EIWAC 2019

Exploring Ideas for World Aviation Challenges

October 29th

ID	Title	Presenter/Chair	
1	Global Plans and Importance of Global Interoperability (TBD)	Stephen P. Creamer	ICAO
	Session Break		
2	The Digital Transformation of Air Traffic Management : Why and How	Florian Guillermet	SESAR-JU
3	Moving Innovation to Implementation	Pamela Whitley	FAA
	Lunch Break		
4	CARATS Long-term Vision for Air Traffic Systems —The Challenge for Implementation of Future Technology —	Tohru Kawaharabata	JCAB
5	Challenge, Leading to Growth — Corporate Strategy of Japan Airlines —	Naoki Tanaka	JAL
	Session Break		
6	ANA's Endeavor to Connect All 7.5 billion People on Earth	Yoshiaki Tsuda, Akira Fukabori & Kevin Kajitani	ANA
7	Innovations for Future Aircraft Operation and Standardization	Shigeru Ozeki	ENRI
8	Panel Discussion — Digitalization in Aviation: A Standardization Perspective —	Moderators: William C. Johnson Hajime Yoshimura	NASA JCAB
	Welcome Reception		

October 30th Hall A

ID	Title	Presenter/Chair	
	Session 1 **ATM Performance 1**	Kota Kageyama	ENRI
EN-A-10	Volatility in Air Traffic Management – How changes in traffic patterns affect efficiency in service provision	Thomas Standfuss	DLR
EN-A-31	Analysis of Weather Impact on Flight Efficiency for Stockholm Arlanda Airport Arrivals	Anastasia Lemetti	Linköping University
EN-A-42	Evaluating Speed Logics for Flight-deck Interval Management	Timo Riedel	Keio University / ENRI
EN-A-4	A Study on Factors Affecting Weather Avoidance using Actual Track Data	Yoichi Nakamura	ENRI
	Lunch Break		
	Session Break		
	Session 4 **ATM Performance 2**	Noboru Takeichi	Tokyo Metropolitan University
EN-A-81	Evaluation of Air Traffic Steadiness in Arrival Operations based on Statistical Analysis and Trajectories Clustering	Songwei Liu	NUAA
EN-I-74	Data-Driven Modeling of the Air Traffic Departure Flow Analysis in Multi-Airport Systems	Zheng Zhao	NUAA
EN-I-87	Preliminary Result on Measuring the efficiency of Thailand's Air Traffic Management System	Supatcha Chaimatanan	Geo-Informatics and Space Technology Development Agency
EN-A-47	Evaluation of air route network under the influence of thunderstorm weather	Dong Sui	NUAA
	Session Break		
	Session 7 **Airport Management 1**	Naoki Matayoshi	JAXA
EN-A-24	SID and STAR optimization near large airports	Jeremie Chevalier	CGX Aero
EN-A-3	Precision Approach Procedures with General Aviation aircraft and Helicopter at Braunschweig Research Airport	Thomas Feuerle	TU Braunschweig
EN-A-11	Dealing with Adverse Weather Conditions by Enhanced Collaborative Decision Making in a TAM APOC	Florian Piekert	DLR

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	Session 2 **SWIM**	Zhijun Wu	CAUC
EN-A-72	Air/Ground SWIM Integration to Achieve Information Collaborative Environment	Kazuyuki Morioka	ENRI
EN-I-86	A Novel Platform to Foster the Special Use of Airspace	Wasanchai Vongsantivanich	Geo-Informatics and Space Technology Development Agency
EN-I-6	Considerations on Implementing System Wide Information Management System	Midori Tanino	FAA
EN-I-93	SWIM in ASEAN Demonstration	David Leow	FAA
	Lunch Break		
	Special Speech 1	Tadashi Koga	ENRI
	Current and Future Aviation Standardisation – Shaping Global Standards through Collaboration	Christian Schleifer-Heingärtner	EUROCAE
	Session Break		
	Session 5 **ATM Modelling**	Yoshikazu Miyazawa	ENRI
EN-A-57	An airport delay level classification method based on clustering ensemble	Zhongbin Li	NUAA
EN-A-13	Congestion Evaluation and Unimpeded Flight Time Calculation Based on Radar Data Analysis	Adriana Andreeva-Mori	JAXA
EN-A-15	Towards Automatic Trajectory Modification for Reducing Air Traffic Complexity Using an ATC Difficulty Index	Sakae Nagaoka	ENRI
EN-A-35	Macroscopic Analysis to Identify Stage Boundaries in Multi-stage Arrival Management	Eri Itoh	ENRI
	Session Break		
	Session 8 **Surveillance**	Dirk Kuegler	DLR
EN-A-16	Data Quality and WAAS Coverage Analysis Based on ADS-B Messages Items Statistics	Fengxun Gong	CAUC
EN-A-75	ADS-B Coverage Design in Mountainous Terrain	Junichi Naganawa	Bhutan Civil Aviation Authority
	A Short Update on the Current NASA Aviation Activities	Akbar Sultan	NASA

October 30th Hall C

ID	Title	Presenter/Chair	
	Session 3 **GNSS**	Susumu Saito	ENRI
EN-I-44	GNSS Multipath Error Model for Aircraft Surface Navigation Based on Canonical Scenarios	Capucine Amielh	ENAC
EN-A-56	Single-frequency time-step method for Ionospheric Delay gradient Estimation	Jirapoom Budtho	King Mongkut's Institute of Technology Ladkrabang
EN-A-45	Evaluation of EPB effects on GBAS CAT II/III performance based on GPS and Beidou near Suvarnbhumi international airport, Thailand	Acharaporn Bumrungkit	King Mongkut's Institute of Technology Ladkrabang
EN-A-88	Development of MC/MF GBAS testbed in Japan and initial experiments for evaluating its performances	Takayuki Yoshihara	ENRI
	Lunch Break		
	Session Break		
	Session 6 **Space Weather**	Susumu Saito	ENRI
EN-A-85	HF-START Evaluation Campaign	Kornyanat Hozumi	NICT
EN-A-49	HAPEE, a statistical approach for scintillation prediction in polar region	Sébastien Rougerie	ONERA
EN-I-39	Update of NICT space weather research and operation activities	Mamoru Ishii	NICT
EN-A-79	Monitoring of plasma bubbles by VHF radar for GBAS	Susumu Saito	ENRI
	Session Break		
	Session 9 **UTM**	Daisuke Kubo	JAXA
EN-A-90	Feasibility Study on Traffic Capacity Increase of UTM through Traffic Rule Improvement	Ryosuke Kaida	Tokyo Metropolitan University
EN-I-71	Autonomous rerouting flight path planning using Gaussian-mixture-based artificial potential field method	Sangho Ko	Korea Aerospace University
EN-A-43	Nearfield Inspection of Navigation Systems with UAVs – First Results from the NAVANT Project	Robert Geise	University of Braunschweig, Institute for EMC

October 31st Hall A

ID	Title	Presenter/Chair	
	Session 10 **Airport Management 2**	Ryota Mori	ENRI
EN-A-25	An Optimistic Planning Approach for the Aircraft Langing Problem	Sana Ikli	ENAC
EN-I-76	Research on the Bay Apron Capacity Improvement Based on Simulation	Fengjie Liang	NUAA
EN-A-46	Passengers on social media: A real-time estimator of the state of the US air transportation system	Philippe Monmousseau	ENAC
	Lunch Break		
	Session Break		
	Session 13 **Artificial Intelligence for Air Traffic Management**	Daniel Delahaye	ENRI
EN-A-5	On the Use of Generative Adversarial Networks for Aircraft Trajectory Generation and Atypical Approach Detection	Gabriel Jarry	ENAC
EN-A-8	A machine learning framework for data driven airport management	Michael Schultz	TU Dresden
EN-A-1	Douglas-Pecker approximation for clustering aircraft trajectories	Masato Fujita	Japan Coast Guard Academy
EN-A-17	AcListant with Continuous Learning: Speech Recognition in Air Traffic Control	Juergen Rataj	German Aerospace Center
	Session Break		
	Session 16 **Aviation Weather**	Navinda K. Wickramasinghe	ENRI
EN-A-61	Impact of wind on the predictability and uncertainty management of 4D-trajectories	Alvaro Rodriguez-Sanz	Universidad Politécnica de Madrid
EN-A-41	Quantification of Weather Impact for Arrival Management Decision Support	Martin Steinheimer	Austro Control

October 31st Hall B

ID	Title	Presenter/Chair	
	Session 11 **Trajectory Management 1**	Mark Brown	ENRI
EN-A-65	Integrating air traffic management with a total transport-managing system	Daniel Rohacs	Budapest University of Technology and Economics
EN-A-91	Simulation Study on the Interoperability between Air Traffic Flow Management and Tactical Arrival Sequencing	Daichi Toratani	ENRI
EN-A-14	A Human-in-the-Loop Simulation Study on the Requirements of Air Traffic Control Operations for expanding Continuous Descent Operations	Hiroko Hirabayashi	ENRI
EN-A-32	Airport schedule optimization to address peak period demand capacity imbalance	Rajesh Piplani	Nanyang Technological University
	Lunch Break		
	Special Speech 2	Tadashi Koga	ENRI
	Sharing trajectory views :the key enabler for Trajectory Based Operations	Patrick Souchu	DSNA
	Session Break		
	Session 14 **Trajectory Management 2**	Adriana Andreeva-Mori	JAXA
EN-A-19	Scenario Based RRT for Aircraft Trajectory Planning under Uncertain Thunderstorm Development	Eduardo Andrés	Universidad Carlos III de Madrid
EN-A-66	A Simulation-Based Study for Performance Evaluation of Fixed Flight-Path Angle Descent	Navinda Wickramasinghe	ENRI
EN-A-7	Air route network generation based on traffic assignment	Shijin Wang	NUAA
EN-I-23	Determining Aircraft Route Capabilities based on large scale historic weather analysis	Jendrick Westphal	Boeing
	Session Break		
	Session 17 **Traffic Capacity & Congestion Management**	Jendrick Westphal	Boeing
EN-A-37	Coordinated sequencing of traffic on multiple En-route constraint points	Souleymanou Abba Rapaya	CCAA Civil Aviation Authority of Cameroon
EN-A-48	Research on Busyness Classification of Waypoints Based on Traffic Complexity Model and Grey Clustering Method	Minghua Zhang	NUAA
EN-A-27	Research on traffic situation recognition of terminal area based on ADS-B	Xiaoyun Shen	CAUC

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	Session 12 **Aviation Safety 1**	Yasuto Sumiya	ENRI
EN-A-63	A Simple Note on Shadowing Effects and Multipath Propagation for CNS	Robert Geise	University of Applied Science for Telecommunication
EN-A-12	Robustness and interference immunity of satellite-based navigation systems – An account of the GPS Jamming trials in Switzerland	Heinz Wipf	AIRNAV CONSULTING
EN-A-58	Numerical Simulation of ILS Signal Interferences and Software Development	Junichi Honda	ENRI
EN-A-54	Anomalous propagation of VHF NAV signals by the sporadic E layer	Keisuke Hosokawa	The University of Electro-Communications
	Lunch Break		
	Poster Session	Sonosuke Fukushima	ENRI
EN-A-9	A Data-driven approach for taxi-time prediction: a case study of Changi airport	Duc-Thinh Pham	ATMRI - NTU, Singapore
EN-A-33	Moving Target Tracking on Airport Surface Based on Interacting Multiple Model Extended Viterbi Algorithm	Shuli Gong	NUAA
EN-A-38	Impulsive interference mitigation method for L-DACS1 System Based on sparse Characteristic	Lei Wang	CAUC
EN-A-52	Reception and Retransmission Methods of Flight Tracking Data	Jun Yang	CAUC
EN-A-59	Research on Operational Situation of Air Route Network Based on Community Structure	Saiwen Zhang	NUAA
EN-A-60	Empirical Study and Vulnerability Analysis of ATC Sector Network Structure	Miao Shangfei	CAUC
EN-A-62	Short-Term Air Traffic Prediction Based on Seasonal-Trend Decomposition and Support Vector Regression Methods	Chi Li	NUAA
EN-A-84	Automatic Airspace Sectorization and Dynamic Configuration	Changcheng Li	NUAA
	Session Break		
	Session 15 **Aviation Safety 2**	Sakae Nagaoka	ENRI
EN-A-53	Risk assessment of future ATM systems under uncertainty	Rosa Maria Arnaldo Valdés	Universidad Politécnica de Madrid
EN-I-73	Airborne collision avoidance for the future	Christian Aveneau	DSNA
EN-A-26	Evaluation of a novel Attention Control Technique within Helicopter Navigation Displays to enhance Terrain Awareness	Thomas Feuerle	Institute of Flight Guidance, TU Braunschweig
EN-A-89	Calculation of Ground Obstacles Collision Probability under ILS Approach	Ryota Mori	ENRI
	Session Break		
	Session 18 **Global Tracking & Related Technologies**	Ping Han	CAUC
EN-A-64	Research on Global Flight Tracking Technology Based on ACARS	Wanwei Wang	CAUC
EN-I-20	A Research Activity on ADS-B Vulnerability Countermeasures	Junichi Naganawa	ENRI