

CONFERENCE PROGRAMME:

25. Salt Water Intrusion Meeting, 17-22 June 2018, Gdańsk, Poland
Conference venue: Mercure Gdańsk Stare Miasto hotel,
 ul. Jana Heweliusza 22, 80-890 Gdańsk, phone: +48 58 321 00 00
All oral sessions will be held in Gdańska Meeting Room, ground floor

SUNDAY, 17 JUNE

15:00-21:00	Registration (lobby)
16:30-18:30	Gdańsk Old Town tour (departure from Mercure hotel)
19:00-21:00	Ice breaking party (restaurant)

MONDAY, 18 JUNE

08:00-	Registration (lobby)
09:00-10:30	CONFERENCE OPENING -CELEBRATING 50 YEARS OF SWIM: ANNIVERSARY SESSION Chair: <i>Kristine Walraevens & Adam Szymkiewicz</i> SWIM reflections: <i>Luc Lebbe, Gualbert Oude Essink, Clifford Voss, Emilio Custodio, Bo Leander, Bohdan Kozerski</i> Featured presentation: <i>Vincent Post</i> Fifty years of Salt Water Intrusion Meetings (p. 212)
10:30-11:00	Coffee break (lobby)
11:00-12:30	MONDAY, 18 JUNE, SESSION 1 - CASE STUDIES (1) Chair: <i>Gualbert Oude Essink</i>
11:00-11:30	Featured presentation: <i>Andrzej Sadurski & Adam Szymkiewicz</i> Saltwater intrusion on the Polish Baltic coast (p. 265)
11:30-11:45	<i>Rena Meyer</i> Past and future evolution of saltwater intrusion in Southern Denmark (p. 175)
11:45-12:00	<i>Emilio Custodio</i> Salinity problems in Mediterranean and island coastal aquifers in Spain (p. 40)
12:00-12:15	<i>Luc Lebbe</i> Salt water intrusion in the breakthrough valley of the river Aa between the Flemish coastal plain and the Saint Omer basin (France) (p. 151)
12:15-12:30	<i>Kristine Walraevens</i> Groundwater salinization in arid and semi-arid zones (p. 5)
12:30-14:00	Lunch break (restaurant)
14:00-15:30	MONDAY, 18 JUNE, SESSION 2 - GEOPHYSICS (1) Chair: <i>Maurizio Polemio</i>
14:00-14:30	Featured presentation: <i>Helga Wiederhold</i> Coastal investigations – a challenge for hydrogeophysics (p. 352)
14:30-14:45	<i>Joost Delsman</i> Large-scale, probabilistic airborne salinity mapping for groundwater management in Zeeland, The Netherlands (p. 63)
14:45-15:00	<i>Dieter Vandeveld</i> Groundwater salinity mapping of the Belgian coastal zone to improve local freshwater storage availability (p. 341)
15:00-15:15	<i>Marieke Paepen</i> Assessment of groundwater discharge and saltwater intrusion in the Belgian coastal area through geophysics (p. 201)

15:15-15:30	<i>Andrew Charles Knight</i> Potential for a vast offshore fresh groundwater body in the Gambier Embayment, Australia (p. 129)
15:30-16:00	Coffee break (lobby)
16:00-18:00	MONDAY, 18 JUNE, SESSION 3 - MODELING (1) Chair: <i>Jesus Carrera</i>
16:00-16:30	Featured presentation: <i>Jean-Christophe Comte</i> Spatiotemporal patterns of saltwater intrusion associated to geological heterogeneities and complex tidal forcing: insights from field-scale, high-resolution investigations (p. 38)
16:30-16:45	<i>Waldemar Świdziński</i> Modeling of groundwater flow and salinity evolution near TSF Żelazny Most, Poland (p. 311)
16:45-17:00	<i>Anke Schneider</i> Modeling saltwater intrusion scenarios for a coastal aquifer at the German North Sea (p. 274)
17:00-17:15	<i>Mark Bakker</i> What goes up must come down (p. 20)
17:15-17:30	<i>Pieter J. Stuyfzand</i> Analytical modeling of freshwater lenses in different settings: from coastal embryo dunes in the Netherlands to inland mega dunes in Abu Dhabi (p. 296)
17:30-17:45	<i>Frans Schaars</i> Modeling and monitoring methods to prevent salt water intrusion caused by artificial dune construction (p. 31)
17:45-18:00	<i>Behzad Mozafari</i> On the use of COMSOL Multiphysics for seawater intrusion in fractured coastal aquifers (p. 179)
18:00-20:30	Poster session & snack (lobby)

TUESDAY, 19 JUNE

08:30-	Registration (lobby)
09:00-10:30	TUESDAY, 19 JUNE, SESSION 4 - COASTAL AQUIFER MANAGEMENT (1) Chair: <i>Leanne Morgan</i>
09:00-09:30	Featured presentation: <i>Adrian Werner</i> Classes of seawater intrusion: An extension to consider the effects of offshore aquifers (p. 349)
09:30-09:45	<i>Mohammad Azizur Rahman</i> Characterization of a regional coastal zone aquifer using an interdisciplinary approach – an example from Weser-Elbe region, Lower Saxony, Germany (p. 236)
09:45-10:00	<i>Laura Martinez</i> Integrated methodology to characterize hydro-geochemical properties in an alluvial coastal aquifer affected by seawater intrusion (SWI) and submarine groundwater discharge (SGD) (p. 173)
10:00-10:15	<i>Perry de Louw</i> Land subsidence by peat oxidation leads to enhanced salinization through boils in Dutch polders (p. 54)
10:15-10:30	<i>Bill Hu</i> Modeling seawater intrusion to coastal aquifers in south coast of Laizhou Bay, China (p. 33)
10:30-11:00	Coffee break (lobby)

11:00-12:30	TUESDAY, 19 JUNE, SESSION 5 - COASTAL AQUIFER MANAGEMENT (2) Chair: Holly Michael
11:00-11:15	<i>Gualbert Oude Essink</i> Building up 3D salinity models for estimating fresh groundwater resources in major deltas under global and climate stresses (p. 195)
11:15-11:30	<i>Daniel Zamrsky</i> Estimating characteristic times of regional groundwater systems along the global coastline with regard to past sea level fluctuations and sediment accumulation patterns (p. 360)
11:30-11:45	<i>Joeri van Engelen</i> 3D Paleohydrogeological modelling of the Nile Delta (p. 338)
11:45-12:00	<i>Geoffrey Cromwell</i> Three-dimensional lithologic model of the San Diego Coastal Aquifer, Southern California, USA (p. 39)
12:00-12:15	<i>Leanne Morgan</i> Untreated groundwater supply and the Christchurch coastal aquifer system (p. 178)
12:15-12:30	<i>Namsik Park</i> Optimal management of freshwater Lens for extreme droughts in Tongatapu Island (p. 13)
12:30-14:00	Lunch break (restaurant)
14:00-15:30	TUESDAY, 19 JUNE, SESSION 6 - SUBMARINE GROUNDWATER DISCHARGE (1) Chair: Jimmy Jiao
14:00-14:30	Featured presentation: <i>Carlos Duque</i> Hydrogeological flow paths in coastal areas; a dismissed factor for the delivery of nutrients? (p. 74)
14:30-14:45	<i>Michael Böttcher</i> Ferruginous groundwaters as a source of P, Fe, and DIC for coastal waters of the southern Baltic Sea: (Isotope) hydrobiogeochemistry and the role of an iron curtain (p. 163)
14:45-15:00	<i>Beata Szymczycha</i> Deep submarine groundwater discharge indicated by pore water chloride anomalies in the Gulf of Gdańsk, southern Baltic Sea (p. 307)
15:00-15:15	<i>Emilia Bubliewska</i> A new method of testing groundwater inflow to the seabed, Puck Bay, South Baltic (p. 29)
15:15-15:30	<i>Ulf Mallast</i> Spatiotemporal variability of SGD as indicated by UAV based thermal infrared measurements (p. 169)
15:30-16:00	Coffee break (lobby)
16:00-18:00	TUESDAY, 19 JUNE, SESSION 7 - MODELING (2) Chair: Torben Sonnenborg
16:00-16:15	<i>Christian Langevin</i> Variable-density flow and transport in MODFLOW 6 (p. 150)
16:15-16:30	<i>Vincent Post</i> It's hydrogeology but not as we know it: Sub-seafloor groundwater flow driven by thermal gradients (p. 66)

16:30-16:45	<i>Su Yean Teh</i> MANTRA-O18: An extended version of SUTRA modified to simulate salt and d18O transport amid water uptake by plants (p. 329)
16:45-17:00	<i>Husam Baalousha</i> Modelling saline groundwater pumping at the beach for reverse osmosis desalination in Qatar (p. 12)
17:00-17:15	<i>Shaked Stein</i> Modeling the impact of saline groundwater pumping from coastal aquifers beneath the fresh-saline water interface for desalination purposes (p. 282)
17:15-17:30	<i>Abdelrahman Abdelgawad</i> Transient investigation of the critical pumping rate in laboratory-scale coastal aquifer (p. 1)
17:30-17:45	<i>Barret Kurylyk</i> Short- and long-term salt water intrusion in response to water stress and modified geology at the Palmyra Atoll National Wildlife Refuge (p. 148)
17:45-18:00	<i>Hongfan Cao</i> Impact of the air injection well position on the performance of preventing seawater intrusion (p. 32)
18:30-19:30	Soccer match (18:20 meeting at the hotel entrance)
20:00-22:00	Barbecue party (hotel terrace / restaurant)

WEDNESDAY, 20 JUNE

07:45-18:00	Field trip [1] : SWIM to Hel (departure from Mercure hotel)
08:15-18:00	Field trip [2]: Castle & Delta (departure from Mercure hotel)

THURSDAY, 21 JUNE

09:00-10:30	THURSDAY, 21 JUNE, SESSION 8 - GEOCHEMISTRY Chair: <i>Pieter Stuyfzand</i>
09:00-09:30	Featured presentation: <i>Yoseph Yechieli</i> Rate of seawater intrusion into a deep aquifer determined with radioactive noble gas isotopes of 81Kr and 39Ar (p. 359)
09:30-09:45	<i>Vincent Post</i> Can bomb-peak tritium persist in the transition zone? A case study from the German island of Langeoog (p. 213)
09:45-10:00	<i>Janek Greskowiak</i> Modelling reactive transport of Si and 222Rn to constrain tide-induced seawater infiltration rates at a meso-tidal beach (p. 89)
10:00-10:15	<i>Dongmei Han</i> Migration of shallow saline groundwater across a regional aquitard inferred from Cl and stable isotope in the North China Plain (p. 73)
10:15-10:30	<i>Xiaoying Zhang</i> Composition and function shift of microbial communities in mangrove seedlings inhabited mudflat during tidal cycles (p. 362)
10:30-11:00	Coffee break (lobby)

11:00-12:30	THURSDAY, 21 JUNE, SESSION 9 - GEOPHYSICS (2) Chair: <i>Alexander Vandenbohede</i>
11:00-11:15	<i>Matthieu Baisset</i> High frequency saltwater intrusion monitoring using borehole geophysical tools (SMD) (p. 14)
11:15-11:30	<i>Andrea Palacios</i> Time-lapse cross hole electrical resistivity tomography (CHERT) for monitoring seawater intrusion dynamics in a Mediterranean aquifer (p. 203)
11:30-11:45	<i>Laura del Val</i> Heat dissipation test with fiber-optic distributed temperature sensing to estimate groundwater fluxes in an unconsolidated coastal aquifer (p. 61)
11:45-12:00	<i>Jude King</i> A quantitative review of 1D airborne electromagnetic inversion methods: A focus on fresh-saline groundwater mapping (p. 122)
12:00-12:15	<i>Ian Gottschalk</i> Using geophysical data to build more realistic saltwater intrusion models (p. 87)
12:15-12:30	<i>Albert Folch</i> Seawater intrusion dynamics monitoring with geophysical techniques combination (p. 82)
12:30-14:00	Lunch break (restaurant)
14:00-15:30	THURSDAY, 21 JUNE, SESSION 10 - SUBMARINE GROUNDWATER DISCHARGE (2) Chair: <i>Christian Siebert</i>
14:00-14:15	<i>Jimmy Jiao</i> Submarine groundwater discharge derived nutrients and red tide outbreaks in Tolo Harbor, Hong Kong (p. 114)
14:15-14:30	<i>Till Oehler</i> Submarine fresh groundwater discharge from a volcanic island into a coral reef (Lombok, Indonesia) (p. 194)
14:30-14:45	<i>Christophe Monnin</i> Seasonal behavior of dissolved inorganic carbon, silica and barium along a salinity gradient in a shallow coastal lagoon (Etang de La Palme, Southern France) (p. 176)
14:45-15:00	<i>Marc Diego-Feliu</i> Ra end-member variability in a dynamic subterranean estuary of a microtidal Mediterranean coastal aquifer (p. 71)
15:00-15:15	<i>Janis Ahrens</i> Efficient nutrient recycling in the subterranean estuary of an exposed sandy beach (p. 3)
15:15-15:30	<i>Anner Paldor</i> Deep submarine groundwater discharge facilitated by seawater circulation in a confined aquifer (p. 205)
15:30-16:00	Coffee break (lobby)
16:00-17:45	THURSDAY, 21 JUNE, SESSION 11 - MODELING (3) Chair: <i>Chunhui Lu</i>
16:00-16:30	Featured presentation: <i>Maria Pool</i> Effects of periodic temporal fluctuations and fluid density effects on mixing and chemical reactions in coastal aquifers (p. 211)

16:30-16:45	<i>Georg Houben</i> Sandtank experiments and numerical modeling of coastal aquifer heterogeneity: fringing reefs, vertical flow barriers and structured conductivity fields (p. 107)
16:45-17:00	<i>Masahiro Takahashi</i> Laboratory scale investigation of dispersion effects on saltwater movement due to cutoff wall installation (p. 323)
17:00-17:15	<i>Thuy T.M. Nguyen</i> Seawater intrusion in coastal aquifers: combined effect of salinity and temperature (p. 192)
17:15-17:30	<i>Holly Michael</i> Effects of offshore pumping on groundwater resources in coastal aquifers (p. 358)
17:30-17:45	<i>Marco Dentz</i> Mixing, dispersion and reaction under transient flow conditions (p. 64)
17:45-18:15	Presenting SWIM 2022 candidate(s)
20:00	Conference dinner (restaurant)

FRIDAY, 22 JUNE

09:00-10:30	FRIDAY, 22 JUNE, SESSION 12 - CASE STUDIES (2) Chair: <i>Emilio Custodio</i>
09:00-09:15	<i>Levi Eldad</i> Delineating the fresh/ saline groundwater interface in a subsea aquifer using Ex-Bz marine time domain (p. 157)
09:15-09:30	<i>Md. Mizanur Rahman Sarker</i> Salinity distribution in different coastal aquifers of southwest Bangladesh (p. 267)
09:30-09:45	<i>Floris Naus</i> Contemporary groundwater salinity in Southwestern Bangladesh as steered by hydrogeological conditions under palaeohydrological and contemporary settings (p. 186)
09:45-10:00	<i>Ángela María Blanco Coronas</i> Influence of the sea level oscillations on groundwater temperature and salinity in the coastal Motril-Salobreña Aquifer (p. 27)
10:00-10:15	<i>Tybaud Goyetche</i> Effects of a heavy rain event on the hydrodynamical and hydrogeochemical parameters in an alluvial coastal aquifer (p. 88)
10:15-10:30	<i>Sebastian Huizer</i> Impact of coastal forcing and groundwater recharge on the growth of a fresh groundwater lens in a mega-scale beach nourishment (p. 112)
10:30-11:00	Coffee break (lobby)
11:00-12:30	FRIDAY, 22 JUNE, SESSION 13 - HYDROGEOLOGY OF ISLANDS AND ATOLLS Chair: <i>Georg Houben</i>
11:00-11:30	Featured presentation: <i>Clifford Voss</i> Seawater flooding is becoming more frequent on low-elevation islands: Strategies to mitigate impacts on groundwater supply (p. 85)

11:30-11:45	<i>Chunhui Lu</i> Enhancing the freshwater lens volume of an island by reducing the hydraulic conductivity of the exterior region (p. 168)
11:45-12:00	<i>Tobias Holt</i> Evolution of a young freshwater lens on a currently developing barrier island, 'Ostplate', Spiekeroog (p. 101)
12:00-12:15	<i>Ferdinand Oberle</i> Atoll groundwater movement from rainfall to overwash (p. 193)
12:15-12:30	<i>Katsushi Shirahata</i> Tidal response method with simple decomposition techniques to determine hydraulic parameters of freshwater-lens aquifer (p. 283)
12:30-14:00	Lunch break (restaurant)
14:00-15:30	FRIDAY, 22 JUNE, SESSION 14 - COASTAL AQUIFER MANAGEMENT (3) Chair: <i>Wesley Danskin</i>
14:00-14:15	<i>Alexander Vandenbohede</i> Towards a MAR system for sustainable drinking water production in the Flemish polders (Belgium) (p. 340)
14:15-14:30	<i>Lucas Borst</i> MAR with salinization through the back door (p. 28)
14:30-14:45	<i>Marc Walther</i> Is sea water intrusion by groundwater over-abstraction even worse than what we expected? - Part 2: Understanding parameter sensitivity in field-scale (p. 348)
14:45-15:00	<i>Niels Hartog</i> Enabling the reuse of industrial wastewater to meet intense freshwater demands by greenhouse agriculture using Aquifer Storage and Recovery (ASR) (p. 95)
15:00-15:15	<i>Denis Neyens</i> Monitoring the groundwater quality/quantity from your desktop – application to salt water intrusion monitoring EMI: Environmental data Management Interface (p. 187)
15:15-15:30	<i>Joseph Hughes</i> Aquifer compaction—a threat to coastal aquifers (p. 111)
15:30-16:00	ANNOUNCING SWIM 2020: <i>Wesley Danskin</i> CONFERENCE CLOSING
16:00-16:30	Farewell coffee (lobby)