34th PIANC WORLD CONGRESS PANAMA 2018 May 7 to 11

CANAL DE PANAMÁ

34th PIANC World Congress Technical Sessions Program

Day 1 (Monday May 7th, 2018)

Track A - Panama 2 Hall	Track B - Panama 3 Hall	Track C - Panama 4 Hall
7:00 AM	Congress Registration - 2nd floor Foyer	
7:30 AM - 8:30 AM	Morning Coffee - Panama 1 Hall	
8:30 AM - 10:00 AM	Welcome & Open Plenary Session (Keynote Speakers): Panama 2, 3 & 4 Halls	
10:00 AM - 10:30 AM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
10:30 AM - 12:00 PM	**Technical Session 1**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Logistics and Infrastructure**
Values and uses on inland waterways (Andrea Dohms, USA)	Physical Modeling Supporting Design and Construction of Low Crested Breakwaters for the Ayia Napa Marina, Cyprus (Mauricio Wesson, USA)	Strategic Planning for the Transfer of the Panama Canal from the United States to Panama (James McCarville, USA)
What is social and environmental awareness of managers, also called: Corporate Social Responsibility (CSR) ? (Tom Denes, USA)	Bollard loads on new port infrastructure, Port of Rotterdam Authority Policy (Erik Broos, Netherlands)	Financing of the Panama Canal Expansion Program (Eida Saiz, Panama)
Why do decision makers and engineers need CSR and a multifunctional approach? Some applications (Yvon Loyaerts, Belgium)	BIM application in pier construction (Tetsushi Noguchi, Japan)	Importance of the Suez and Panama Canals, the way they changed trade patterns, and their current and future roles (Rodolfo Sabonge, Panama)
Joint development of hydropower and navigation on a major river: example of the Mekong River (Jean-Louis Mathurin, France)	Constructing Modern Ports without Stepping on Water (Rubens Sabino, Brazil)	A generalized cost analysis for neopanamax vessels (Ricardo Ungo, Panama)
12:00 PM - 1:30 PM	Lunch - Barcelona Halls	
1:30 PM - 3:00 PM	**Technical Session 2**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Logistics and Infrastructure**
Research on Navigation Regulation of Liantuo Reach between the Three Gorges and the Gezhouba Project by Fixed-bed Physical Model (Xiaoxiang Feng, China)	Open benchmark datasets for validating numerical wave penetration models (Martijn de Jong, Netherlands)	Panama Trade Logistics Integration Platform (Samuel Diaz Correa, Panama)
Standardisation of Inland Waterways (PIANC WG 179) (Ivo ten Broeke, Netherlands)	Spectral modeling of wave propagation in coastal areas with a harbor navigation channel (Bram Bliek, Netherlands)	Panamá and the globalization of China´s Silk Road Initiative (Eddie Tapiero, Panama)
U.S. Waterways: Toward a More Formal Classification in Support of Navigation (Helen Brohl, USA)	Numerical ship-wave generation, propagation and agitation analysis, related with harbor downtime management (Gabriel Diaz-Hernandez, Spain)	Boushehr port infrastructures refinement Value engineering study (Saeed Pourshahidi, Iran)
The Importance of the U.S. Inland Transportation and Navigation System for the Panama Canal Grain Trade (Javier Ho, Panama)	Interaction of irregular waves and perforated-wall caisson breakwater (Alireza Shafieefar, Iran)	Increasing Berth Utilization with Alternative Technology (Joel Shirriff, Canada)
3:00 PM - 3:30 PM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
3:30 PM - 5:00 PM	**Technical Session 3**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Logistics and Infrastructure**
Inland Waterway Management - The Times They Are A-Changin' (Michael Fastenbauer, Austria)	Site Conditions for Port Developments on the Atlantic Coast of Central Panama (Luis Alfaro, Panama)	Linear Scheduling as a Data Visualization Tool for Construction Progress Analysis – A Case Study from the Panama Canal Expansion Program (Ricardo Tapia, Panama)
The Panama Canal Expansion and Its Impacts on US Ports & Inland Waterways (Nicholas Pansic, USA)	Container Port Deepening in Cartagena (Brian Shaw, USA)	Logistics & Infrastructure: Program Management in the Panama Canal Expansion (Ilona Hogan, Panama)
Marine Accident Investigations at the Panama Canal...a success story of over 100 years (Miguel Rodriguez, Panama)	Upgrading of seawalls and breakwaters for climate change (Ron Cox, Australia)	Dynamic Logistics Simulation: A Powerful Planning Tool (Stefan Brown, Canada)
Systematic Simulation Techniques for Nautical Evaluation of Fairways (Evert Lataire, Belgium)	Case study: Engineering of a EPC 3km jetty fast track project (Hubert Vander Meulen, Belgium)	An Industry-Education-Research Cooperation for Inland Waterway Logistics (Lisa-Maria Putz, Austria)

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Track D - Mallorca Hall	Track E - Berlin 1 Hall	Track F - Berlin 2 Hall
7:00 AM	Congress Registration - 2nd floor Foyer	
7:30 AM - 8:30 AM	Morning Coffee - Panama 1 Hall	
8:30 AM - 10:00 AM	Welcome & Open Plenary Session (Keynote Speakers): Panama 2, 3 & 4 Halls	
10:00 AM - 10:30 AM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
10:30 AM - 12:00 PM	**Technical Session 1**	
Topic: Marinas	**Topic: Environment**	**Topic: Dredging**
Single Point Yacht Moorings (PIANC WG 168) (Claudio Fassardi, USA)	New Guidance on Carbon Management for Port and Navigation Infrastructure (Douglas Dougherty, USA)	Construction and Operation of a Work Vessel Location and Navigation Information System for Fishing Port Construction (Shimpei Nagano, Japan)
Design of maritime structures against hurricanes: Campeche Marina study case (Fernando Lopez Mera, Spain)	Engineering With Nature for Sustainable Development of Water Resources Infrastructure (Todd Bridges, USA)	Dredging for Sustainable Infrastructure, a holistic approach (Rene Kolman, Netherlands)
Experience in waves attenuator structures to protect marinas: Functional and Structural Design (Enrique Peña, Spain)	Air Quality (AQ) Characterization and Policy Design for AQ and Health Improvement at the Port of Manila, Philippines (Edgar Vallar, Philippines)	Monitoring dredge placement operations through long-term and fine-scale suspended sediment observations within a shallow coastal embayment. (Ryan Beecroft, Australia)
Marinas design in areas of highly environmentally sensitive (Ozgur Unay Unay, Spain)	Optimizations for enhancing the future thermal performance of buildings' envelopes using GRC & Aerated concrete blocks in hot arid zones (Mohamed Mahdy, Egypt)	Dot.PRO : Proactive Management of Waterway Maintenance Projects (Frederik Goethals, Belgium)
12:00 PM - 1:30 PM	Lunch - Barcelona Halls	
1:30 PM - 3:00 PM	**Technical Session 2**	
Topic: Marinas	**Topic: Environment**	**Topic: Dredging**
Value of 3D Physical Modeling in Harbor Design - Gateway Harbor Case Study (Andrew Cornett, Canada)	Exploring potential climate change impacts & adaptation strategies for seaport performance (Judith Mol, Netherlands)	An online decision tool for workability assessment using operational wave modelling (François Dekeuleneer, Belgium)
The diversifying business of Port authorities: from commercial ports to commercial waterfronts (Michiel De Jong, Netherlands)	Climate change challenges for management of natural resources in the Panama Canal watershed (Matthew Larsen, Panama)	Planning and management of dredging works. (Mauricio Torronteguy, Brazil)
Geotextile Tube and Gabion Armoured Seawall for Coastal Protection - An alternative (Sherlin Prem Nishold, India)	Restoring forests for water related and other ecosystem services in the Panama Canal Watershed (Jefferson Hall, USA)	Holistic dredging and sediment management on the waterway Danube (Christoph Konzel, Austria)
Sustained by the Sea: How a Small Boat Harbor Study in Rural Alaska Produced Insights into Economic and Environmental Sustainability (Jason Norris, USA)	Climatic variation of the components of wind waves in the Black Sea (Boris Divinskii, Rusia)	The Processing and Beneficial Use of Fine-Grained Dredged Material – A Manual for Engineers (Abbas Sarmad, USA)
3:00 PM - 3:30 PM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
3:30 PM - 5:00 PM	**Technical Session 3**	
Topic: Marinas	**Topic: Environment**	**Topic: Dredging**
Spatial Competiveness and the Development of Marina Towns in the Caribbean – The Case of Saint Lucia, Saint Kitts and Nevis, and Grenada (Willard Phillips, Trinidad and Tobago)	A New PIANC Standard of Practice for Managing Environmental Risks of Navigation Infrastructure Projects (Burton Suedel, USA)	Resilience and Anti-Fragility of the New Jersey State-Maintained Marine Transportation System (Matt Lunemann, USA)
Designing Ocean Reef Harbor Entrance for Swell Conditions (Mauricio Wesson, USA)	The challenges of limiting the environmental impact of fairway projects (Camilla Spansvoll, Norway)	Piaçaguera Channel dredging case: Confined Aquatic Disposal - CAD as an alternative for the destination of sediments not available to the ocean disposal. (Mauricio Torronteguy, Brazil)
Marina Management in the Natural Resources Program: The US Army Corps of Engineers Case Study (Wen-Huei Chang, USA)	Environment and economic benefits of Onshore Power Supply for Inland Navigation in Flanders (Mohssine El Kahloun, Belgium)	Enhancing the capacity for prediction and management of the environmental impacts of major capital dredging programs in Western Australia. (Luke Twomey, Australia)
Theoretical study and engineering application of the structure design of deep plug-in large diameter steel cylinder (Ting Ting Wang, China)	Durme Valley River Restoration Plan. Maintenance dredging and reusing the sediment for nature restoration and improvement of safety against flooding. (Hans Quaeyhaegens , Belgium)	New Contractual Model for Dredging Projects to Avoid Disputes: Case Studies of Performance Based Contracts in dredging projects around the world. (Luis Prieto-Portar, USA)

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Day 2 (Tuesday May 8th, 2018)

Track A - Panama 2 Hall	Track B - Panama 3 Hall	Track C - Panama 4 Hall
7:00 AM	Congress Registration - 2nd floor Foyer	
7:30 AM - 8:30 AM	Morning Coffee - Panama 1 Hall	
8:30 AM - 10:00 AM	**Technical Session 4**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Logistics and Infrastructure**
General Considerations on the Use of Inflatable Gates on Waterways (Michael Gebhardt, Germany)	Expansion of Port Infrastructures (Jens Kirkegaard, Denmark)	Study on the Functioning of Ports in Production and Logistics for Export Promotion of Marine Products (Masamitsu Nakalzumi, Japan)
Japanese expertise on inflatable gates – Technical development, standards and long-term experiences (Ichiro Maruyama, Japan)	The first phase of expansion of the Kingston Container Terminal (Eric Fernagu, France)	Economic effects of changes in logistics infrastructure networks: the Argentinian inland waterways case (Ricardo Sanchez, Argentina)
Construction, Commissioning and Warranty of Inflatable Gates (Willi Lechtenberg, Germany)	The development of Aberdeen Harbour Expansion Project (Ian Cruickshank, UK)	Shipping LNG from an Arctic LNG Plant: some challenges in navigation, waterways, ships, port design and operations (Frederic Jean Louis Hannon, France)
Construction of 29 Inflatable Gates in Northern France (Jean-Luc Berterottiére, France)	Expansion of PSA's Panama Hub Port at the Former Rodman Naval Base to serve Rail Mounted Gantry Cranes (Manfred Zinserling, USA)	Hurricane effects on energy commodity supply chains: Case study of Hurricanes Harvey, Irma, and Maria (Marin Kress, USA)
10:00 AM - 10:30 AM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
10:30 AM - 12:00 PM	**Technical Session 5**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Logistics and Infrastructure / Inland Navigation**
Operation and Maintenance of Inflatable Gates. Experiences at German Waterways (Thilo Wachholz)	Strategic Port Planning and its associated management, a Guide for port authorities (Natalia Urriza, Argentina)	Design and Implementation of the Structural Health & Monitoring System for the Third Bridge over the Panama Canal at the Atlantic side (Gloribel Cespedes, Panama)
Inflatable gates - Case Studies and Experiences in the United States (Timothy Paulus, USA)	Port Vision Bahia Blanca 2040, setting the course for the region (Pablo Arecco, Argentina)	Panama Maritime Single Window (MSW) Challenges, Benefits and Lessons Learned (Marcia Lezcano de Ortega, Panama)
Inflatable gates – Structural Design of Rubber Gates (Peter Jansen, Netherlands)	Towards Sustainable Port Infrastructure through Planned Adaptation (Poonam Taneja, Netherlands)	Traffic management, reliability and economic transport on the Inland waterway Danube (Markus Hoffmann, Austria)
Recent large dimensions flap gate on Seine River (Fabrice Daly, France)	Bosch - the comprehensive partner for Ports & Waterways (Harald van der Heijden, Netherlands)	Renovation and redesign of the Malamocco lock gates in the MOSE system of the Venice lagoon (Jeroen Hillewaere, Belgium)
12:00 PM - 1:30 PM	Lunch - Barcelona Halls	
1:30 PM - 3:00 PM	**Technical Session 6**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Inland Navigation**
Design and Fabrication of Rolling Gates (PIANC WG 173) (Johnny Wong, Panama)	Bahia Blanca 2040 Master Plan, flexible planning for waterways (Gerardo Bessone, Argentina)	World's largest FRP Composite Mitre Gate (Jos Vorstenbosch Krabbe, Netherlands)
Panama Canal Rolling Gates (PIANC WG 173) (Johnny Wong, Panama)	Stockholm Norvik Port, how we build a new Baltic sea freight port for the future (Mattias Sandell, Sweden)	Miter Gate Machinery and Controls (Brenden McKinley, USA)
Machinery and Controls of Rolling Gates (PIANC WG 173) (Timothy Paulus, USA)	Port Development to Support Offshore Petroleum Exploration and Production (Joseph Berlin, USA)	Miter Gates: Design and Fabrication (Frederick Joers, USA)
Maintenance of Rolling Gates (PIANC WG 173) (Timothy Paulus, USA)	Spanish ports development from the last decade of the 20th century (Ramon Gutierrez, Spain)	Mitre Gates: Maintenance (Eric Johnson, USA)
3:00 PM - 3:30 PM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
3:30 PM - 5:00 PM	**Technical Session 7**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Inland Navigation**
Application and Practice of In-Chamber Single Longitudinal Culvert with Double Open Ditches Filling and Emptying System in Large Navigation Locks (Jun Li, China)	Seismic Design and Construction of Pile-Supported Concrete Wharves for Container and Bulk Handling Terminals (Jyotirmoy Sircar, USA)	Parana – Paraguay Rivers Inland Waterway (Sebastian Garcia, Argentina)
No standard lock gates for the new sea lock in IJmuiden in the Netherlands, the largest lock in the world (Pieter van Lierop, Netherlands)	Design of the upgraded nautical access to the Snim iron ore port in Nouadhibou (Eric Fernagu, France)	A Planning Framework for Improving Reliability of Inland Navigation on the Madeira River in Brazil (Calvin Creech, USA)
New Panama Canal Locks Rolling Gates Drive Mechanism Design and Construction Considerations. (Luis Isaza, Panama)	Tsunami Hazard Assessment for Permanently Moored FSRU Marine Terminal in Chile (Eric Smith, USA)	Challenges in the design of port infrastructure in the Magdalena River - Colombia (John Michael Polo, Colombia)
Design of rollergates of the lock of Amsterdam using a spectral design approach for wave forces (Henry Tuin, Netherlands)	Proposal of countermeasures against level 2 earthquake and tsunami for -7.5m pier on a remote island of Japan (Masafumi Saito, Japan)	Advances on the methodology for the Inland Waterways Classification for South America (Azhar Jaimurzina, Chile)

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Day 2 (Tuesday May 8th, 2018)

Track D - Mallorca Hall	Track E - Berlin 1 Hall	Track F - Berlin 2 Hall
7:00 AM	Congress Registration - 2nd floor Foyer	
7:30 AM - 8:30 AM	Morning Coffee - Panama 1 Hall	
8:30 AM - 10:00 AM	**Technical Session 4**	
Topic: Dredging	**Topic: Environment**	**Topic: Inland Navigation**
Different aspects of dredging and disposal works, experiences and challenge in Panama Canal (Melita Chin, Panama)	Towards a framework for integrated, ecosystem-based port development (Tiedo Velinga, Netherlands)	A new in-chamber double longitudinal culverts filling and emptying system for high head and large navigation lock (Jun Li, China)
Different aspects of dredging and disposal works, experiences and challenge in Panama Canal (Raúl Figueroa, Panama)	Designing for stakeholder values in port development in Africa (Jill Slinger, Netherlands)	Study on the Filling-Emptying System of Longitudinal Culvert in the Lock Floor (Wu Peng, China)
The Port of Oakland's Vision 2000 Middle Harbor Basin Projects, Oakland, CA, USA (Ellen Johnck, USA)	The contribution of nature-based concepts to sustainable port development (Daan Rijks, Netherlands)	Engineering the Levelling Systems of the Sea Locks in The Netherlands; Taking into Account the Effects of the Density Difference (Wim Kortlever, Netherlands)
Unsuitable fill material management in port terminal construction: Example in Buenaventura Port, Colombia (Jordan Lagnado)	Diffusing knowledge on Sustainable Port Development (Poonam Taneja, Netherlands)	Reengineering valve opening law to optimise lock levelling: some case studies (Didier Bousmar, Belgium)
10:00 AM - 10:30 AM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
10:30 AM - 12:00 PM	**Technical Session 5**	
Topic: Dredging	**Topic: Environment**	**Topic: Inland Navigation**
Long-term Sediment Management Planning at North America´s Largest Port Complex (Kathryn Curtis, USA)	Development of method of grasping distribution of coral reefs using remote sensing (Etsujiro Katayama, Japan)	Design guidelines for inland waterway dimensions (Bernhard Soehngen, Germany)
Punta Pacifica Man-made islands (Marc de Leeuw, Panama)	Development of coral reef propagation technology through mass culture, transportation and settlement of coral larvae, in Japan (Keiichi Tamura, Japan)	Inland Waterways design Guidelines - INCOM WG141 results in perspective (Jean-Marc Deplaix, France)
How Navigable are Fluid Mud Layers? (Alex Kirichek, Netherlands)	Disaster Prevention Facilities and Marine Environment Improvement Effect (Naozumi Yoshizuka, Japan)	St Lawrence seaway modernization (Benoit Nolet, Canada)
Settlements monitoring on soil improvement by preload in the reclamation area for a new port at Costa Rica Caribbean Sea (Luis Osmel Millan Solorzano, Costa Rica)	Hydrodynamic and Meteorological Forecast to Support Emergency Response Services due to Accident of Fundão Tailing Dam, Rio Doce, Brazil (Clarissa de Luca, Brazil)	Concrete mattresses for lining and erosion protection of flowing water bodies (Markus Wilke, Germany)
12:00 PM - 1:30 PM	Lunch - Barcelona Halls	
1:30 PM - 3:00 PM	**Technical Session 6**	
Topic: Dredging	**Topic: Environment**	**Topic: Inland Navigation**
Towards a better prediction of dredging plumes: numerical and physical modelling of the near-field dispersion (Boudewijn Decrop, Netherlands)	Le Havre - Port 2000: A new Containerport with a simultaneous move towards environmental rehabilitation of Seine Estuary (1996 – 2016) (Paul Scherrer, France)	Navigation Improvements for the Welland Canal (William Miles, USA)
Lessons learned Dredging project in common maritime area Puerto de San Antonio, Chile (José Aldunate Rivera, Chile)	Revisit the Economic Impacts of the Cruise Ports in the United States Considering Responsible Cruising (Wen-Huei Chang, USA)	The Stratton Lock Expansion Project (Fox River, Illinois, USA) (Joshua Repp, USA)
Planning, designing and successfully executing 4m m3 of dredging and dry excavation to expand PSA Panama's container terminal. (David Taylor, Panama)	Waitangi Port Upgrade – Providing a critical lifeline at the edge of New Zealand (Mark Foster, New Zealand)	The port of Ostend: construction works for the widening of the inner approach channel (Filip Mortelmans, Belgium)
	Towards an ecosystem-based port design process: Lessons learnt from Tema port, Ghana (Wiebe de Boer, Netherlands)	Lengthen of Quesnoy-sur-Deule lock – Description of a lateral side construction method (Philippe Schalkwijk, France)
3:00 PM - 3:30 PM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
3:30 PM - 5:00 PM	**Technical Session 7**	
Topic: Dredging	**Topic: Environment**	**Topic: Inland Navigation**
Environmental and Social Management in Port Dredging: A Case Study of the 2017 Kingston Harbour Dredging Campaign (Christopher Gayle, Jamaica)	Numerical simulation for prediction of oil slick spread in Persian Gulf (Zohreh Hajisalimi, Iran)	Design Challenges and Innovations for the Inlet and Outlet Monoliths, Approach Structures, and Water Saving Basins of the Panama TSL (Greg Katzenberger, USA)
Engineering and Environmental Impact of Sand Dredging for the New Container Terminal Development, Bayport ("Hamifratz Port"), Haifa, Israel (Noa Oren, Israel)	Oil spill probability map as a tool for environmental management (Sahar Mokhtari, Iran)	A New Sea Lock in Terneuzen, with the same size lock chamber as the Panama Canal Expansion Project (Koen Van Doorslaer, Belgium)
Working with Nature – Case Study Fehmarn Belt Link (Anders Bjørnshave, Denmark)	Ocean wave energy period parameters conditioned on significant wave heights (Muraleedharan Gangadharan, Portugal)	Scale model research and field measurements for the design of two large sea locks in the Netherlands (Arne van der Hout, Netherlands)
Estimating water turbidity near dredging operations using a weather balloon-mounted camera (Justin Wilkens, USA)	Multiple purpose water resource in the Panama Canal Watershed: Environmental Education, Sustainable Tourism and Ethnography Research (Rolando Checa, Panama)	Gates of the 5th Brunsbüttel Lock (Matthias Schäfers, Germany)

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Day 3 (Wednesday May 9th, 2018)

Track A - Panama 2 Hall	Track B - Panama 3 Hall	Track C - Panama 4 Hall
7:00 AM	Congress Registration - 2nd floor Foyer	
7:30 AM - 8:30 AM	Morning Coffee - Panama 1 Hall	
8:30 AM - 10:00 AM	**Technical Session 8**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Inland Navigation**
Small Hydro Power in Inland Navigations - Environmental Aspects (Nicholas Crosby, UK)	Experimental Study of Tsunami-induced Forces on Onshore Seawalls (Naoki Furuichi, Japan)	Hydraulics of the Panama Canal New Locks: from conceptual design to Cosco Shipping Panama transit (Sébastien Roux, France)
Small Hydro Power in Inland Navigations - Best Practice and Examples of what can be achieved (Nicholas Crosby, UK)	The biggest storm at Cape Town, South Africa, in 40 years impacts on ships (Miche Moses, South Africa)	Widening and straightening improvements to the navigation channel in Gaillard Cut at the Panama Canal. (Manuel Barrelier, Panama)
How to Power Navigation Locks with Electricity (George Berman, Panama)	Pressure Distribution Acting on Breakwater Caisson under Tsunami Overflow (Kojiro Suzuki, Japan)	Latest in Technologies for Navigational Locks (Timo Kiiso, Germany)
Low head hydropower generation. A new opportunity for old structures. A UK perspective (Ian White, UK)	New technnologies with concrete blocks for tsunami protection and long-period wave absorption (Shin-ichi Kubota, Japan)	Innovative Highlights - Renewal of Södertälje Lock (Jeremy Augustijn, Netherlands)
10:00 AM - 10:30 AM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
10:30 AM - 12:00 PM	**Technical Session 9**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Inland Navigation**
Erosion Program Control at the Panama Canal (Antonio Abrego, Panama)	Effects of wave overtopping discharges on property and operation behind the breakwater crown walls (Jose Valdes, Spain)	Guidelines for River Information Services (RIS) edition 2018 – PIANC WG125 (Juergen Troegl, Austria)
Landslide Control Program at the Panama Canal (Carlos Reyes, Panama)	The study of Seiche Waves at the Northern Coastlines of Persian Gulf (Mohammadreza Allahyar, Iran)	The future of River Information Services – beyond borders and transport modes (Juergen Troegl, Austria)
Numerical investigation of the impact of inland transport on bed erosion and transport of suspended sediment : Propulsive system and confinement effect (Sami Kaidi, France)	Inner Harbor Navigation Canal Hurricane Surge Barrier Lessons Learned (James Costello, USA)	River Information Services (RIS) in Germany (Thomas Wagner, Germany)
Building a Decision Support System for the Terneuzen Locks : combining optimal management for water and shipping (Chantal Martens, Belgium)	Seizing opportunities from the Panama Canal Expansion through Adaptive Port Planning: A case study of the Caribbean Port of Barranquilla (Oscar Soto, Panama)	River Information Services and e-Navigation: Harmonization of Information Services and Portfolios (Brian Tetreault, USA)
12:00 PM - 1:30 PM	Lunch - Barcelona Halls	
1:30 PM - 3:00 PM	**Technical Session 10**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Inland Navigation**
Measurement and Analysis of Ship's Squat on the River Elbe, Germany (Thorsten Albers, Germany)	Applying a semi-analytical prediction model for gate vibrations to the new Afsluitdijk gates subjected to wave impacts as a comparison to present design approaches (Orson Tieleman, Netherlands)	Operational Capacity Model for the Panama Canal (Jaime Vasquez, Panama)
Proposal for a sedimentation statistical approach for navigable depth prediction assessment in the St. Lawrence Waterway (Samir Gharbi, Canda)	Validation of 3D underkeel clearance model with full scale measurements (Alex Harkin, Australia)	Improving traffic flow analysis: the integration of trajectory analysis in capacity modelling. A case study applied to the Nord-Pas-de-Calais ECMT-Va-canals (Nicolas Zimmerman, Belgium)
Nautical Risk Analysis for Vidin-Calafat Bridge in the Danube (José Iribarren, Spain)	Exploring the capacity limits of estuarine access channels, a case study of the Western Scheldt and the Port of Antwerp (Roeland Adams, Belgium)	Developments in Radio Navigation Systems - Present Status and Outlook to future developments (Maritime and inland Waterways) (Michael Hoppe, Germany)
Remote Controlled Marine Security of Locks (Luc Boisclair, Canada)	Container Terminal Planning towards optimizing Supply Chains Logistics (Ingrid Klimann, Argentina)	River Information Services in a multimodal Intelligent Transport domain (Pedro Sebastián Vila Aguiló, Spain)
3:00 PM - 3:30 PM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
3:30 PM - 5:00 PM	**Technical Session 11**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Inland Navigation**
Small Hydro Power in Inland Navigations - Utilising Existing Infrastructure (Nicholas Crosby, UK)	Effective Indices on Occupational Incidents in Persian Gulf Ports Case Study: Bushehr Port (Vahid Salehi, Iran)	Driving Assistance Systems for Inland Vessels based on High Precision DGNSS (Research project LAESSI) (Rainer Strenge, Germany)
Small Hydro Power in Inland Navigations - What Technology Can Offer (Nicholas Crosby, UK)	Ship Handling Simulation in Approach Channel and Harbour Design (Carl-Uwe Böttner, Germany)	Development of a ship eco-driving prototype for inland waterways (Florian Linde, France)
Good Navigation Status in accordance with article 15(3)b of the TEN-T guidelines (Sim Turf, Belgium)	AI Terminal Initiatives - Possible modernization of port operation and management through modern cutting edge IC technologies - (Kenji Ono, Japan)	Expert-system for automatically managing high water levels with smart infrastructures (Sylvain Quennehen, France)
Development of Romanian inland waterways and hydro connection with Europe (Ciortan Romeo, Romania)	Future proofing port infrastructure within the Port of Rotterdam How to create more value for the Port Tenants (Egbert van der Wal, Netherlands)	Integrated Maritime Operational Planning System (Felix Camargo, Panama)

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8:30 AM - 10:00 AM	**Technical Session 8**	
Topic: Ports	**Topic: Environment**	**Topic: Inland Navigation**
Sohar breakwaters – Cost based risk assessment (Perry Groenewegen, Netherlands)	A sustainability assessment of ports and port-city plans: Comparing ambitions with achievements (Cor Schipper, Netherlands)	Report on the findings of Working Group 189 "Fatigue in Hydraulic Structures" (Travis Adams, USA)
Motions of moored vessels due to passing vessels: full-scale measurements at a container terminal in the Port of Antwerp (Stefaan Ides, Belgium	Opportunities of Building with Nature for the marine infrastructure sector (Daan Rijks, Netherlands)	The Dalles Dam Navigation Lock Downstream Miter Gate - Cracking, Instrumentation, Repairs, Replacement and Performance - 2007-2017 (Travis Adams, USA)
Ports open waterways. Modeling vessel resonance under swell conditions (Elena Quevedo, Spain)	Applying Working with Nature to Navigation Infrastructure Projects (Victor Magar, USA)	Optimizing Pier Structures using Dynamic Mooring Forces Modelling (Oliver Stoschek, Germany)
Characterization analysis on harbor siltation in Japan (Yasuyuki Nakagawa, Japan)	Design of the scour protection layer for a breakwater in an estuarine environment (Wim Van Alboom, Belgium)	Fiber Reinforced Polymer (FRP) Composite Implementation in Navigation Structures (Eric Johnson, USA)
10:00 AM - 10:30 AM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
10:30 AM - 12:00 PM	**Technical Session 9**	
Topic: Ports	**Topic: Ports**	**Topic: Inland Navigation**
Stad ship tunnel - The world first fulls scaled ship tunnel (Terje Andreassen, Norway)	Relevance of the Panama Canal in the Recreational Navigation Business (Ricardo Ungo, Panama)	Reliability Assessment of Unreinforced Hydraulic Structures Using Probabilistic Methods (Arslan Tahir, Germany)
Using GPS to measure truck operations in a container terminal (Alvaro Lasso, Panama)	Analysis of PIANC guidelines and ROM standards in design of approach channel and harbor basin (Fred Cui, China)	Floating barriers for erosion protection of channel banks of the Panama Canal (Julio Monroy, Panama)
Belgian Royal decree for sea-going inland vessels: a review for container and bulk cargo vessels 10 years after the introduction. (Luca Donatini, Belgium)	Design of the scour protection layer for a breakwater in an estuarine environment (Wim Van Alboom, Netherlands)	Flow-induced Vibrations at Hydraulic Structures (Michael Gebhardt, Germany)
Integrating Planning, Operational, and Risk Management Technologies to Drive Port Optimisation. (Brendan Curtis, Australia)	Full-scale measurements to assess squat and vertical motions in exposed shallow water (Jeroen Verwilligen, Belgium)	Safety priorities determination for hydraulic structures relevant for navigable waterways in France : the case of Voies Navigables de France (Geoffroy Caude, France)
12:00 PM - 1:30 PM	Lunch - Barcelona Halls	
1:30 PM - 3:00 PM	**Technical Session 10**	
Topic: Ports	**Topic: Ports**	**Topic: Inland Navigation**
Web based Operational System for Optimizing Ship Traffic in Depth Constricted Ports (Simon Mortensen, Australia)	Integrated Asset Management: predictive, future responsive and use orientated decision making. (Henk Voogt, Netherlands)	Use of Model Simulation at the Panama Canal for Resource Estimation (Martín Varela, Panama)
Application of a Maneuvering Simulation Center and Pilots Expertise to the design of new ports and terminals and infra-structure optimization in Brazil (Eduardo A. Tannuri, Brazil)	COFASTRANS (Ultra Large Co ntainer Vessel Fast & Eco-Efficient Trans hipment System) (Gordon Rankine, UK)	Desk study, measurements, verification and calibration of simple but accurate calculation method for vessel speed (and squat) in the very confined water in a minimum lock. (Johannes J. Veldman, Netherlands)
Decision-support system based on multi criteria analysis for new port location (Alberto Camarero Orive, Spain)	Future Ports and Piloting in Panama (Tommy Mikkelsen, Dubai)	Remote-control, set the standard by designing a simulator and professionalize! (Michiel Coopman, Belgium)
Hydrodynamic Aspects of Waterway Design and Operation (Thomas Sellers, USA)	A vision for French Guiana in 2025 (Philippe Lemoine, France)	Design and Commissioning of the Filling and Emptying System for the Panama Canal Third Set of Locks (Nicolas Badano, Argentina)
3:00 PM - 3:30 PM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
3:30 PM - 5:00 PM	**Technical Session 11**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Ports**
Methodology to Analyze the Moored Ship Behaviour Due to Passing Ships Effects (Jose Iribarren, Spain)	Mastering Latent Defects in Maritime and Port Engineering through Technical Risk Management (Wim Van Alboom, Belgium)	Technical management of the cyber-physical waterway: it's all about managing complexity. (Michiel Coopman, Belgium)
Design values for berthing velocity of large seagoing vessels (Alfred Roubos, Netherlands)	Maritime Port Planning and Operations: A review of available guidelines, identification of challenges, and discussion on measuring success factors in the development of a Port Masterplan (Katrina Dodd, Australia)	Panama Canal's Bank Lighting (Rossana Peralta, Panama)
Towards a Complete Design of the Manoeuvring Areas Additional Factors Involved in the Detailed Design (Ismael Verdugo, Spain)	Globalization -- Slowing, Reversing, Changing? -- Implications for Ports and Waterborne Transport Infrastructure (Anne Cann, USA)	Hydrology and Hydraulic Analysis for the diversion of the Cocoli River (Johnny Cuevas, Panama)
Observations of hydrodynamics and scour potential during berthing and deberthing of large ships at the Port of Brisbane, Australia (Remo Cossu, Australia)	The Implications of Panama Canal Expansion to U.S. Ports and Coastal Navigation Planning (Kevin Knight, USA)	An integrated analysis for the Passing Ship problem on Santos Port considering Real-Time Simulations and Moored Ship Dynamics (Felipe Ruggeri, Brazil)

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Day 4 (Thursday May 10th, 2018)

Track A - Panama 2 Hall	Track B - Panama 3 Hall	Track C - Panama 4 Hall
7:00 AM	Congress Registration - 2nd floor Foyer	
7:30 AM - 8:30 AM	Morning Coffee - Panama 1 Hall	
8:30 AM - 10:00 AM	**Technical Session 12**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Inland Navigation**
The impacts of unscheduled lock outages (Craig Philip, USA)	Navigation Risk Assessment in Coastal Ports using Automatic Identification System Data (Martin Schultz, USA)	Design of a lock to reduce salt intrusion in the Vilaine estuary (Olivier Bertrand, France)
Understanding risk-driving factors, their indicators and resulting decision criteria: The interdisciplinary approach in Germany (Andreas Panenka, Germany)	Design and execution of a heavy-duty deepsea quay wall for offshore wind energy (Leon Tuunter, Nertherlands)	Can better turbulent mixing reduce density induced ship forces during lockage? (Carsten Thorenz, Germany)
Update the Final Report of the International Commission for the Study of Locks Terms of Reference (John Clarkson, USA)	Automating Mooring for Increased Safety and Security (Mike Howie, Switzerland)	Methods to assess the performance of bubble screens applied to mitigate salt intrusion through shipping locks (Thomas O'Mahoney, Netherlands)
Risk Assessment of the German Waterway Infrastructure for the Prioritization of Maintenance and Repair Activities. (François Marie Nyobeu Fangue, Germany)	Truck emergency-braking impulse effect on morred ferry (Xuelei Feng, Netherlands)	Mitigation of Salinity Intrusion Due to Tidal Pumping in a Texas Coastal Salt Marsh (Gary Brown, USA)
10:00 AM - 10:30 AM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
10:30 AM - 12:00 PM	**Technical Session 13**	
Topic: Inland Navigation	**Topic: Ports**	**Topic: Inland Navigation**
Ship & Barge Collisions with Bridges over Navigable Waterways (Michael Knott, USA)	Shunt-E 4.0 - Autonomous zero emission shuntig processes in port and hinterland railway operations (Iven Kraemer, Germany)	Numerical simulations of two types of longitudinal filling system for the New Lock at Terneuzen (Thomas O'Mahoney, Netherlands)
Historical quay wall renovation in Antwerp, Belgium (Gerrit Feremans, Belgium)	French Caribean Port Extension at La Martinique. Observational method in maximum seismic context. (Patrick Garcin, France)	An application-oriented model for lock filling processes (Fabian Belzner, Germany)
Experiences with Smart Shipping: results from the Netherlands (Michael Schreuder, Netherlands)	Early warning system to support construction and management of port infranstructures: The case of TX-2 AÇU port construction (Antonio Tomás, Spain)	The hydraulic study of single culvert filling-emptying system (Wang Zhao Bing, China)
Kentucky Lock Addition Downstream Cofferdam (Bernard Schulte, USA)	A modern cyclone harbour for escort class tugs in north-west Australia (Lars Peter Madsen, Australia)	Physical model research of breaking logs for a lock levelling system with openings in the gates – Application to the new lock of Sint-Baafs-Vijve (Belgium) (Jeroen Vercruysse, Belgium)
12:00 PM - 2:00 PM	Lunch and Closing Ceremony- Barcelona Halls	

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Day 4 (Thursday May 10th, 2018)

Track D - Mallorca Hall	Track E - Berlin 1 Hall	Track F - Berlin 2 Hall
7:00 AM	Congress Registration - 2nd floor Foyer	
7:30 AM - 8:30 AM	Morning Coffee - Panama 1 Hall	
8:30 AM - 10:00 AM	**Technical Session 12**	
Topic: Ports	**Topic: Ports**	**Topic: Ports**
Physical and numerical modeling of ships moored in ports (Lionel Guisier, France)	A simplified approach to operationalise UKC calculations (Brendan Curtis, Australia)	Vessel-Induced Surge Model Validation Using High-Resolution AIS Data and Field Measurements in a Complex Harbor (Scott Fenical, USA)
Ways & Rails for Slipways for Dry Docking Small Ships (Keith Mackie, South Africa)	An innovative harbour decision-making tool (Maria Izaskun Benedicto, Spain)	Ship maneuver patterns to prevent propeller scouring effects (Marcella Castells, Spain)
Motions of moored container vessels due to passing vessels : model validation using full-scale measurements at the Port of Antwerp and detailed study of the mooring configuration. (Thibaut Van Zwijnsvoorde, Belgium)	The development of ReDRAFT® system in Brazilian Ports for safe underkeel clearance computation. (Felipe Ruggeri, Brazil)	Berth Scour Protection for Single & Twin Propellers (Martin Hawkswood, UK)
Challenges and Considerations in Selection, Anchorage Design, and Installation of Quick-Release Mooring Hooks on Existing Structures (William Bruin, USA)	Operational Analysis of Cruise Ships against Long Waves Action – The experience at Valparaiso's Bay (Benjamin Hernández, Chile)	Physical modeling of propeller scour on an armoured slope (Neville Berard, Australia)
10:00 AM - 10:30 AM	Coffee Break in Exhibit Hall - Panama 1 Hall & 2nd Floor Foyer	
10:30 AM - 12:00 PM	**Technical Session 13**	
Topic: Ports	**Topic: Ports**	**Topic: Ports**
Recommendations for increased durability and service life of new marine concrete infrastructure. Report of WG 162 of the Maritime Navigation Commision (Boy-Arne Buyle, Norway)	Performance Verification of Marine Fenders (Mishra Kumar, Singapore)	Evaluation of Proposed Jetties for Port of Santos Navigation Channel Depth Maintenance (Thiago Corrêa, Brazil)
Evaluation of Marine Structures for Kinematic Effects (Julie Galbraith, USA)	Ship Simulation – Important aspects for consideration (Neil Lawson, Australia)	Experimental investigation on submerged reef (Panneer Selvam Rajamanickam, India)
Corrosion Evaluation of Maritime Steel Structures in Costa Rica with Thicknesses and Cathodic Potential Measurements (Luis Millan Solorzano, Costa Rica)	Applying PIANC Fender Design Guidance to US Design Codes (Rune Iversen, USA)	Surface Ocean Currents in Makran Coasts of Gulf of Oman (Mohammad Bagheri, Iran)
The use of reinforced concrete in maritime engineering – Increasing the durability and service life of concrete infrastructure (Stefan Kohn, Germany)	The safe use of cylindrical fenders on LNG, Oil and Container Terminals (Erik Broos, Netherlands)	Surface Wind Field Simulation Over the Persian Gulf (Afshan Khaleghi, Iran)
12:00 PM - 1:30 PM	Lunch and Closing Ceremony- Barcelona Halls	