



III. GLOBAL CONFERENCE ON INNOVATION IN MARINE TECHNOLOGY AND THE FUTURE OF MARITIME TRANSPORTATION

18th-19th of April 2019, Selçuk, İzmir - TURKEY

The Abstract Book of GMC '19

GMC'19 PROGRAMME & CONTENTS

18 APRIL 2019 - Thursday

REGISTRATION 09:00 - 10:00

MEETING HALL (A) GÜNDÜZ AYBAY

MEETING HALL (B) NECMETTİN AKTEN

10:00 -11:00

Opening Speeches

11:00-12:00

Keynote Speaker

Prof. Dr. George THEOCHARIDIS

Keynote Speaker

Prof. Dr. Osman TURAN

Lunch Break 12:00 - 13:00



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18 APRIL 2019 - Thursday

I. Sessions

MEETING HALL (A) GÜNDÜZ AYBAY	MEETING HALL (B) NECMETTİN AKTEN
13:00 - 14:15	13:00 - 14:15
ALTERNATIVE MARINE FUELS & MARITIME ENERGY EFFICIENCY	BEST PRACTICES & NEW CONCEPTS IN MARITIME TRANSPORTATION
Moderator: Prof. Dr. Oğuz Salim SÖĞÜT	Moderator: Prof. Dr. George THEOCHARIDIS
<ol style="list-style-type: none">Investigation of Suitable Savonius Wind Turbines for The Black Sea Coasts by Using Computational Fluid Dynamics (Page:1). - Mehmet Zeki ŞENER, Ercan KÖSEProducing Electricity Power from Ship Exhaust Gases: A Cost Analysis Application on a Ro-Ro Cargo Ship (Page:2). - Selim BAŞTÜRK, Sercan EROLExperimental Investigation of using Emulsified Fuel in a Diesel Engine on Performance and NOx Emissions (Page:3). - Fatih OKUMUŞ, Görkem KÖKKÜLÜNK, Cenk KAYA, Aykut SAFAInvestigation of the Effects of Marine Fuels in Lubrication Oil on The Friction of Piston Ring-Cylinder Liner in Marine Diesel Engines (Page:4). - Olcay SERT, Zafer AYDIN, Görkem KÖKKÜLÜNKEnvironmental Impacts of the Exhaust Gases from Ships (Page:5). - Muhammet BORAN	<ol style="list-style-type: none">Classification Analysis for Studied Fields in Maritime (Page:6). - Leyla TAVACIOĞLU, Umut TAÇ, Özge ESKİ, Neslihan GÖKMENPreparing Data Set for Deep Learning Based Ship Detection (Page:44). - Veysel GÖKÇEK, Gazi KOÇAKDetermining Maritime Educational Needs for Energy Efficiency Within the Scope of MarEd Project (Erasmus+Programme) (Page:9). - Özcan ARSLAN, Elif Bal BEŞİKÇİ, Esmâ UFLAZEvaluating Efficiency Improvement Potential of an Organic Rankine Cycle for a Marine Diesel Power Plant by Applying Advanced Exergy Analysis (Page:17). - Turgay KÖROĞLU, Oğuz Salim SÖĞÜTEvaluation of The Maritime 4.0 Using The AHP Method (Page:15). - Umur BUCAK, Mehmet Fatih DİNÇER, Hakan DEMİREL
Coffee Break 14:15 - 14:30	



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II. Sessions

MEETING HALL (A) GÜNDÜZ AYBAY

MEETING HALL (B) NECMETTİN AKTEN

14:30 - 15:30

HUMAN FACTOR IN MARITIME DOMAIN

Moderator: Prof. Dr. Osman TURAN

1. An Extensive Research into Possibility of a Human-Centered Safety System for Fatigue Detection at Sea (Page:11).
- **Barış ÖZSEVER, Leyla TAVACIOĞLU**
2. A Survey for Analysing Factors that Affecting Marine Service and Seafarers' Job Satisfaction: Case Study for Turkey (Page:12).
- **Umut YILDIRIM, Serdar YILDIZ, Özkan UĞURLU, Burak VARDAR**
3. A Compliance Analysis of Marine Engineering Cadets' Practices on Maintenance and Repair of Shipboard Machinery/Equipment Tasks & Duties Within On-Board Training Book Records (Page:13).
- **Çağatay KANDEMİR, Mehmet Oğuzhan AKALIN, Metin ÇELİK**
4. The Effect of Stress' on Seafarers' Job Performance (Page:14).
- **Müge BÜBER, Nergis ÖZİSPA**

Coffee Break 15:30 - 15:45



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MEETING HALL (A) GÜNDÜZ AYBAY	MEETING HALL (B) NECMETTİN AKTEN
15:45 - 16:45	15:45 - 16:45
MARITIME TRADE, LOGISTICS & PORT OPERATIONS	MARITIME LAW, GOVERNANCE & MARITIME SECURITY
Moderator: Prof. Dr. Muhammed BORAN	Moderator: Prof. Dr. Leyla TAVACIOĞLU
<ol style="list-style-type: none">1. The Components of the Port Hinterland Performance: A Literature Review Study (Page:19). - Umur BUCAK, Soner ESMER2. Optimal use of port cranes to maintain the environment of port cities (Page:20). - Akram ELENTABLY3. Statistical Analysis of Tanker Inspection Reports (Page:21). - Elif Bal BEŞİKÇİ, Özcan ARSLAN, Aydın ŞIHMANTEPE, Hatice UNCÜOĞLU4. A Study on Turkish Maritime Trade Statistics (Page:22). - Alper KILIÇ	<ol style="list-style-type: none">1. The Effect of Piracy on Maritime Transportation (Page:23). - Cemre Akyurt, Alper KILIÇ2. Analyzing Organizational Culture for Innovation Performance in Maritime Industry. - Pelin BOLAT, Gizem YÜKSEL, Fırat BOLAT, Tuğsan İşiaçık ÇOLAK3. Impact Analysis for Explosion Scenario of a Sailing Gas Tanker (Page:25). - Ali Cem KUZU4. Are The Ships Fully Secured Against the Cyber-Attacks? (Page:26). - Burak KÖSEOĞLU, Cenk ŞAKAR, Müge BÜBER, Ali Cemal TÖZ
Coffee Break 16:45 - 17:00	



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IV. Sessions

MEETING HALL (A) GÜNDÜZ AYBAY

17:00 - 18:00

MARITIME SAFETY

Moderator: Prof. Dr. Selçuk NAS

1. Maritime Investigation Reports Involving Man-Over-Board (MOB) Casualties: A Methodology for Evaluation Process (Page:27).
- Orhan GONEL, İsmail ÇİÇEK
2. Investigation of Marine Accidents Under the HFACS-PV Structure (Page:28).
- Özkan UĞURLU, Serdar YILDIZ
3. Case Study on Marine Accidents Occurred in VTS Areas (Page:29).
- Serdar YILDIZ, Burak VARDAR, Özkan UĞURLU, Umut YILDIRIM
4. The Relationship Between the Amount of Container Cargo Handled in Turkey with The Number of Turkish-Flagged Container Vessel (Page:56).
- Davut PEHLİVAN, Gizem YÜKSEL

MEETING HALL (B) NECMETTİN AKTEN

17:00 - 18:00

MARITIME LAW, GOVERNANCE & MARITIME SECURITY

Moderator: Assoc. Prof. Dr. Alper KILIÇ

1. Maritime Security in The Framework of NATO Security Architecture (Page:30).
- Pelin BOLAT, Savaş Rüştü BİÇER
2. Evaluating unmanned vessel through regulatory framework (Page:31).
- İbrahim COŞKUN, Ümit Gürkal EGEMEN, Fırat BOLAT
3. Use of Unmanned Aerial Vehicles in Maritime Search and Rescue Operations (Page:32).
- Turuğsan OLGAÇ, Ali Cemal TÖZ
4. Energy Efficiency and Environmental Aspects of Refrigerated Containers in Maritime Transport Towards Intelligent Systems (Page:33).
- Turgay KÖROĞLU

Welcome Cocktail 19:30



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I. Sessions

MEETING HALL (A) GÜNDÜZ AYBAY

09:00 - 10:00

ALTERNATIVE MARINE FUELS & MARITIME ENERGY EFFICIENCY

Moderator: Asst. Prof. Görkem KÖKKÜLÜNK

1. Investigation of Issues in Tank Cleaning Operations and a Proposal of an Automated System for Improvement in Tank Cleaning System (Page:34).
- Taylan GÜLER, İsmail ÇİÇEK, Onural Alper SAHİN
2. Investigation of the Improvement of the Negative Effects of Diesel Fuel Mixed with Lubricating Oil by Tall Oil Acid in Ship Diesel Generators (Page:36).
- Cenk KAYA, Olcay SERT, Hüseyin ELÇİÇEK, Zafer AYDIN, Görkem KÖKKÜLÜNK
3. Criteria Comparison of Companies Which Have Different Tonnage of Vessels for BWTS Selection (Page:37).
- Çağlayan TOP, Gül Emecan KARA

MEETING HALL (B) NECMETTİN AKTEN

09:00 - 10:00

Coffee Break 10:00 - 10:15



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II. Session

MEETING HALL (A) GÜNDÜZ AYBAY

10:15 - 11:15

HUMAN FACTOR IN MARITIME DOMAIN

Moderator: Assoc. Prof. Dr. Yusuf ZORBA

1. A Comprehensive Study on Assessment of Safety Climate Based on Theory of Planned Behavior in Maritime Domain (Page:39).
- **Pelin ERDEM, Leyla TAVACIOĞLU**
2. A Review on Practicality of Cognitive Performance Tests in Maritime Officer Selection (Page:40).
- **Mesut Can KÖSEOĞLU, Leyla TAVACIOĞLU, Umut TAÇ, Neslihan GÖKMEN, Özge ESKİ**
3. Investigation of Seafarer Employment for Turkey (Page:41).
- **Hüsnü ÖĞE, Alper KILIÇ**
4. Future of Vessel Traffic Service as A Socio Technical System and Simulation-Tools (Page:38).
- **Berat DAĞKIRAN, Pelin BOLAT**

MEETING HALL (B) NECMETTİN AKTEN

10:15 - 11:15

BEST PRACTICES & NEW CONCEPTS IN MARITIME TRANSPORTATION

Moderator: Prof. Dr. Özcan ARSLAN

1. The Analysis of Endorsement and Recognition Problem for Turkish Marine Officers' Certificate of Competencies (CoC) (Page:43).
- **Tuğfan ŞAHİN, Pelin BOLAT**
2. A Study for Educational Institutions in Seafarers Training: Seafarer Trainers (Page:45).
- **Orkun Burak ÖZTÜRK, İdris TURNA, Ahmet Emre PİRİM**
3. Towards Introducing Knowledge Management Concept to Maritime Education & Training (Page:7).
- **Amr Moneer IBRAHİM, Saleh Mesbah ELKAFFAS**
4. Updating Issue in STCW (Page:42).
- **Aynur MAHARRAMOVA**

Coffee Break 11:15 - 11:30



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11:30 - 12:45	11:30 - 12:45
NAVAL ARCHITECTURE	MARITIME TRANSPORTATION MANAGEMENT
Moderator: Prof. Dr. Oğuz Salim SÖĞÜT	Moderator: Prof. Dr. Hüseyin YILMAZ
<ol style="list-style-type: none">Investigation of Bilge System Assembly Operations of the Black Sea Type Fishing Vessels (Page:46). - Abdullah TÜRK, Murat ÖZKÖKComparison of Damage Stability in Tankers for Different Subdivision (Page:47). - Kubilay BAYRAMOĞLU, Tolga BAYRAMOĞLU, İsmail BAYER, Hakan AKYILDIZInterpretation of Rule-Based Ship Structural Element Sizing by Finite Element Analysis (Page:49). - Hasan ÖLMEZ, Harun ATİKThe Prediction of Ship Shaft Bearing Gap By Artificial Neural Networks and Drydocking Maintenance Planning (Page:50). - Soykan KALENDER, Aykut SAFA	<ol style="list-style-type: none">Determination of Evaluation Criteria for the New Traffic Separation Schemes and Implementation for the 1915 Çanakkale Bridge (Page:51). - Yusuf ZORBA, Selçuk NASAnalysis of Marine Traffic by Simulation Method in Liquid Bulk Terminals (Page:52). - Emin Deniz ÖZKAN, Umay Uzunoğlu KOÇER, Selçuk NAS, Özgür İŞLEK, Emel TÜZGEN, Anıl DOĞANApplication of Queuing Theory to Ships Passing Through Turkish Straits (Page:53). - Ömer Can KARAKURT, Alper KILIÇA Review of Agent-Based Simulation in Maritime Transport (Page:54). - Burcu ÇELİK, Yusuf ZORBAAn Application of Agent-Based Modeling for the Maritime Transportation (Page:55). - Yusuf ZORBA
Lunch Break 12:45 - 14:00	



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14:00 - 15:15	14:00 - 15:15
MARITIME TRADE, LOGISTICS & PORT OPERATIONS	MARITIME TRANSPORTATION MANAGEMENT
Moderator: Asst. Prof. Pelin BOLAT	Moderator: Asst. Prof. Fırat BOLAT
<ol style="list-style-type: none">1. Industry 4.0, Industrial Internet of Things and Shipping 4.0 Epoch: Tasks, Challenges and Problems (Page:16). - Vladlen SHAPO2. A Review of International Standards of Environmental Noise and Its Adverse Effects on Port Workers (Page:57). - Ece ÖZSEVER, Aydın ŞİHMANTEPE3. Technological Advancements and Innovation in Logistics Industry: Perspectives of Maritime Faculty Students (Page:58). - Nazlı Gülfem GİDENER ÖZAYDIN, Cansu YILDIRIM4. The Overview of the Newly Opened Arctic Routes in Terms of World Maritime Shipping (Page:59). - Fatih AKKUŞ, Ercan AKAN, Murat YILDIZ5. A Brief Comparison of International and National Regulations on Preparedness Response and Co-Operation to Pollution Incidents by Oil, HNS: Status of Pollution Response Organization (Page:60). - Cihat AŞAN, Aydın ŞİHMANTEPE	<ol style="list-style-type: none">1. Analysis of Marine Traffic Density Using AIS Data: An Application in the Iskenderun Bay (Page:61). - Burak Kundakçı, SELÇUK NAS2. The Effects of Electronic Navigation Devices on Marine Accident Occurrences (Page:62). - Mehmet KAPTAN, Serdar YILDIZ, Özkan UĞURLU, Umut YILDIRIM3. Shipmaster Evaluation System for the Safety of Navigation and Fleet Management (Page:63). - Yusuf ZORBA, Selçuk NAS4. Examination of Ships Detentions by Years in Port State Controls (Page:64). - Gülden ORAL, Alper KILIÇ5. Training and Assessing Software in MET (Page:8.) - Valentin V. TARASOV, Anatoliy P. GERASIMOV, Aleksei STRELKOV
Best Paper Awards & Closing 16:00	