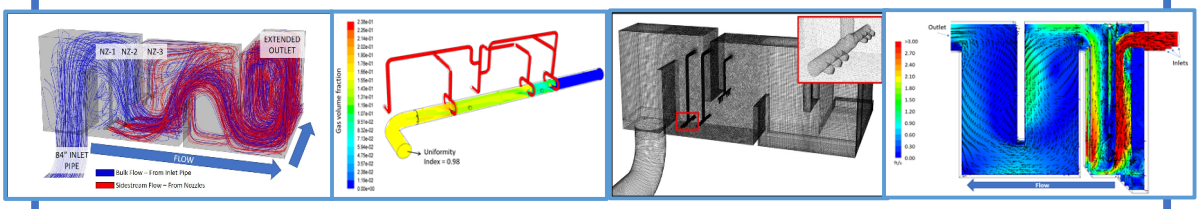
IOA-PAG Webinar Series

OZONE CFD 101: HOW TO SUCCESSFULLY UTILIZE CFD TO IMPROVE MIXING, TRANSFER, AND DISINFECTION

JUNE 25, 2020 at 10-Noon Central Time (15:00-17:00 UTC)

As ozone doses and concentrations increase, design of contactors can benefit significantly by using CFD modeling. This webinar introduces the basics of computational fluid dynamics. Attendees will gain a broad understanding of best practices for implementation of CFD modeling including meshing, turbulence modeling, and verification and validation of models through ozone-specific case studies.



IOA Members: Free - Non-members: $45 - Event Sponsor: $200

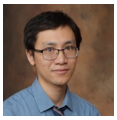
https://ioa-pag.org/webinar-ozone-cfd/

PRESENTERS

Dr. Sri Pathapati, Director of R&D at Mazzei Injector Company

CFD 101 for Water Treatment: Models, Methods, Do's and Don'ts

Sri has 15 years of experience in physical testing, design optimization and multiphase CFD modeling. Sri, to his surprise, received the 2013 ASCE Rudolph Hering medal for CFD work and is happy to be on the team that won the 2020 ASCE State-of-the-Art of Civil Engineering award. Sri loves water, engineering, guitar, reading, and Florida Gators football (and CFD of course).



Dr. Jie Zhang, P.E., CFD Engineer at Carollo Engineers

CFD Simulation of Ozone and Disinfection By-Products Transport at the Tippin WTP, Tampa, Florida

Dr. Jie Zhang is an engineer at Carollo Engineers, Inc., with expertise in numerical modeling. He has extensive experience in developing and evaluating CFD models of headworks, pump stations, flocculation and sedimentation basins, UV systems, and clearwells. He established and served as the 1st chair of ASCE EWRI task committee on computational fluid dynamics from 2015 to 2017. He served as the co-editor of a CFD primer book published in 2019 which was selected for the 2020 ASCE State of the Art of Civil Engineering Award.

Carrie Knatz, P.E., Principal at CDM Smith

Using CFD to Design a 320-mgd Ozone Facility for Houston's Northeast Water Purification Plant

Carrie Knatz is a senior hydraulic engineer for CDM Smith and a specialist in treatment plant hydraulics. Ms. Knatz has over 20 years of experience in the application of CFD modeling for water treatment design. She has served as an officer for the ASCE EWRI CFD Task Committee since inception in 2017 and authored two case study chapters in the CFD book published in 2019, which was selected for the 2020 ASCE State of the Art of Civil Engineering Award.

Chris Schulz, P.E., BCEE, Senior Vice President at CDM Smith

Using CFD to Design a 320-mgd Ozone Facility for Houston's Northeast Water Purification Plant

Chris Schulz is a senior water treatment process designer for CDM Smith and a specialist in ozone disinfection and advanced oxidation processes. Mr. Schulz has been active in water treatment process research, which has led to development of new water treatment technologies for which he holds 11 US patents. He has published seven articles in peer-reviewed journals, and presented more than 70 papers at professional engineering conferences. He is currently a Board member of the IOA Pan-American Group and IOA International.

Dr. Wim Audenaert, CEO of AM-TEAM

The Practical Application of CFD and Kinetic Modelling to Limit Bromate Formation, Save Costs and Obtain Maximal Disinfection and Oxidation Performance

Wim Audenaert has 11 years of water industry experience and finished a PhD on ozonation and AOP modelling in 2012. He co-founded and leads the company AM-TEAM, providing cutting-edge CFD and process simulation services to the water industry worldwide. AM-TEAM has ozonation modelling activities in the drinking water, wastewater and water reuse fields. Wim is an active member of several international networks, including WEF, IWA and IOA.

Dr. Daniel (Dan) W. Smith, Professor Emeritus, University of Alberta - **MODERATOR**

Dan developed his first ozone-based water treatment system in 1971, while an Officer in the U.S. Public Health Service. He held positions in consulting, teaching and research and he retired from the University of Alberta in 2006. His ozone research focused on 2-phase mass transfer and laser Doppler based measurement of fluid dynamics in reactors. In 2013 he was elected an Officer of the Order of Canada.

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International Ozone Association – Pan-American Group. Questions: jennifer.fuel@snwa.com