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DAY 1

Time		*Title*	*Author*		*Company*	*Country*
		Session 1 - Digital Transformation in Space **Chair: Yolande Martinet (Airbus Defence & Space, France)**				
09:00		Introduction and Welcome Speech	Massimo	Bandecchi	ESA	The Netherlands
09:10		Introduction and Welcome Speech	Massimiliano	Vasile	University Of Strathclyde	United Kingdom
09:20		Introduction and Welcome Speech	Andrew	Heyes	University Of Strathclyde	United Kingdom
09:30		Impacts of the digital transformation on 0 / A / B1 phases, current status and perspectives	Gérald	Garcia	Thales Alenia Space France	France
09:50		Enabling concurrent engineering for complex system with innovative data ecosystem from feasibility to development and exploitation phases	Alain	Huet	ArianeGroup	France
10:10		Toward a Digital Platform for Spacecraft Manufacturing	Philipp Matthias	Schäfer	DLR German Aerospace Center	Germany
10:30		MARVL - Model Based Requirements Verification Lifecycle	Sam	Gerené	RHEA Group	The Netherlands
10:50	11:05	Networking Break				
11:05	11:35	**KeyNote Speech "Reclaiming Your Inner Geek: Systems Engineering Lessons from Safety Culture and Computer Science"**	Steven	Jenkins	Jet Propulsion Laboratory	United States

11:35		Revisit of requirement management in a model centric process for phases 0 / A / B1.	Gérald	Garcia	Thales Alenia Space France	France
11:55		IDM Applications: a new paradigm to design parametric models in a collaborative environment	Jean-luc	Le Gal	CNES	France
12:15		A Tale of Two Models: Using Concurrent Engineering and MBSE to Develop AeroCube 10	Rob	Stevens	The Aerospace Corporation	United States
12:35	13:35	LUNCH				
13:35	***withdrawn***	On the Verge of Space 4.0: Why Don't Empower Design Artefacts with Modelling Capabilities?	Christopher	Cerqueira	ITA	Brazil
13:35		Integrated Mission Design using satsearch	Sam	Gerené	spacejunkies V.O.F. (satsearch)	The Netherlands
13:55		A survey of Augmented Reality use in the Concurrent Design Facility	Robin	Biesbroek	European Space Agency	The Netherlands
14:15		Multi-disciplinary Collaborative Simulation System for Launch Vehicle Design	Jinghua	Liu	Nanjing University of Aeronautics and Astronautics	China
		Session 2 - Poster Session Elevator Pitches **Chair: Adina Cotuna (ESA, The Netherlands)**				
14:35						
15:00	15:15	Networking Break				
15:15	15:25	Introduction and Instructions for Session 3 and World Cafè Rounds	Organisers			

Session 3 - Digital Engineering & MBSE: Applications and Plans

Chair: Gérald Garcia (Thales Alenia Space, France)

15:25	Implementation Strategy of Model-Based Systems Engineering at JAXA	Matsuaki	Kato	Japan Aerospace Exploration Agency	Japan
15:35	MBSE Best Practices for ESA Projects	Hans-Peter	de Koning	European Space Agency, European Space Research & Technology Centre	The Netherlands
15:45	Data-driven Systems Engineering: Turning MBSE into Industrial Reality	Louise	Lindblad	Valispace Ug	Germany
15:55	JAXA's MBSE Methodology and It's Application to an Astronomical Observation Mission	Nasa	Yoshioka	Japan Aerospace Exploration Agency	Japan
16:05	MBSE for MSR - Introducing MBSE to early phase mission design for Mars Sample Return	Jakob	Huesing	European Space Agency, European Space Research & Technology Centre	The Netherlands

World Cafè - Digital Engineering & MBSE: Applications and Plans

16:15 **Round 1**

16:45 **Round 2**

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Moderators

Ralf Hartmann	Airbus
Laetitia Saoud	Thales Alenia Space

Secretaries

Ilaria Roma	ESA
Borja Garcia Gutierrez	ESA

Time Keepers

Jan Knippschild	ESA
Xavier Collaud	ESA

Panel 1 (Auditorium)

Alain Huet	ArianeGroup
Harald Eisenmann	Airbus
Ingo Gerth	OHB
Jakob Huesing	ESA
Jean-Luc Le Gal	CNES
Nasa Yoshioka	JAXA
Sam Gerené	RHEA

Panel 2 (Room 4+5)

Andrea Tosetto	Blue Engineering
Gerald Garcia	Thales Alenia Space

Hans-Peter de Koning	ESA
Jan-Christian Meyer	UNSW Canberra
Louise Lindblad	ValiSpace
Matsuaki Kato	JAXA
Norbert Brauer	Airbus

17:15 **World Cafè Resume by Moderators**

17:45 **Day 1 Conclusions**

19:00 ***Glasgow City Hall - Speech from Local Authorities & Welcome Reception***

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DAY 2

Session 4 - Interactive DEMOs Session Elevator Pitches

Chair: Jakob Huesing (ESA, The Netherlands)

09:00

1	CDP4 – An industrial Open Source ECSS-E-TM-10-25A Implementation	Sam	Gerené	RHEA Group	Belgium
2	Next Generation Space Components Database for Real Time Concurrent Design	Zack	Bodinger	Space-point	United States
3	Model Hub – MBSE Sharing platform	Alex	Vorobiev	RHEA Group	Belgium
4	Collaborative System Manager (COSM 1.2) features and usage in railways and automotive sectors.	Andrea	Tosetto	Blue Engineering	Italy
withdrawn	Innovative Tool for fast Low-Thrust-Gravity-Assist Analysis in Concurrent Design Studies	Volker	Maiwald	German Aerospace Center (DLR), Institute of Space Systems	Germany
withdrawn	AOCS Simulation During the Pre-Phase A of Space Mission Studies	Ronan	Chagas	National Institute for Space Research	Brazil
5	The Strathclyde Space Systems Database: A New Life Cycle Sustainability Assessment Tool for the Design of Next Generation Green Space Systems	Andrew	Wilson	University Of Strathclyde	United Kingdom

	6	Concurrent design practices for enhanced security of space systems	Matteo	Merialdo	Rhea Group	Belgium
	7	Artificial Intelligence for Early Design of Space Missions in support of Concurrent Engineering sessions	Francesco	Murdaca	University of Strathclyde	United Kingdom
	8	CDP4 Additional Software Development: Matlab Application For Database Interactions	Nikita	Veliev	Skolkovo Institute Of Science And Technique	Russian Federation
withdrawn		An Approach of Digitalization Regarding the Exchange of Supplier Information in Concurrent Engineering Tools	Diana	Peters	German Aerospace Center (DLR)	Germany
	9	A prototype tool for the robust design optimisation of space missions	Mariapia	Marchi	Esteco Spa	Italy
	10	"Nexus: a design optimisation and process integration solution"	Luca	Lanzi	iChrome	Italy

Time		***Title***	***Author***		***Company***	***Country***
	Session 5 - Systems & Concurrent Engineering Methodology Evolution & Trends **Chair: Takashi Ohtani (JAXA, Japan)**					
09:30		How do you go from a mission concept idea to a NASA selected mission? Formulating the Psyche Discovery Mission with JPL's Concurrent Engineering Teams	Kelley	Case	Jet Propulsion Laboratory	United States
09:50		A Through-life, Integrated and Concurrent Engineering Methodology for the Responsive Development of Large and Complex Space Systems	Luciano	Pollice	Sapienza University Of Rome	Italy
10:10	***withdrawn***	Supporting concurrent engineering by integrating with an automatic concept	Jonathan	Menu	Siemens Industry Software NV	Belgium

		generation methodology				
10:10		Knowledge-Based Information Extraction from Datasheets of Space Parts	Francesco	Murdaca	University of Strathclyde	United Kingdom
10:30		Networking Break				
		Session 5 - Systems & Concurrent Engineering Methodology Evolution & Trends **Chair: Kelley Case (NASA - Jet Propulsion Laboratory, United States)**				
11:05		Responsiveness: New value creation approach for earth observation mission and the introduction of a Japanese program as an implementation example	Seiko	Shirasaka	Japan Science And Technology Agency	Japan
11:25		Rapid, Comprehensive, Mission Architecting at the Jet Propulsion Laboratory	Alfred	Nash	Jet Propulsion Laboratory, California Institute Of Technoogy	United States
11:45		The challenges of designing space systems in the context of System-of-Systems Application	Benoit	Pigneur	University College London	United Kingdom
12:05		Multistakeholder Negotiation space exploration: A Concurrent design methodology to effectively guiding group decision making to balanced preliminary design solution	Loris	Franchi	Politecnico Di Torino	Italy
12:25	13:45	LUNCH				
		Session 5 - Systems & Concurrent Engineering Methodology Evolution & Trends **Chair: Massimo Bandecchi (ESA, The Netherlands)**				

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13:25	*withdrawn*	Development of The Aerospace Corporation's Human Spaceflight Team within the Concept Design Center	Kristine	Ferrone	The Aerospace Corporation	United States
13:45		Towards a Conceptual Data Model for Fault Detection, Isolation and Recovery in Virtual Satellite	Sascha	Müller	German Aerospace Center	Germany
14:05		D-CDF: Adapting ESA's Concurrent Design Facility for use in the Defence Sector	James	White	The Defence Innovation Greenhouse	The Netherlands
14:25		Launching Concurrent Design into the superyacht world	Michel	Wit	Feadship	The Netherlands
14:55		**KeyNote Speech "History of SE and Motivation to MBSE in JAXA"**	Matsuaki	Kato	JAXA	Japan
15:25	15:40	Networking Break				
15:40		Low cost space mission trends and approaches in early design phases.	Giorgio	Cifani	ESA	The Netherlands
16:00		Costing at the Speed of Light: How Your Concurrent Engineering Design Team Can Bootstrap Your Organizations Programmatic Capabilities	Jairus	Hihn	Jet Propulsion Laboratory/California Institute of Technology	United States
16:20		**INTERACTIVE DEMOs / POSTER Session / Tools Exhibition (parallel)**				
		INTERACTIVE DEMOS (Room 4)				
16:20		CDP4 – An industrial Open Source ECSS-E-TM-10-25A Implementation	Sam	Gerené	RHEA Group	Belgium
16:40		Next Generation Space Components Database for Real Time Concurrent Design	Zack	Bodinger	Space-point	United States
17:00		The Strathclyde Space Systems Database: A New Life Cycle Sustainability Assessment Tool for the Design of Next Generation Green Space Systems	Andrew	Wilson	University Of Strathclyde	United Kingdom

17:20	Model Hub – MBSE Sharing platform	Alex	Vorobiev	RHEA Group	Belgium

INTERACTIVE DEMOS (Room 4)

16:20	Artificial Intelligence for Early Design of Space Missions in support of Concurrent Engineering sessions	Francesco	Murdaca	University of Strathclyde	United Kingdom
16:40	A prototype tool for the robust design optimisation of space missions	Mariapia	Marchi	Esteco Spa	Italy
17:00	CDP4 Additional Software Development: Matlab Application For Database Interactions	Nikita	Veliev	Skolkovo Institute Of Science And Technique	Russian Federation
17:20	Collaborative System Manager (COSM 1.2) features and usage in railways and automotive sectors.	Andrea	Tosetto	Blue Engineering	Italy

INTERACTIVE DEMOS (CDF Room)

16:20	Concurrent design practices for enhanced security of space systems	Matteo	Merialdo	Rhea Group	Belgium
17:05	"Nexus: a design optimisation and process integration solution"	Luca	Lanzi	iChrome	Italy

1620-
18:00 **POSTER SESSION / TOOLS EXHIBITION (Foyer)**

18:00 **Transfer to Aperitif and Gala Dinner**

The Aperitif is offered by RHEA Group Belgium

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DAY 3

Time		*Title*	*Author*		*Company*	*Country*
		Session 6 - Concurrent Engineering - Academic perspectives **Chair: Javier Cubas (Universidad Politécnica De Madrid, Spain)**				
09:00		CDF as a tool for space engineering master's student collaboration and concurrent design learning	Juan	Bermejo	Instituto Ignacio Da Riva (IDR/UPM)	Spain
09:20		The Spanish contribution to the 1st ESA Concurrent Engineering Challenge: design of the Moon Explorer and Observer of Water-ice (MEOW) mission	Javier	Cubas	Universidad Politécnica De Madrid	Spain
09:40		Overview and Results of the Inaugural ESA Concurrent Engineering Workshop Dedicated to CubeSats and the Subsequent Applications and Implementation for a University CubeSat Design Project	Lucas	Brewster	Carleton University	Canada
10:00		ESA Academy 's Concurrent Engineering Workshops	Johan	Vennekens	Telespazio Vega UK on behalf of ESA	The Netherlands
10:20		Introducing the Australian National Concurrent Design Facility – UNSW Canberra's end-to-end mission design tool	Jan-Christian	Meyer	UNSW Canberra	Australia
10:40	10:55	Networking Break				

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		Session 7 - Concurrent Engineering - Status & Plans **Chair: Carlos Corral van Damme (ESA, The Netherlands)**				
10:55		Review on Concurrent Design practice in the space sector	Dominik	Knoll	Skoltech	Russian Federation
11:15		You work with me the way you talk to me – Team dynamics and team building exercise	Adina	Cotuna	ESA-ESTEC	The Netherlands
11:35		The devil is in the details: lessons learned from operations for Phase 0 studies	Xavier	Collaud	European Space Agency	The Netherlands
11:55		Considerations and first steps towards the implementation of Concurrent Engineering in later project phases	Antonio	Martelo Gómez	German Aerospace Center (DLR)	Germany
12:25	13:25	LUNCH				
13:25	13:55	**KeyNote Speech "From Design by Analysis to Design by Robust Optimisation and Beyond"**	Massimiliano	Vasile	University of Strathclyde	United Kingdom
		Session 8 – Future Trends in Engineering Design **Chair: Annalisa Riccardi (University of Strathclyde, United Kingdom)**				
13:55		Improved Collaborative Optimization for Multidisciplinary Design Optimization Problems	Edmondo	Minisci	University of Strathclyde	United Kingdom
14:15	***withdrawn***	Multidisciplinary Design Optimization of Lander Spacecraft on Small Asteroids	Agne	Paskeviciute	Kth Royal Institute Of Technology	Sweden

14:15		A Microservice-Based Multi-Cluster Computation Platform for Space Mission Design	Huang	Xinxing	Beihang University	China
14:35		Robust Design Optimisation of Dynamical Space Systems	Gianluca	Filippi	University Of Strathclyde	United Kingdom
14:55		Phased mission system reliability with imprecise mission timing	Daniel	Krpelik	Durham University	United Kingdom
15:15		Sensitivity Analysis Tool for Complex Space Missions Using Machine Learning	Yuzhu	Zhang	National Space Science Center, Chinese Academy Of Sciences	China

14:00 15:00 Round Table - Teaching Concurrent Engineering at Universities

14:00 15:00 MEET THE EXPERTS!

Time		*Title*	*Author*		*Company*	*Country*
	Round Table Conclusions **Chair: Diego Escorial (ESA, The Netherlands)**					
15:35		Round Table - Teaching Concurrent Engineering at Universities				

Conference Conclusions

15:45 Wrap-Up & Conference Conclusions

16:15 End of SECESA 2018

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Poster Session

1		System design synthesis and multi-disciplinary optimization of a conceptual re-entry vehicle using an integrated design process	Sweety	Pate	Private Research	Belgium
2		Integrated Design and Simulation Environment for a Space Qualified Onboard Computer	Cristóbal	Nieto Peroy	Luleå University of Technology	Sweden
3		Efficient Experimental Strategies for Complex Space Simulation System	Peng	Shi	National Space Science Center, Chinese Academy of Sciences	China
	withdrawn	A Microservice-Based Multi-Cluster Computation Platform for Space Mission Design	You	Song	Beihang University	China
4		Development and Validation of a CFD Optimized Integrated Pitot Sensor - Produced by Selective Laser Melting and Abrasive Flow Machining	Julian	Ferchow	Inspire Ag / ETH Zürich	Switzerland
5		Extensive Cost Estimating methodologies for the CDF GaiaNIR study	Elisabetta	Lamboglia	ESA	The Netherlands
6		ESA Academy CubeSats Concurrent Engineering Workshop	Johan	Vennekens	Telespazio Vega UK on behalf of ESA	The Netherlands
	withdrawn	Current Trends in Cargo Planning and Logistics of the International Space Station	Michael	Mein	BARRIOS TECHNOLOGY LTD	United States
7		New opportunities: exploiting Concurrent Design tools in the Model Based Systems Engineering Approach	Anton	Ivanov	Skolkovo Institute Of Science And Technology	Russian Federation

8	Leveraging Mbse for Esa Ground Segment Engineering: Starting with the Euclid Mission	Marcus	Wallum	European Space Agency, European Space Operations Center	Germany