



OICWE 2020



مؤتمر عمان الدولي لهندسة وإدارة مصادر المياه

Oman's International Conference on Water Engineering and Management of Water Resources

OICWE2020 Programme



نحو مستقبل مستدام للمياه
Towards a Sustainable
Water Future

9 - 11 November 2021

٩ - ١١ نوفمبر ٢٠٢١م

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٩ - ١١ نوفمبر ٢٠٢١م

الهندسة المدنية ومسح الكميات
الكلية العسكرية التقنية
سلطنة عمان

**Oman's International Conference on
Water Engineering and Management of Water Resources
Towards a Sustainable Water Future**

Military Technological College

Sultanate of Oman

9 - 11 November 2021



Oman's International Conference on Water Engineering & Management of Water Resources OICWE2020 Towards a Sustainable Water Future

9 -11 November 2021

Department of Civil Engineering & Quantity Surveying
Military Technological College
Muscat, Sultanate of Oman

Programme

Tuesday, 9 th November 2021 (Venue: MTC Auditorium)	
Ceremony & Opening Session	
08:00 – 10:30	Registration & Coffee
11:00 – 12:30	Opening Ceremony
12:10 – 12:20	Keynote Paper OWC-211: Management of Water Resources in Sultanate of Oman <i>S. Al Khanbashi</i>
12:20 – 12:40	Keynote Paper OWC-100: Oman's Aflaj - Celebrating National Heritage <i>A. Badr</i>



Wednesday, 10th November 2021

(Venue: Online)

Plenary Session 1

Water and Wastewater Treatment (Part A)

Session Chair: *Aqeed Dr. M. Al Siyabi (Dean of MTC) & Dr. J. Venables*

11:00 -11:20	Keynote Paper OWC-411: Engineered Soil: Innovative Techniques Towards Saving Water <i>S. Al-Ismaily</i>
11:20 -11:35	OWC-102: Treatment of Industrial Wastewater Effluents Using Electrochemical Advanced Process with Diamond Electrodes <i>N.D. Mu'azu</i>
11:35 -11:50	OWC-127: Assessment of Helminths Ova in Wastewater <i>I.N. Al Sulaimi, M.A. Al-Mamun and A. Sana</i>
11:50 -12:05	OWC-111: Bromate Removal from Drinking Water Using Adsorbates and ZnO (Zinc Oxide) Nanoparticles <i>Z.K. AlHajji, M. Ahmed and J.N. AL Sabahi</i>
12:05 -12:20	OWC-124: Cosmo-RS Screening of Ionic Liquids for Perfluorooctanoic Acid <i>M. Grabda and S. Oleszek</i>
12:20 -12:30	Short Break



Wednesday, 10th November 2021

(Venue: Online)

Plenary Session 2

Water and Wastewater Treatment (Part B)

Session Chair: *Aqeed Eng. A. Al Shibli (Director of Applied Research, MTC) & Prof. J.B. Williams*

12:30 -12:50	Keynote Paper OWC-304: Research-Led Innovation to Deliver Sustainable Wastewater and Drainage Technologies <i>J.B. Williams, F. Couceiro, D. Hutchinson, T.G. Holloway, S. Benzing, A. Lawrence, E. Williamson and A. Baird</i>
12:50 -13:05	OWC-101: Novel Doubled Layered Hydroxides Nanocomposites for Effective Remediation of Water Contaminated with Toxic Pollutants <i>N.D. Mu'azu, M. Zubair, M.H. Essa and N. Jarrah</i>
13:05 -13:20	OWC-123: Adsorption Studies of Methylene Blue Removal by Low-Cost Adsorbent <i>R.A. Mahfud, P.S. Raju and F.O. Mahammed</i>
13:20 -13:35	OWC-105: Cost effective and energy saving technologies for industrial wastewater treatment process <i>M.N. Alkhazaleh, A.M. Rajesh, S. Binumol, G. Baskar and S.M. Al Ghaithi</i>
13:35 -13:50	OWC-118: Towards Sustainable Wastewater Treatment - Evaluation of Two Technologies <i>B.M. Alwahaibi, A. Al-Mamun, M.S. Baawain and H. Omidvarbor</i>
13:50 -14:30	Break



Wednesday, 10th November 2021

(Venue: Online)

Plenary Session 3 Sustainability and Environmental Impact (Part A)

Session Chair: *Eng. B. Al Ghunaimi (VDAA, MTC) & Mr. R. Venables*

14:30 -14:50	Keynote Paper OWC-400: Desalination Sustainability – The Need to Think Again <i>A. Badr</i>
14:50 -15:05	OWC-106: Management Options for Extending the Lifecycle of Reverse Osmosis Membranes and their Environmental Assessment <i>J. El Kharraz, A. Almajraf, A. Alaoufi, A. Al-Hinaai, R. Dridi, J. Allison, A. Al-Busaidi, A. Mushtaque, K. Al Rahbi, M. Al Mahdouri, J. Landaburu, S. Molina and J. Senán</i>
15:05 -15:20	OWC-410: Water Footprint Analysis of Construction Aggregates in Qatar <i>M. Wayman, K.E. Hassan and M.S. Al-Kuwari</i>
15:20 -15:40	Keynote Paper OWC-407: Impacts of Climate Change on Wadi Diqah River Basin in Oman <i>M. A. Tomaszekiewicz</i>
15:40 -16:00	Short Break



Wednesday, 10th November 2021

(Venue: Online)

Plenary Session 4 Sustainability and Environmental Impact (Part B)

Session Chair: *Mr. R. Mangabhai & Dr. K.E. Hassan*

16:00 -16:20	Keynote Paper OWC-204: Managing Catchments Sustainably – Isn't one Person's Flood another Person's Water Resource? <i>J. Venables</i>
16:20 -16:35	OWC-107: Laundry Wastewater Characterization and Treatment for Reuse Purposes in Oman <i>A.S. Alhinai</i>
16:35 -16:50	OWC-502: Recycling Chilled Water Condensate from A/C Units to Reduce Water Scarcity in Oman <i>S.A. Khan, A.H. Al Abri and A. Badr</i>
16:50 -17:05	OWC-405: Stormwater Management Using Pervious Concrete Containing Sorghum Husk Ash and Recycled Concrete Aggregates <i>M.A. Tijani, W.O. Ajagbe, A.A. Ganiyu, A.S. Aremu, S.O.A. Olawale and O.A. Agbede</i>
17:05	End of Day 2



Thursday, 11th November 2021

(Venue: Online)

Plenary Session 5 Water Structures

Session Chair: Dr. A. Badr (Chair of OICWE2020, MTC) & Prof. D.E. Reeve

11:00 - 11:20	Keynote Paper OWC-701: Experimental Investigation of Bimodal Wave Overtopping <i>D.E. Reeve</i>
11:20 - 11:35	OWC-707: Sliding Stability of Dayqah Dam Under Seismic Loads <i>M.S. Chowdhury and A. Badr</i>
11:35 - 11:50	OWC-916: Buckling Behaviour of Thin Shell Concrete Arch Dams with Geometrical Nonlinearities <i>H.A. Al Lawati and F.K. Al Jahwari</i>
11:50 - 12:05	OWC-917: Flash Floods Mitigation Using Structural Measures in Egypt <i>M. Abdel-Fattah, S.A. Kantoush and T. Sumi</i>
12:05 - 12:20	OWC-708: Suitability of Commonly Used Design Storm Profiles for Oman <i>A.G. Awadallah and K.H. Hamed</i>
12:20 - 12:30	Short Break



Thursday, 11th November 2021

(Venue: Online)

Plenary Session 6 Mathematical Modelling and Simulation

Session Chair: *Dr. M.S. Chowdhury (MTC) & Prof. Y. Xuan*

12:30 - 12:50	Keynote Paper OWC-913: Quantitative Modelling of Hydroclimatic Extremes <i>Y. Xuan and H. Wang</i>
12:50 - 13:05	OWC-901: Modelling Heavy Metal Concentration in Kainji Hydropower Reservoir, Nigeria <i>A.A. Mohammed, B.F. Sule, A.W. Salami and A.G. Adeogun</i>
13:05 - 13:20	OWC-911: Forecasting Effluent Turbidity and pH in Jar Test Using Radial Basis Neural Network <i>N.K. Asmel, R.R. Al-Nima, F.I. Mohammed, A.M. Al Saadi and A.A. Ganiyu</i>
13:20 - 13:35	OWC-902: Field Investigation and Numerical Modelling of Drainage Systems in Coastal Regions <i>S.B. Mitchell and O. Onabule</i>
13:35 - 13:50	OWC-914: Study of Riser Reactor Design Using Simultaneous Ordinary Differential Equations (ODE) <i>R. Mahfud</i>
13:50 - 14:30	Break



Thursday, 11th November 2021

(Venue: Online)

Plenary Session 7 Water Distribution Systems

Session Chair: *Dr. A.A. Ganiyu (MTC) & Dr. S.A. Al-Mamary*

14:30 - 14:50	Keynote Paper OWC-408: Effect of Climate Change on Aflaj in the Sultanate of Oman <i>S.A. Al-Mamary</i>
14:50 - 15:05	OWC-306: Management of Water Losses in Water Distribution Systems Using Lean Six Sigma Framework <i>J.S. AlDairi and A. Badr</i>
15:05 - 15:20	OWC-301: Hydraulic Analysis of Water Distribution Networks at the University of Ibadan <i>S.O. Adesogan, B.F. Sasanya, W.O. Ajagbe, A.T. Akinmuyiwa and A.A. Ganiyu</i>
15:20 - 15:35	OWC-703: Gravity-Fed Rural Water Supply Design in Mount Rinjani Lombok for Sustainable Tourism <i>P. Mandiartha and A.N. Tanjung</i>
15:35 - 15:45	Short Break

Closing Session

Session Chair: *Aqeed Dr. M. Al Siyabi (Dean of MTC) & Dr A. Badr (Chair of OICWE2020)*

15:45 -17:00	Discussion, Awards and Closing Remarks
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