



EUROPEAN COMMISSION
Research Directorate-General



1st Joint EU-China Aeronautical Projects Kick-off Meetings and Open Workshop

Nanjing/ China, 25th - 27th October 2010

A scientific and technical workshop of the EU-China Coordinated Support Action GRAIN is taking place at Nanjing at the occasion of the Kick-off Meetings of joint EU-China research and networking projects, MARS*, COLTS** and GRAIN***.

* MARS: Manipulation of Reynolds Stress for Separation Control and Drag Reduction

** COLTS : Casting of Large Ti Structure

*** GRAIN : GReener Aeronautics International Networking

Tentative Schedule

Monday, 25th October 2010 - Open Workshop

08:45 – 09:30	<p>Welcome Address Hall C</p> <p><i>Chairmen: ZHAO Ning (NUAA), Gabriel Bugeba (CIMNE/UPC)</i></p> <ul style="list-style-type: none"> - HUA Jun, CAE - Dietrich Knoerzer, RTD-H.3 Aeronautics, European Commission - Jacques Periaux, CIMNE/UPC, Coordinator GRAIN - ZHAO Ning, NUAA <p>Invited Lecture: Dietrich Knoerzer, RTD-H.3 Aeronautics, European Commission <i>“The Greening of Aeronautics: A Need for a Sustainable Global Air Transport”</i></p>
09:30 – 10:30	<p>Plenary Session 1 Hall C</p> <p><i>Chairmen: Jacques Periaux (CIMNE) and HUA Jun (CAE/AVIC)</i></p> <p><i>Invited lecture 1 Adel Abbas (AIRBUS) , Spain</i> <i>“Numerically “flight-test” a virtual aircraft”</i></p> <p><i>Invited lecture 2 WANG Jinjun (BUAA)</i> <i>“Investigations on Flow Control and Possible Application in Aeronautics”</i></p>
10:30 – 11:00	<i>Coffee Break</i>
11:00 – 12:30	<p>Parallel Session 1A Hall C</p> <p style="text-align: center;"><i>“ NOX Emission”</i></p>
	<p>Parallel Session 1B Hall Charles</p> <p style="text-align: center;"><i>“Casting of Large Ti Structure”</i></p>

	<p><i>Chairmen: Ian Poll (Cranfield), XU Huasheng (GTE)</i></p> <ul style="list-style-type: none"> - Ian Poll (Cranfield) ,UK - presented by Kosta Kontis, Univ. Manchester - <i>"NOX production by an aircraft in cruise"</i> - - DENG Yuanhao (GTE) <i>"The brief introduction of GTE combustor group"</i> - Marcus Kremers (AIRBORNE), The Netherlands - <i>"Thermoplastoc Composites, a new technology for greener structures"</i> - Lin Yuzhen (BUAA) <i>"Experimental Investigation on ignition performance of LESS Combustor"</i> 	<p><i>Chairpersons: WU Xinhua (Birmingham Univ.), ZHANG Guoqing, (BIAM)</i></p> <p>NAN Hai (BIAM) <i>"Research Preparing of COLTS Project of Chinese Partners"</i></p> <ul style="list-style-type: none"> - Michele Chiumenti (INGENIA/CIMNE) <i>"Coupled Thermo-Mechanical Simulation of Solidification and Cooling Phases in Casting Processes"</i> - YANG Rui, Institute of Metal Research, Chinese Academy of Sciences <i>"Titanium research at IMR with special attention on casting and COLTS task"</i> - Pierre Vialettes , EADS IW –China <i>Microstructure – mechanical properties relationship in titanium alloys</i>
13:00 – 14:00	<i>Lunch Break</i>	
14:00 – 15:00	<p>Plenary Session 2 Hall C <i>Chairmen: QIN Ning (Sheffield Univ.) and Xiaosu YI (BIAM)</i></p> <p><i>Invited lecture 3 Eric Moreau (Univ. Poitiers), France</i> <i>"Plasma actuators for subsonic flow control"</i></p> <p><i>Invited lecture 4 LIU Xiaoqing (Chinese Academy of Science)</i> <i>"Research & development of bio-based polymers and composites"</i></p>	
15:00 – 15:30	<i>Coffee Break</i>	
15:30 – 17:00	<p>Parallel Session 2A Hall C <i>Noise Prediction and Reduction</i></p> <p><i>Chairmen: Herman Deconinck, (VKI), HUANG Wenchao (ASRI)</i></p> <ul style="list-style-type: none"> - PENG Shia-Hui (FOI), Sweden <i>« Numerical Analysis of Flow-Generated Noise Source Using Turbulence-Resolving Modeling Approach"</i> -YAN Qun (ASRI) <i>"Aircrafts noise reduction: state of the art in China"</i> - Herman Deconinck (VKI), Belgium 	<p>Parallel Session 2B Hall Charles <i>Green Materials</i></p> <p><i>Chairmen: Daniel Amentia (LEITAT) , YI Xiaosu (BIAM)</i></p> <ul style="list-style-type: none"> - LIU Yanfeng, BIAM, <i>"All Natural fiber Sandwich Composite in Aeronautics"</i> - Marcus Kremers (AIRBORNE), Netherlands <i>"Thermoplastic Composites, a new technology for greener structures"</i> - LI Yanliang (BIAM) <i>" Fire retardation behavior of benzoxazine based materials"</i>

	<p><i>“Validation and improvement of airframe noise prediction tools in Europe”</i></p> <p>- LU Hongqiang (NUAA) <i>“High-order DG solution of acoustics and noise”</i></p>	<p>- David Amentia (LEITAT), Spain <i>“Environment-friendly materials for aeronautic applications”</i></p>
<p>17:00 – 18:30</p>	<p><i>Internal Kick-off preparation meetings of GRAIN, MARS and COLTS</i></p>	

Tuesday, 26th October 2010 1st Joint EU-China Research Projects Kick-off Meeting

<p>08:15 – 09:00</p>	<p>Opening Ceremony and Kick-off Meeting Hall A <i>Chairmen: WEI Jinzhong (CAE/AVIC), Liam Breslin (European Commission)</i></p> <ul style="list-style-type: none"> - ZHANG Xiangmu, (Director General, Bureau of Equipment and Manufacturing Industry, MIIT) - Rudolf Strohmeier (Dep. Director General DG Research, European Commission) - ZHANG XinGuo (President CAE) - Philippe Vialatte (Head of Science, Technology and Environment Section, Delegation of EU in Beijing) - ZHU Di (President NUAA) <p>Keynote Lecture: - Rudolf Strohmeier (Dep. Director General DG Research, European Commission) <i>“Research and Innovation: Key Factors for Europe to Tackle the Global Challenges”</i></p>
<p>09:00 – 10:00</p>	<p>Introductory Lectures Hall A <i>Chairmen : Dietrich Knoerzer (European Commission and HUA Jun (CAE) Liam Breslin (RTD-H.3 Aeronautics, European Commission)</i></p> <ul style="list-style-type: none"> - <i>“Aeronautics and Air Transport in the 7th Research Framework Programme of the EU “</i> - LI Benjian (Deputy Director General , Bureau of Equipment and Manufacturing Industry, MIIT) <i>“Chinese Civil Aircraft Science and Technology</i> - Joachim Szodruch, DLR and ACARE <i>“Towards a Sustainable Air Transport System”</i>
<p>10:00 – 10:30</p>	<p><i>Taking Photo / Coffee Break</i></p>
<p>10:30 – 11:50</p>	<p>Industry and Research Lectures (Part 1) Hall A <i>Chairmen: Liam Breslin (European Commission) and WEI Jinzhong (CAE/AVIC)</i></p> <ul style="list-style-type: none"> - CHEN Yingchun (COMAC) <i>“International Cooperation of C919 Project”</i> - Dale King (Airbus), UK <i>“ Airbus Industrial Strategy in China “</i> - ZHANG Jian (ACAE) <i>“ Development of Chinese Civil Aero-engine”</i>
<p>12:00 – 13:30</p>	<p><i>Lunch Break</i></p>
<p>13:30 – 14:30</p>	<p>Industry and Research Lectures (Part 2) Hall A <i>Chairmen: Dietrich Knoerzer (European Commission) and HUA Jun (CAE)</i></p>

	<ul style="list-style-type: none"> - Charles Hirsch (NUMECA International), Belgium <i>“Development of advanced simulation methods for engine sustainable design “</i> - YI Xiaosu (BIAM) <i>“Materials development for sustainable society, example on polymer matrix composites”</i> - Guillaume Alleon (EADS IW India) <i>“Applications of BEM & FMM in Acoustic Simulation at EADS”</i> - 		
14:30 – 15:00	<ul style="list-style-type: none"> - Presentation by project teams <i>Chairmen: QIN Ning (Sheffield Univ.) and DONG Jun (ARI)</i> “MARS : Manipulation of Reynolds Stress for Separation Control and Drag Reduction” 	Hall A	
15:00 – 15:30	<ul style="list-style-type: none"> - Presentation by project teams <i>Chairpersons: WU Xinhua (Birmingham Univ.) and ZHANG Guoqing (BIAM)</i> “COLTS : Casting of Large Ti Structure” 	Hall A	
15:30 – 16:00	Coffee Break		
16:00 – 17:00	<p>Plenary Session 3 Hall A <i>Chairmen: Adel Abbas (Airbus) and FU Song (Tsinghua Univ)</i></p> <ul style="list-style-type: none"> - Invited Lecture 5 KOU Dazhi (Shanghai Supercomputer Center) <i>“Application development of high performance computing in SSC”</i> - Invited Lecture 6 Thomas Gerhold (DLR Braunschweig) <i>“Optimization of the unstructured CFD-Solver TAU for Multi- and Many-Core Architectures”</i> 		
17:00 – 18:30	<p>Parallel Session 3A Hall B “Large scale simulation on HPC”</p> <p><i>Chairmen: Jacques Periaux (CIMNE/UPC), BAI Wen (CAE)</i></p> <ul style="list-style-type: none"> -Jordi Saniger (EADS IW), France <i>“Simulation and computational techniques: current research challenges for industrials”</i> - ZHONG Chengwen (NWPU) <i>“A Lattice Boltzmann GPU code for the simulations of fluid flows in complex geometries”</i> -QIN Ning (Univ. Sheffield), UK <i>“HPC for Turbulent Flow Simulation and Control”</i> - ZHENG Yao (ZJU) <i>“Numerical Simulation with Its Applications in Flow Control”</i> 	<p>Parallel Session 3B Hall C “CO2 Emission and drag reduction”</p> <p><i>Chairmen: Domenico Quagliarella (CIRA), DONG Jun (ARI)</i></p> <ul style="list-style-type: none"> - Raffaele S. Donnelli (CIRA), Italy <i>“A Short Overview of State of the CIRA Art on Drag Reduction”</i> - NIU Zhong Guo (ARI) <i>“Active Flow Control of Plasmas and synthetic jets”</i> - - Kostas Kontis (Univ. Manchester), UK <i>“Development of flow control actuators and their application to wings at subsonic speeds”</i> - - MING Xiao (NUAA) <i>“Some technical aspects of Flow Control”</i> 	<p>MIT/ EC Policy Meeting in parallel</p> <p>16:00-18:00</p>

		ZHANG Yeping (FAI) <i>“ Transonic wing design based on adjoint equation method”</i>	
19:00 – 21:00	Workshop Banquet		

Wednesday, 27th October 2010 - Restricted Project Kick-off Meetings Hall B & C

08:00 – 10:00	<p>Kick-off Meeting of GRAIN/MARS</p> <p>Hall B</p> <p><i>Coordinators : Gabriel Bugada / Jacques Periaux (CIMNE) – Hua Jun (CAE)</i></p> <p><i>Welcome and introduction by the coordinators</i></p> <p><i>Dietrich Knoerzer (European Comm.) "Requirements and Management Aspects of FP7 projects"</i></p> <p><i>GRAIN Project Overview by the coordinators</i></p> <p><i>MARS Project Overview by the coordinators</i></p>	<p>Kick-off Meeting of COLTS</p> <p>Hall C</p> <p><i>Coordinators : WU Xinhua (Birmingh. Univ.), ZHANG Guoqing, (BIAM)</i></p> <p><i>Welcome and introduction by the coordinators</i></p> <p><i>Liam Breslin (European Commission) "Requirements and Management Aspects of FP7 projects"</i></p> <p><i>Project Overview by the coordinators</i></p>
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10:00 – 10:30	<i>Coffee Break</i>	
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10:30 – 12:30	<p>Kick-off Meeting of GRAIN/MARS <i>(continued)</i></p> <p>Hall B</p> <p><i>Coordinators : Gabriel Bugada (CIMNE) / QIN Ning (Sheffield Univ.) – DONG Jun (ARI)/MING Xiao (NUAA)</i></p> <p><i>GRAIN WPs Presentation by KGTs Chairmen leaders</i></p> <p><i>MARS WPs Presentation by WPs leaders</i></p>	<p>Kick-off Meeting of COLTS <i>(continued)</i></p> <p>Hall C</p> <p><i>Coordinators : WU Xinhua (Birmingham Univ.), ZHANG Guoqing, (BIAM)</i></p> <p><i>COLTS WPs Presentation by WPs leaders</i></p>
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12:30 – 13:30	<i>Lunch Break</i>	
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13:30 15:00 –	<p>Technical meetings on work package / task level of GRAIN / MARS / COLTS</p> <p>Hall B & C</p> <p><i>(Details and structures to be organized by the project consortia)</i></p>	
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10:00 – 17:00	Departure to Shanghai and visit of COMAC (VIP Delegation)	
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Thursday, 28th October 2010

09:00 – night	<p>Visiting EXPO (VIP Delegation and Shanghai Delegation)</p> <p>Collaboration projects release: <i>(Details to be defined by the Commission and MIIT & CAE/AVIC)</i></p>	
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