, US Army Research Laboratory and Cory Burdick and Brendan Fields, US Military Academy	**Automated Landing Analysis (303)** Phong Nguyen, NSWC-Carderock Division	**Probabilistic Damage Tolerance Analysis of Debonded Sandwich Composites (312)** Michael Shiao, Department of Army
1115-1145	**Maneuver Acoustic Flight Test of the Bell 430 Helicopter (71)** Michael Watts and Eric Greenwood, NASA Langley Research Center; Royce Snider and Joel Baden, Bell Helicopter Textron	**Undergraduate SDC Winner**	**Rate Effects and Environmental Sensitivity of Textile Energy Absorbers (124)** Simon Miller, Charles Bakis and Edward Smith, The Pennsylvania State University and Eric Little and Michael Yukish, Applied Research Laboratory	**An H-infinity Technique for Improved Higher Harmonic Control (007)** Frank Fan and Steven R. Hall, Massachusetts Institute of Technology	**Variance Constrained Control of Maneuvering Helicopters (121)** Cornel Sultan and Tugrul Oktay, Virginia Tech	**THE HELICOPTER INTEGRATED DIAGNOSTIC SYSTEM (HIDS) FILES: HOW EMPIRICAL DATA ANSWERS THE QUESTIONS FOR CONDITION BASED MAINTENANCE (368)** Christopher Neubert, Mark Hollins, Eric Carney, and William Hardman, NAVAIR	**Commercial Derivative Rotorcraft for Select DOD Missions – A Survivability Perspective (181)** Michael Schuck, SURVICE Engineering	**Structural Methods to Account for Porosity/Voids in Composite Parts (405)** Yuri Nikishkov and Andrew Makeev, University of Texas at Arlington

| 1145-1215 | Automated Design of Noise-Minimal, Safe Rotorcraft Trajectories (133) Robert Morris, NASA Ames Research Center | Graduate SDC Winner | | Development and Hover Testing of the Active Elevon Rotor (360) Mark Fulton, Nili Gold, M. Hossein Mansur and Mark Tischler, US Army AFDD and Gavin Nielsen, California State University, Chico | | Methods to Reduce Seeded-Fault Test Requirements for CBM Initiatives (272) David Kasper and Mark Davis, Sikorsky Aircraft Corporation; Matt Watson, Impact Technologies; Nate Bolander, Sentient Corporation and Jason Fetty, U.S. Army AATD | Employment of Conceptual Civil Tiltrotor Aircraft in Disaster Response (191) Terry Gibson, Michael Jagielski and John Barber, Bell Helicopter Textron, Inc.; William Chung, SAIC and Larry Young, NASA Ames Research Center | Common Local Instabilities of Composite Sandwich Structures with Honeycomb Cores (247) Alexander Engleder, Eurocopter Deutschland GmbH |

Technical Session C, Wednesday, 2 May 2012 -- Afternoon

	Aerodynamics II	Avionics and Systems I	Dynamics II	Mod. & Sim. I	Operations II	Propulsion I	Struct. & Materials II	Test & Evaluation II
1345-1415	Influence of rotation on dynamic stall (251) Anthony Gardner and Kai Richter, DLR	Effectivley and Efficiently Applying Link16 Datalink to AH-64 Apache (021) Michael Leong, Boeing AH-64 Apache	Computational Modeling of Dive Turn Maneuvers using a Hybrid Methodology (300) Ritu Marpu and Lakshmi Sankar, Georgia Institute of Technology; James Baeder, University of Maryland and Steve Makinen, Sikorsky Aircraft Corporation	A METHODOLOGY FOR ROTORCRAFT BROWNOUT MITIGATION THROUGH FLIGHT PATH OPTIMIZATION (134) John Tritschler, Roberto Celi and J. Gordon Leishman, University of Maryland	Hostile Fire Detection for Parapublic Operations (256) Charles Shepard and Randy Williams, Bell Helicopter Textron Inc. and Mike Paturzo and Barney McNelis, AAI Corporation	BENEFITS OF VIRTUAL TESTING (190) Emmanuel Mermoz, Eurocopter	The Impact of Loads Variability in Rotorcraft Fatigue Design and Lifing Management: A Preliminary Study (044) Jack Zhao and Mike Urban, Sikorsky Aircraft Corp.	Experimental Study of Rotor Performance in Deep Ground Effect with Application to a Human-Powered Helicopter (291) Joseph Schmaus, Benjamin Berry, Panagiotis Koliais and William Gross, University of Maryland
1415-1445	Multi-Fidelity Modeling of Separated Flow Control with Nanosecond Pulsed Plasma Actuation (344) Bryan Glaz, U.S. Army Research Laboratory; Datta Gaitonde, Ohio State University and Surya Dinavahi, Lockheed Martin Corporation	Lightweight Metal Rubber Electrical Cables (047) Richard Claus, Amanda Dippold, Michelle Homer and Jacob Dennis, NanoSonic Inc.	Assessment of Shell and Beam Elements for Modeling Rotorcraft Blades (364) Hao Kang, Hossein Saberi and Chongseok Chang, Advanced Rotorcraft Technology, Inc.	SIMULATING ERROR FOR PERCEPTIVE AND COGNITIVE ERROR ASSESMENT (200) Hakan Isci	High Speed Long Range MEDEVAC -Critical Care Transport – Level II to Level III - Implications on Medical Treatment Facilities (328) Christian Host, The Boeing Company	Variable-Speed Power-Turbine Research at Glenn Research Center (410) Gerard Welch, Ashlie McVetta, Mark Stevens and Samuel Howard, NASA Glenn Research Center; Paul Giel and Wai-Ming To, ASRC AEROSPACE CORP; Ali Ameri, Ohio State U. and Gary Skoch and Douglas Thurman, Army Research Laboratory	Statistical review of Equivalent Initial Flaw Size (092) Michael Urban, Stephen Gould, Joshua Mancher and Jinlu Wang, Sikorsky Aircraft Corp.	Prediction and Measurement of the Deformations of an Extremely Flexible Rotor using Digital Image Correlation (227) Jerome Sicard and Jayant Sirohi, The University of Texas at Austin
1445-1515	Experimental - Numerical Investigation of the Retreating Blade Dynamic Stall (125) Alex Zanotti, Politecnico di Milano	Further Study on Blade-tip Close Warning Situational Awareness Laser System (114) Lei Zhang and Zhe Wu, Beihang University	Lead Lag Stability Prediction: Why CFD is Needed (343) Jorge A. Morillo and Loren Ahaus, Bell Helicopter Textron, Inc. and Nicolas Reveles and Marilyn J. Smith, Georgia Institute of Technology	Off-Axis Dynamics and Simulator Fidelity (061) Bruce Haycock and Peter Grant, University of Toronto Institute for Aerospace Studies	WAAS-enabled IFR Decelerating Approaches for Helicopters (362) Paul Wilson, Jonathan Silvester and Carl Griffith, Bell Helicopter Textron Inc.	ROTORDYNAMIC FEASIBILITY OF A CONCEPTUAL VARIABLE-SPEED POWER TURBINE PROPULSION SYSTEM FOR LARGE CIVIL TILT-ROTOR APPLICATIONS (404) Samuel Howard, NASA Glenn Research Center	Competing Failure Risk Assessment (202) Suresh Moon, L-3 Communications and Nam Phan, NAVAIR	Blade Displacement Measurement Technique Applied to a Full-Scale Rotor Test (229) Anita I. Abrego and Lawrence E. Olson, NASA Ames Research Center; Danny A. Barrows, NASA Langley Research Center and Alpheus W. Burner, Jacobs Technology, Inc.
1515-1600	COFFEE BREAK							

	Aerodynamics III	Crash Safety II	Dynamics III	Handling Qualities II	Product Support	Struct. & Materials III	Sys Engineering II	UAV II
1600-1630	EC145 T2 - Comprehensive and Challenging Industrial CFD Applications (238) Dieter Schimke, Eurocopter	Evaluation of Unmanned Aerial Systems (UAS) Interoperability Testing of Sensor and Flight Controls between Boeing Apache Block III and General Atomics Grey Eagle UAS (120) Chen Li, The Boeing Co	On the Necessity of High-Fidelity Aeroelastic Modeling of On-blade Control Surface for Helicopter Vibration Suppression (320) Fatma Ulker and Fred Nitzsche, Carleton University and Sypridon Voutsinas and Vasilis Riziotis, National Technical University of Athens	Subjective Fidelity Assessment of Rotorcraft Training Simulators (261) Emma Timson, Mark White, Philip Perfect and Gareth Padfield, The University of Liverpool and Robert Erdos, National Research Council of Canda	Flight Test Results NH90 NFH Ship Helicopter Operational Limitation Qualification Process (379) Alrik Hoencamp, Royal Netherlands Navy	Development of a Carbon Fiber Composite Gearbox for Rotorcraft Applications (062) Jeffrey Lawrence, V System Composites	Assessing Sustained Fatigue Damage in Traditionally-Benign Steady-State Helicopter Flight Conditions (231) Robert Benton, Jung-Hua Chang and Jeremiah Hardman, US Army Aviation Engineering Directorate	Blade Tip Pressure Measurements using Pressure Sensitive Paint (233) Oliver Wong, US Army and A. Neal Watkins, NASA Langley Research Center
1630-1700	Numerical and Experimental Investigation of Helicopter Fuselage Drag Reduction Using Active Flow Control (175) Caroline Lienard, Arnaud Le Pape and Christophe Verbeke, ONERA	AH-6 - Creating an Agile Software Product Line Architecture Abstract (128) Andrew Augenstein, The Boeing Co.	Comprehensive Analysis Predictions of Helicopter Rotor Structural Loads using a Fast Loose-Coupled Aerodynamics Solution (158) Daniel Wachspress and Ke Yu, Continuum Dynamics, Inc.; Jimmy Ho, AFDD at Ames Research Center; Hossein Saberi, Advanced Rotorcraft Technology and Hyeonsoo Yeo, AMRDEC	Generic Research Simulator Requirements for Prediction of Adverse Rotorcraft Pilot Couplings (035) Michael Jones and Michael Jump, University of Liverpool	Reliability of Ship Motion Criteria for Helicopter Operations in High Sea States (127) James Colwell, Defence R&D Canada - Atlantic	Hybrid Gear Preliminary Results - Application of Composites to Dynamic Mechanical Components (142) Robert Handschuh, Gary Roberts and Ryan Sinnamon, NASA Glenn Research Center and David Stringer, Army Research Laboratory	Comparing Alternative Helicopter Fatigue Reliability Models (232) Robert Benton and Michael Kiser, US Army Aviation Engineering Directorate	Hover Test Blade Displacement Measurements using Projection Moiré Interferometry (039) Martin Sekula, NASA Langley Research Center
1700-1730	Drag Minimization of the European Tilt-Rotor ERICA wing - fuselage junction by means of a multi-objective approach (082) Andrea Garavello and Rita Ponza, HIT09 and Ernesto Benini, University of Padova	Apache Mission Processor Software: Partitioning & Distributed Display Architecture (161) Ronald Koontz, The Boeing Company	Theoretical and Experimental Investigation of Aeroelastic Rotorcraft-Pilot Coupling (105) Pierangelo Masarati and Giuseppe Quaranta, Politecnico di Milano and Linghai Lu and Michael Jump, University of Liverpool	A Retrospective Survey of Adverse Rotorcraft Pilot Couplings in European Perspective (319) Marilena Pavel, Delft University	Adaptive Workspace: A Technical Solution for Managing Aviation Operations (283) Samad Muhammad, Atlantic Software Technologies, Inc. and Joel Statkevicus, Sikorsky Aircraft Corporation	Design of a Partially Distributed Turbo-shaft Engine Control System (126) Rohit Belapurkar and Rama Yedavalli, The Ohio State University and Paul Paluszewski, William Greene and William Storey, Goodrich Engine Control Systems	Apache AH Mk1 ODR (354) Richard Christ, Boeing Military Aircraft	CH-47 Helicopter Swashplate Test Stand (148) Daniel Bowman and Steve Fuchs, University of Dayton Research Institute and Bryan Thompson, US Army
1730-1800	Drag Prediction of Two Production Rotor Hub Geometries (269) T. Alan Egolf, Sikorsky.com and Mike Dombroski, CD-adapco	Leveraging Emerging Embedded Processing Trends in Rotorcraft AOSA (173) Thomas Gaska, Lockheed Martin MS2-Owego	Robust Stability Analysis: a Tool to Assess the Impact of Biodynamic Feedthrough on Rotorcraft (248) Giuseppe Quaranta and Pierangelo Masarati, Politecnico di Milano and Joost Venrooij, Max Planck Institute for Biological Cybernetics	Computational Study of the Role of Shrouds and Multiphase Flow in High Speed Gear Windage Loss (194) Robert Kunz, Ralph Noack and Sean McIntyre, The Pennsylvania State Applied Research Lab; Matthew Hill, Bell Helicopter Textron		Full field deformation measurement techniques for a rotating composite shaft (280) Lee Kohlman, Charles Ruggeri, Gary Roberts and Robert Handschuh, NASA Glenn Research Center	OH-58 Tailboom Damage Detection Study (348) Stephen Conlon, Samuel Evans, Edward Smith, Peter Romano and Andrew Barnard, The Pennsylvania State University	Hydromechanical Analysis of a Fluid-Elastic Lag Damper Incorporating Temperature Dependence from -30°C to 50°C (234) Norman Wereley and Harinder J. Singh, University of Maryland and Grum T. Ngatu and Curt S. Kothera Techno-Sciences Inc.
1800-1830								

Technical Session D, Thursday 3 May 2012 -- Morning

Aerodynamics III	Crash Safety II	Dynamics III	Handling Qualities II	Product Support	Struct. & Materials III	Sys Engineering II	UAV II

0800-0830	**Experimental investigation of unsteady transition on a pitching rotor blade airfoil (254)** Kai Richter, Stefan Koch, Anthony Gardner, Holger Mai, and Claas-Hinrik Rohardt, German Aerospace Center (DLR); Andree Altmikus, Eurocopter Germany and Alexander Klein, University Stuttgart	**Side-Facing Seat Injury Criteria and Testing Methodology Development (419)** Charles Clarke and Lindsay O'Donnell, Sikorsky Aircraft Corp. and Marv Richards, BAE Systems	**Investigation of Performance and Loads of a UH-60A Rotor at High Advance Ratios (366)** Hyeonsoo Yeo, US Army AFDD	**Transformational Vehicle Management Systems (389)** Vineet Sahasrabudhe, Sikorsky Aircraft Corp.	**The Reduction of Composite Rotor Blade Maintenance: A path forward (053)** Marcus Cappelli, Wonsub Kim, Michael Urban and Joshua Mancher, Sikorsky Aircraft Corp.; Rajesh Kumar and Mark Gurvich, United Technologies Research Center and Louis Centolanza, Aviation Applied Technical Directorate	**Qualification and Deployment of a Portable Shot Peening System for the Repair of Critical Safety Items in the Army Aviation Repair Facilities (028)** Randy Buckner, Robert Bilbrey and Jon Tegtmeier, Avion Solutions, Inc and John Gran, U.S. Army Aviation Research, Development and Engineering Directorate	**Rotorcraft and System Engineer: A New Perspective for Education and Profession (394)** José Corrêa de Sáand Donizeti de Andrade, Instituto Tecnológico de Aeronáutica (ITA) and Valderez F. Fraga, Universidade Federal do Rio de Janeiro	**Highly Accurate SLAM for Rotary Wing MAVs (108)** Omri Rand, Technion, IIT and Chen Friedman and Inderjit Chopra, University of Maryland
0830-0900	**Compressibility Effects on Torsion Damping During Dynamic Stall Events (347)** Patrick Bowles, Dustin Coleman, Thomas Corke, Flint Thomasand Katie Thorne, University of Notre Dame and Mark Wasikowski, Bell Helicopter Textron	**Side-facing aircraft seat safety recommendations (174)** Joseph Pellettiere, Rick DeWeese, David Moorcroft and Allan Abramowitz, Federal Aviation Administration	**Loads Correlation of a Full-Scale UH-60A Airloads Rotor in aWind Tunnel (230)** Hyeonsoo Yeo, US Army Aeroflightdynamics Directorate and Ethan Romander, NASA Ames Research Center	**Handling Qualities Augmentation and Gust Alleviation Using Active Rotors (244)** Pamela Montanye, The Boeing Company; Joseph Horn, The Pennsylvania State University and James Rigsby, Sikorsky Aircraft Corporation	**MSG-3 in the Helicopter World (187)** Brian Jenkins, Bell Helicopter Textron Canada	**Structures & Materials Residual Stress Effects on Surface Crack Growth of Rotorcraft Dynamic Components (290)** Paul Green, Bogdan Krasnowski and Xiaoming Li, Bell Helicopter Textron Inc.	**Motivating System Engineers (066)** Theodora Saunders, Sikorsky Aircraft Corp.	**Targeted Autonomous Indoor Flight of a Rotary-Wing MAV (210)** Svetlana Potyagaylo, Omri Rand and Yaron Kanza, Technion
0900-0930	**Compressible Dynamic Stall Mechanisms Due to Airfoil Pitching and Freestream Mach Oscillations (098)** Kyle Gompertz, Chris Jensen, James Gregory and Jeffrey Bons, Ohio State University	**Optimal Occupant Protection Using Vertically Stroking Seat Suspensions with Magnetorheological Energy Absorbers (146)** Harinder J. Singh and Norman Wereley, University of Maryland	**Cheeseman Award Paper**	**Handling Qualities of a Large Civil Tiltrotor in Hover using Translational Rate Command (277)** Carlos Malpica and Colin Theodore, NASA Ames Research Center; Ben Lawrence, San Jose State University Research Foundation; James Lindsey, Monterey Technologies and Chris Blanken, U.S. Army RDECOM	**Comparison of an inductance in-line oil debris sensor and magnetic plug oil debris sensor (313)** Paula Dempsey, NASA Glenn Research Center and Stephen Showalter, Eaton Aerospace Corporation	**Numerical Analysis of Inflatable Structures with Application to Unmanned Aerial Vehicles (UAVs) (213)** Michael Coatney, Army Research Laboratory	**Leading Teams for Successful Clean Sheet Programs (119)** Johnathan Lewis, Mike Manninen and Harold Tiedeman, Rockwell Collins	**The ONERA RESSAC Unmanned Helicopter : Towards a safe autonomous operation in an urban environment (237)** Yoko Watanabe, Paul Chavent, Alain Piquereau, Roger Mampey, Patrick Fabiani and Martial Sanfourche, ONERA
0930-1015	COFFEE BREAK							
1015-1045	**Rotor Aeromechanics Results From The Sikorsky Active Flap Demonstration Rotor (091)** Peter Lorber, Benjamin Hein and Jonathan Wong, Sikorsky Aircraft Corp. and Brian Wake, United Technologies Research Center	**Design and Test of a Lightweight Magnetorheological Energy Attenuation System for Rotorcraft Seats (420)** Wei Hu and Norman M. Wereley, University of Maryland; Grum T. Ngatu and Gregory J. Hiemenz, Techno-Sciences Inc. and Jin Woodhouse, U.S. Army	**Performance and Vibratory Load Measurements of a Slowed Rotor at High Advance Ratios (206)** Ben Berry and Inderjit Chopra, University of Maryland	**FLIGHT DYNAMIC SIMULATION MODELING OF LARGE FLEXIBLE TILTROTOR AIRCRAFT (293)** Ondrej Juhasz and Roberto Celi, University of Maryland and Mark Tischler and Christina Ivler, US Army	**AH-64 Tail Blade Assembly - Removal and Replacement of Pitch Bearings (297)** Daniel Grzelecki, RDMR-AEM	**Reinforcements for Improved Bending Stiffness in Closed Cells Exhibiting E-T Coupling (015)** Sean Muder, University of Texas at Arlington	**Modeling and Simulation for Avionic System Engineering (103)** Ronald Blanrue, EUROCOPTER	**Evaluation Of The ARTIS Sampling-based Path Planner Using An Obstacle Field Navigation Benchmark (245)** Florian Adolf, German Aerospace Center

Time	Aircraft Design	Avionics & Systems	CFD/CSD	Crew Stations	HUMS	Composites	Reliability	Guidance
1045-1115	**Wind Tunnel Measurements of Full-Scale UH-60A Rotor Tip Vortices(203)** Gloria Yamauchi, NASA Ames Research Center	**Crashworthy Seat Cushion Change Process and Results (274)** Alex Harris and Curt Parsons, BAE Systems	**Optimization Framework for Dynamic Analysis of Active Twist Rotor (372)** Devesh Kumar and Carlos Cesnik, University of Michigan	**A Portable Display for Evaluating Handling Qualities in Shipboard Hover A Portable Display for Evaluating Handling Qualities in Shipboard Hover (406)** David Mitchell, Mitchell Aerospace Research; Thomas Nicoll, Lockheed Martin Corp.and Sean Roark, NAVAIR	**Laser Powder Deposition Repair of Knife Edge (Labyrinth) Seals on Navy and Army Jet Engines (076)** Paul Anneler, RDECOM	**Apparatus and Method for Testing Bend-twist Coupled Laminated Composites under Bending (088)** Michael Tadros and Erian Armanios, University of Texas at Arlington	**V22 CARTS: Component Assessment Reliability Tracking System (197)** Joseph Dankowski, The Boeing Co.	**Probabilistic Roadmap Planning in a Probabilistic Environment (285)** Thomas Frewen, Suresh Kannan, Sanjay Bajekal and Konda Chevva, United Technologies Research Center and Igor Cherepinsky, Sikorsky Aircraft
1115-1145	**PIV in helicopter aerodynamics (352)** Markus Raffel, DLR; Leibniz University of Hannover and James Heineck, Ames Research Center	**The Evolution and Limitations of Lumbar Spine Injury Criteria for Evaluating Crashworthy Seating Systems (390)** Marvin Richards, BAE Systems and Stanley Desjardins, SAFE Inc.	**Innovative Systems To Reduce One Per Rev Vibrations In Helicopters (264)** Attila Lengyel, Midé Technology Corporation	**MODELING ISSUES IN THE PREDICTION OF THE MODULATION TRANSFER FUNCTION OF A BROWNOUT CLOUD (253)** John Tritschler and Roberto Celi, University of Maryland	**Numerical Approaches to Flight Reduction for Helicopter RTB (139)** Steve Pollard and Nicholas Lieven, University of Bristol and Richard Hunt and Peter Morrish, Helitune Ltd	**Experimental Characterization of a Quasi-Closed Modified-Star-Beam Pitch-Compliant Composite Blade Concept (332)** D. Stefan Dancila and Elijah Stevens, The University of Texas at Arlington	**System Engineering and Design for Environment and Safety (DfES) (258)** Theodora Saunders, Sikorsky Aircraft Corp.	**A Comparison of Automatic Nap of-the-Earth Guidance Strategies for Helicopters (326)** John Mooney, Eric Johnson and Dmitry Bershadsky, Georgia Institute of Technology and Vineet Sahasrabudhe and Jonathan Hartman, Sikorsky Aircraft Corp.
1145-1215	**PIV Measurements of the Leading-Edge Vortex Generated by a Flapping MAV (302)** David Mayo and J. Gordon Leishman, The University of Maryland College Park		**Aeromechanics of a Variable Radius, Morphing Rotor (185)** Graham Bowen-Davies and Inderjit Chopra, University of Maryland		**Building Commonality Across the US Army Black Hawk IVHMS Fleet While Reducing Data File Size (093)** Casey Carter, Ron Hodgen, Al Morris and Danny Russell, People Tec, Inc.; Jennifer Kerns, U.S. Army Utility Helicopter Project Office and Bill Stell, U.S. Army AMRDEC SED	**Cracking Mechanism of Foam Core on a Helicopter Rotor Blade and its Influences (017)** Weiguo Hou, Weifang Zhang and Xiangliang Wang, Beihang University and Jun Xing, Beijing Institute of Aeronautical Materials	**MISSION EFFECTIVENESS AND PRODUCTIVITY MEASURES (309)** Paul Russell and John Lloyd, Bell Helicopter Textron	**An Integrated Framework for Adaptive Optimal Obstacle Avoidance for Rotary-wing UAVs (333)** Keeryun Kang, J.V.R. PRASAD and Eric Johnson, Georgia Institute of Technology
1215-1245			**Upstream Miniature Trailing Edge Effectors for Rotorcraft Vibration Reduction (381)** Eui Sung Bae and Farhan Gandhi, The Pennsylvania State University					

Technical Session E, Thursday, 3 May 2012 -- Afternoon

Time	Aircraft Design II	Avionics & Systems II /Systems Engineering III	CFD/CSD Joint Sess'n	Crew Stations	HUMS III	Mod. & Sim. II	Propulsion II	
1330-1400	**Vertical Lift Agility and Maneuverability Design Considerations (330)** Nicholas Lappos, Erez Eller, John Knag and William Fell Sikorsky Aircraft Corporation	**Eurocopter Common Cockpit Avionics Concept and its Deployment on EC175 and EC145 (DO297 Process Highlight) (090)** Erwan Guillanton, Alexander Reich and Serge Germanetti, Eurocopter	**Investigation of the Rotor Stall Boundary Using CFD/CSD Analysis for Active and Passive Rotor Systems (386)** Craig Reimann UTRC and Edward Reed, Sikorsky Aircraft Corp.	**ROTARY WING UAS DUO TRAINING WITH SIMULATOR (211)** Hakan Isci, TAI	**Wireless sensor and network architectures for HUMS (204)** Jacob Loverich, KCF Technologies, Inc.	**Adjoint-based Unsteady Airfoil Design Optimization with Application to Dynamic Stall (292)** Karthik Mani, University of Wyoming	**Torsional Stability of a Face-gear Drive System (225)** Meng Peng and Hans DeSmidt, University of Tennessee	

1400-1430	**A Composite Rotor Blade Structural Design Environment for Aeromechanical Assessments in Conceptual and Preliminary Design (278)** Peter Rohl, Paul Dorman and Mark Sutton, Advatech Pacific; Carlos Cesnik and Devesh Kumar, University of Michigan	**Serial RUAS General Avionics System Demands Analysis Based on Improved QFD method (112)** Lei Zhang, Yaoming Zhou and Zhe Wu, Beihang University	**Coupled CSD/CFD and Viscous Vortex Particle Method for Rotorcraft Comprehensive Analysis (215)** Jinggen Zhao, Nischint Rajmohan and Chengjian He, Advanced Rotorcraft Technology, Inc.	**Enhancing Pilot Perceptual Skills using a Scaffolding Training Approach (135)** Courtney Dean and Camilla Knott, Aptima, Inc. and Thomas Schnell, University of Iowa	**Micropower Wireless Strain Sensor for Rotorcraft Applications (355)** Steven Arms and Chris Townsend, MicroStrain, Inc.	**Simulation Analysis of a Flight Control Law with In-Flight Performance Optimization (163)** Gurbuz Ozdemir and Joseph Horn, The Pennsylvania State University	**Assessing Variable Speed Power Turbine Technology on LCTR2 Size and Performance (295)** Christopher Snyder, NASA Glenn Research Center and C. W. Acree, NASA Ames Research Center
1430-1500	**Redesign of the AH-64 Apache Composite Main Rotor Blade Attachment Fittings to Provide a Field Repair Capability (412)** Len Reid, Fatigue Technology and Robert Loftus, The Boeing Company	**Open Networking Technologies For the Integration of Net-Ready Applications on Rotorcraft (177)** Thomas DuBois and Brendan Blanton, The Boeing Co.; Randy Johnson, Bell Helicopter Textron; William Kinahan, Sikorsky Aircraft Corp.; Ferdinand Reetz, US Navy and Markus Endler, PUC-Rio	**An Assessment of CFD/CSD Prediction State-of-the-Art Using the HART II International Workshop Data (349)** Marilyn Smith, Georgia Institute of Technology; Joon Lim, US Army AFDD (AMRDEC); Berend van der Wall, German Aerospace Center (DLR); Mathieu Amiraux, University of Maryland; Robert Biedron and Doug Boyd, NASA Langley Research Center; Massimo Gennaretti, University Roma Tre; Buvana Jayaraman Science & Technology Corp. and Sung Jung, Konkuk University	**Brownout Landing Aid System Technology (BLAST) - System Overview and Flight Test Results (220)** Brian Sykora, BAE Systems	**Field Evaluation of a Passive RFID System on Rotorcraft for Tracking Dynamic Components (271)** Doug Algera and Nagaraja Iyyer, Technical Data Analysis, Inc.	**The Securing Equipment Computational Utility for Response Estimation (SECURE) Toolbox (080)** Robert McKillip and Jeffrey Keller, Continuum Dynamics, Inc.	**CBM component testing at The University of South Carolina: Impact of lubrication analysis on the improvement of the AH64D helicopter gearbox condition indicators (425)** Jacob McVay, Abdel Bayoumi and Kareem Gouda, University of South Carolina
1500-1530	**The lightning indirect effect protection of more electrical and more composite modern helicopters (252)** Marc Poncon, Steven Guillet and Tauber Wolfgang, Eurocopter	**LANDSAFE® Aircraft Survivability System: The DVE Solution (184)** Daniel Dakin, Elizabeth Dakin and Pri Mamidipudi, Optical Air Data Systems	**Extensive Validation of CFD/CSD Aeroelastic Simulations for a Helicopter in Descending Flight (376)** Sung Jung, Jae-Sang Park, Young-Hyun You, Jeong-Hwan Sa and Soo-Hyung Park, Konkuk University	**Flight Evaluation of Two Rotorcraft Symbology Sets for Landing in Degraded Visual Environments (137)** Gregory Neiswander, SJSU Research Foundation; Zoltan Szoboszlay and Ernesto Moralez, U.S. Army RDECOM and Arthur Grunwald, Technion - Israel Institute of Technology	**Analysis of Magnetic Communications for Use on Rotorcraft (077)** Nicholas Soldner, Sanjay Bajekal and Vijay Lakamraju, United Technologies	**An Efficient POD based Technique to Model Rotor/Ship Airwake Interaction (111)** Nischint Rajmohan, Jinggen Zhao and Chengjian He, Advanced Rotorcraft Technology Inc. and Jeewoong Kim, Lakshmi.N. Sankar and J.V.R Prasad, Georgia Institute of Technology	**Feasibility Study of Oil-Free T700 Rotorcraft Engine: Hybrid Foil Bearing and Non-linear Rotordynamics (101)** Daejong Kim and Mahesh Varrey, University of Texas at Arlington
1530-1600	COFFEE BREAK						

1600-1630	**Hover performance improvement with warp-induced spanwise camber variation (359)** Mihir Mistry and Farhan Gandhi, The Pennsylvania State University	**Development of Virtual Pilot Laboratory (VPLab) Toolset in Support of Aircraft Avionics Testing and Evaluation (221)** Dooyong Lee and Chengjian He, Advanced Rotorcraft Technology	**Helios Adaptive Mesh Refinement for HART II Rotor Wake Simulations (363)** Joon Lim and Andrew Wissink, US Army AFDD; Buvana Jayaraman and Arsenio Dimanlig, Science and Technology Corp.; Brian Wake, UTRC and Stephen Makinen, Sikorsky Aircraft Corp		**The Lubricant Condition and Wear Metal Analysis Sensor System (LUCAS) Program, an Important Project for Condition Based Maintenance Practices (075)** John Moffatt U.S. Army, Aviation Applied Technology Directorate and Chris Minnella, Carl Byington and Cody Ture, Impact Technologies	**High Fidelity Simulation of Tiltrotor Aerodynamic Interference (218)** Chengjian He and Jinggen Zhao, Advanced Rotorcraft Technology	**Assessment of the engine installation performance of a redesigned tiltrotor intake and exhaust system (045)** Andrea Garavello, HIT09 and Gianluigi Misté, Tommaso Nibale and Ernesto Benini, University of Padova	
1630-1700	**Hover Testing of a Swashplateless Rotor with Compact Brushless Motor Actuated Flaps for Primary Control (369)** Anand Saxena and Inderjit Chopra, University of Maryland	**Rotorcraft Avionics Designs for Tomorrows Capabilities (275)** Mark Palich, The Boeing Company	**A Robust Algorithm for Trimming Time-Domain CFD/CSD Helicopter Rotor Models (370)** Benjamin Silbaugh and James Baeder, University of Maryland		**Polymeric Bead Matrix Technology for on-board CBM of Fluid-Lubricated Aircraft Components (176)** David Gonzales, GA Alert, LLC; Joe Hedges, Voelker Sensors, Inc. and Mike Augustine, Benz Engineering	**Reducing Blade Element Model Configuration Data Requirements Using System Identification and Optimization (153)** Daniel Spira, Vincent Myrand-Lapierre and Olivier Soucy, CAE Inc.	**A Method to Integrate Drive System Design (117)** Sylvester Ashok and Daniel Schrage, Georgia Institute of Technology	
1700-1730	**An Evaluation of Three Technologies for Rotating/Non-Rotating Data Transfer (282)** Claude Matalanis, Nicholas Soldner, Sanjay Bajekal, Ulf Jonsson, Vijay Lakamraju and Brian Wake, United Technologies Research Center; Jonathan Moore and Marcel Piet, Defense Holdings Inc. and Mark Scott, Sikorsky Aircraft Corp.		**Computational Investigation and Fundamental Understanding of a Slowed UH-60A Rotor at High Advance Ratios (399)** Mark Potsdam, US Army and Buvana Jayaraman and Anubhav Datta, STC Corp.			**GenHel Rotor Blade Airfoil Unsteady Aerodynamic Model (164)** Melvin Garelick, Sikorsky Aircraft Corp.	**Recent Developments to Apply New, High-Performance Ferrium Steels to Lighter, More Robust Rotorcraft (327)** Jason Sebastian, Jim Wright, Chris Kern, Rich Kooy and Jeff Grabowski, QuesTek Innovations	
1730-1800							**Analysis of Nonlinear Vibration Signature via High Order Statistics for Condition Assessment of Helicopter Drivetrain Systems (422)** David Coats, Mohammed Hassan and Abdel Bayoumi, University of South Carolina	