The 6th International Conference on Swimming Pool and Spa

Information & Programme

The Royal Tropical Institute

Amsterdam, 17 - 20 March 2015
Conference location:
Royal Tropical Institute (KIT)
Mauritskade 63
1092 AD Amsterdam
The Netherlands

Drinking Water excursion Tuesday March 17th

If you register yourself for the excursion on the registration form please read this info. From 13.00 – 16.00 hrs the excursion to the Jan Lagrand Plant Heemskerk will take place. The bus for the excursion will leave at 12.15 hrs from the entrance of the KIT. Please be in time we can’t wait for you. The bus will leave at 16.00 hrs from the Jan Lagrand Plant back to the KIT for the welcome reception.

Information on the Welcome reception on Tuesday March 17th

The welcome reception will take place on Tuesday March 17th from 16.30 – 18.00 hrs at the KIT. There will be served drinks and snacks. The Welcome reception is together with the Dutch participants of the “Startschot Bhvbz” Conference who will take place in the KIT on 17 March. You have the possibility to pre-register yourself during the meet and greet.

Information about the conference dinner on Thursday March 19th

We will transfer by boat from KIT to the conference dinner. The boat will departure at 17.15 hrs for a boat trip through the canals and historic Amsterdam. During the boat trip we will serve drinks and finger food.

The conference dinner will take place from 18.30 – 22.00 hrs at “De Sint Olofs Kapel”. The dinner is an informal walking dinner. The Olafs Chapel is a 3 minute walk from Amsterdam Central Station. After the dinner you can go your own way to your hotel. If you click on the follow link you can plan your trip [http://9292.nl/en](http://9292.nl/en).

Transport from Amsterdam Schiphol Airport to KIT:

by train directly from the airport to Amsterdam Central Station; every 15 minutes (transfer time 10 minutes). From Amsterdam Central Station take tram 9 which stops in front of KIT.

Taxis are also available at Amsterdam Central Station. For public transport in the Netherlands the OV-chipkaart is the ticket for public transport [click here](http://9292.nl/en). If you carry an OV-chipkaart with you, you will no longer need to think about strip tickets or metro and train tickets. You can travel on trains, trams, buses and metros with a single ticket. Available at NS ticket machines or NS information desk in the arrival hall.
Outline programme “Pool and Spa Conference” 17 – 20 March 2015 the Netherlands

Tuesday 17-03-2015
12.15 – 16.00  Excursion Drinking water production plant; PWN Jan Lagrand Plant Heemskerk
16.30 – 18.00  Welcome reception KIT in Amsterdam (pre-registration possible)

Wednesday 18-03-2015
08.00 – 09.00  Registration
09.00 – 09.20  Key note presentation and opening of the conference by L.C. Rietveld
09.20 – 10.20  session 01: Microbiological health
10.20 – 11.00  Coffee break (poster session)
11.00 – 12.20  session 02: Disinfection by-products
12.20 – 13.20  Lunch
13.20 – 14.00  Flash presentations 1
14.00 – 15.20  session 03: Biofilms
15.20 – 15.40  Tea break
15.40 – 16.20  session 04: Monitoring and surveillance
16.20 – 16.50  Keynote presentation by R. van der Vliet

Thursday 19-03-2015
08.00 – 09.00  Registration for one day attendants
09.00 – 10.20  session 05: Chemical health
10.20 – 10.40  Coffee break (poster session)
10.40 – 12.00  session 06: Swimming ponds
12.00 – 13.00  Lunch
13.00 – 13.40  Flash presentations 2
13.40 – 14.40  session 07: Guidelines and regulations
14.40 – 15.00  Tea break
15.00 – 16.00  Session 08: New analytical methods
16.00 – 17.15  Session 09: Education and behaviour
17.15 – 18.30  Transport to conference dinner
18.30 – 22.00  Conference dinner, with presentations and selection of next ICSPS

Friday 20-03-2015
08.30 – 09.00  Registration for one day attendants
09.00 – 09.30  Key note presentation “WASUP”
09.30 – 10.50  session 10: Safety and Emerging topics
10.50 – 11.10  Coffee break (poster session)
11.10 – 12.30  session 11: Hygienic aspects
12.30 – 13.40  Closing of the conference and lunch
**Conference programme**

**Wednesday**

18-03-2015

08.00 – 09.00 Registration
09.00 – 09.20 Key note presentation: Holland Waterland by L.C. Rietveld

**Session 01**

**Microbiological health**

Chair

A. Mavridou

09.20 – 09.40 Systematic review of outbreaks associated with hot tubs and spas - United States, 1978–2010
M.C. Hlavsa, K. Schnell, M.J. Beach, USA

09.40 – 10.00 Resistance profiles of P. aeruginosa isolates deriving from various water environments including swimming pools
O. Pappa, A. Vantarakis, A.M. Kefala, A. Mavridou, A. Galanis, Greece

10.00 – 10.20 The microbiological quality of water in fish spas and the associated health risk
F.M. Schets, H.H.J.L. van den Berg, R. de Zwaan, D. van Soolingen, A.M. de Roda Husman, the Netherlands

10.20 – 10.40 Fast set pools – are they a hygienic risk?
T. Holtmeier, C. Höller, Germany

10.40 – 11.00 Coffee break

**Session 02**

**Disinfection by-products**

Chair

L.C. Rietveld

11.00 – 11.20 Impact of different treatment processes on concentrations of DBPs and DBP precursors in swimming pools
I. Slavik, B. Skibinski, W. Uhl, Germany

11.20 – 11.40 Elimination of trihalogenmethanes versus microbial contamination
W. Mascher, F.F. Reinthaler, A. Grisold, F. Mascher, Austria

11.40 – 12.00 Laboratory studies on the effect of ozonation on THM formation in swimming pool water
K.M.S. Hansen, A. Spiliotopoulou, W.A. Cheema, H.R. Andersen, Denmark

12.00 – 12.20 Inorganic disinfection by-products: Chlorate and Nitrate and their impact on UV treatment
L. Erdinger, T. Schlosser, Germany

12.20 – 13.20 Lunch
13.20 – 14.00 Flash session: 5 minutes poster presentations
Chair H.R. Andersen

Efficacy evaluation of footbath in reducing surface contamination
M. Mata, J.R. Nogueira, A.M. Heitor, Portugal

Disinfection of water and asthma
D. Francioso, S. Ribiscini, G. Pocetta, Italy

Electrochemical and copper disinfection with minimal chlorination: a two-year case study in an intense bather loaded public training pool
P. Lievens, R. Calders, R. Vanlangendonck, J. Van den Bulcke, A. Jobee, Belgium

Disinfection of swimming pool water with Chlorine gas, generated in situ by salt electrolysis
A. Reuß, Germany

Session 03 Biofilms
Chair R. Sommer (to be confirmed)

14.00 – 14.20 Biofilm formation potential of chlorinated and non-chlorinated swimming pool water
M.G.A. Keuten, M.C.F.M. Peters, J.C. van Dijk, M.C.M. van Loosdrecht, the Netherlands

14.40 – 15.00 Biofilm growth on swimming pool material
M.C.F.M. Peters, M.G.A. Keuten, M. de Kreuk, M.C.M. van Loosdrecht, L.C. Rietveld, the Netherlands

15.00 – 15.20 Pseudomonas aeruginosa on vinyl-canvas inflatables and foam teaching aids in swimming pools
F.M. Schets, H.H.J.L. van den Berg, R. Baan, G. Lynch, A.M. de Roda Husman, the Netherlands

Session 04 Monitoring and surveillance
Chair V. Romano Spica

15.40 – 16.00 Strategies for benchmarking and coping with oocyst-enriched faecal incidents in recreation water
G. Weiss, D. Weiss, Austria

16.00 – 16.20 Evaluation of an MPN test for the rapid enumeration of Pseudomonas aeruginosa in swimming pool and spa pool waters
D.P. Sartory, M. Brewer, A. Beswick, D. Steggles, United Kingdom

16.20 – 16.50 Keynote presentation by R. van der Vliet: Innovation in swimming
Thursday 19-03-2015

08.00 – 09.00  Registration for one day attendants

Session 05  Chemical health  C. Höller

09.00 – 09.20  *Pool chemical–associated injuries in public and residential settings — United States, 2003–2012*
M.C. Hlavsa, S.A. Collier, M.J. Beach, USA

09.20 – 09.40  *Indoor swimming pool attendance and respiratory and dermal health in schoolchildren - HITEA Catalonia*
L. Font-Ribera, C.M. Villanueva, E. Gràcia-Lavedan, A. Borràs-Santos, M. Kogevinas, J.P. Zock, Spain

09.40 – 10.00  *Disinfection byproducts in swimming pool: exposure and risk assessment*
S. Chowdhury, Saudi Arabia

10.00 – 10.20  *A comparison between freshwater and seawater swimming pools: From disinfection by-products profile to genotoxicity*
T. Manasfi, M. De Méo, B. Coulomb, C. Di Giorgio, J.L. Boudenne, France

10.20 – 10.40  Coffee break

Session 06  Swimming ponds  M. Weilandt

10.40 – 11.00  *Introduction into the topic, definitions, requirements*
M. Weilandt, Germany

11.00 – 11.20  *FLL- Recommendations for planning, construction, servicing and operation of outdoor swimming pools with biological water purification (Swimming and Bathing ponds)*
S. Bruns, Germany

11.20 – 11.40  *Limnological Aspects and Mechanisms of in situ Disinfection in Natural Swimming Ponds*
J. Spieker, Germany

11.40 – 12.00  *Hygienic Situation in Natural Swimming Ponds over the Course of a Decade*
A. Cordes, Germany

12.00 – 13.00  Lunch

13.00 – 13.40  Flash session: 5 minutes poster presentations  D. Heederik (to be confirmed)

*Disinfection by-products formation of UV treated swimming pool water*
A. Spiliotopoulou, K.M.S. Hansen, H.R. Andersen, Denmark

*Kinetics of chlorine consumption and DBP-formation with BFA-components*
P. Hua, X. Chen, E. Vasyukova, W. Uhl, Germany
**DBP exposure in an indoor chlorinated swimming pool and short term effects in biomarkers of genotoxicity and lung permeability: The pescina2 study**

**New approaches to evaluate legionella exposure and disease risk in persons attending spa**
P. Borella, G. Ferranti, A. Mansi, D. Minuto, A. Bargellini, I. Marchesi, Italy

**Chlorite, chlorate and bromate in pool water**
C. Vogel, P. Fecher, W. Dicke, C. Höller, U. Lessig, Germany

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**Session 07**
Chair: J. Bakker (to be confirmed)

**13.40 – 14.00**
*Developing a long-term strategy for improving health and safety at public swimming facilities in the United States*
M.J. Beach, USA

**14.00 – 14.20**
*A new bathing water regulation in the Netherlands – fit for the future!*
W. Reinhold, the Netherlands

**14.20 – 14.40**
*Swimming pool guidelines in the northern region of Portugal*
M. Mata, J. Rocha Nogueira, Portugal

**14.40 – 15.00**
Tea break

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**Session 08**
Chair: L. Erdinger

**15.00 – 15.20**
*A novel trichloramine analysis method, factors influencing trichloramine concentration in pool water and the effect of Uv treatment*
F. Soltermann, T. Widler, S. Canonica, G. Donzé, U. von Gunten, Switzerland

**15.20 – 15.40**
*Analysis of chlorinated by-products in swimming pool water by membrane introduction mass spectrometry – Influence of water physicochemical parameters*
N. Cimetière, N. Garandel, P. Humeau, France

**15.40 – 16.00**
*Indication of anthropogenic pollutants in swimming pool water via potassium*
T. Schlosser, Germany

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**Session 09**
Chair: P. Appel (to be confirmed)

**16.00 – 16.20**
*Swimming lessons and quality assurance of output*
M. Hol, the Netherlands

**16.20 – 16.40**
*Abstract Dutch Don’t Drown Foundation*
J. Rijpstra, the Netherlands

**16.40 – 17.00**
*Sign, shower, swim*
N.G.A. Zwilling, M.G.A. Keuten, P. Wilhelm, M.H.A. van Vuuren, the Netherlands
17.00 – 17.15  Information video for pool visitors on personal hygiene and tri chloramine  
T. Grummt, R. Junek, C. Schmalz, C. Zwiener, Germany

17.15 – 18.30  Transport to conference dinner
18.30 – 22.00  Conference dinner with presentations and selection of next ICSPS

Friday  
20-03-2015

08.30 – 09.00  Registration for one day attendants
09.00 – 09.30  Presentation WASUB5 team

Session 10  
Safety and Emerging topics
Chair  
J. Bierens

09.30 – 09.50  Entrapment accidents caused by drainage systems in swimming pools: A statistical study of accident victims and unsafe environments found in field research  
J.P. Avezaat, A. Göb, Germany

09.50 – 10.10  Measurement of entrapment hazards caused by drainage systems in swimming pools  
J.P. Avezaat, the Netherlands

10.10 – 10.30  Improving air quality of indoor swimming pools  
J.G. Middendorf, the Netherlands

10.30 – 10.50  Influence of hydrodynamic parameters on transfer of Disinfection By-Products in ambient air of indoor swimming Pool: use of Residence Time Distribution approaches on a reference basin  
P. Humeau, N. Garandel, J. Guilhot, M. Masri Idlibi, N. Cimetière, France

10.50 – 11.10  Coffee break

Session 11  
Hygienic aspects
Chair  
M.J. Beach

11.10 – 11.30  Biological removal of urea in chlorinated and non-chlorinated pool water treatment  
M.G.A. Keuten, M.C.F.M. Peters, L.C. Rietveld, J.C. van Dijk, M.C.M. van Loosdrecht, the Netherlands

11.30 – 11.50  Microflora and SPA  
V.R. Spica, S. Giampaoli, F. Valeriani, Italy

11.50 – 12.10  Repair of a shower population versus indicator organisms after chlorination  
M.C.F.M. Peters, M.G.A. Keuten, M. de Kreuk, M.C.M. van Loosdrecht. L.C. Rietveld, the Netherlands

12.10 – 12.30  Does the addition of salt affects the disinfection capacity of pool water?  
R. Sommer, S. Cervero-Arago, E. Holzhammer, Austria

12.30 – 13.40  Closing of the Conference and lunch
Posters

Electrochemical and copper disinfection with minimal chlorination: a two-year case study in an intense bather loaded public training pool
P. Lievens, R. Calders, R. Vanlangendonck, J. Van den Bulcke, A. Jobse, Belgium

Quality control of water in public swimming pools
Y.A. Sánchez, Colombia

Volatile DBPs in indoor swimming pools facilities
G. Fantuzzi, E. Righi, G. Predieri, G. Aggazzotti, Italy

Chlorite, chlorate and bromate in pool water
C. Vogel, P. Fecher, W. Dicke, C. Höller, U. Lessig, Germany

Ozone/Bromine as an alternative water disinfection system to chlorine in the German Standard DIN 19643 „Treatment of the Water of Swimming Pools and Baths“?
E. Stottmeister, M. Hoffmann, Germany

Transformation mechanisms of oxybenzone into bromoform in seawater swimming pools
T. Manasfi, S. Ravier, B. Temime-Roussel, B. Coulomba, J.L. Boudennea, France

Disinfection of swimming pool water with Chlorine gas, generated insitu by salt electrolysis
A. Reuß, Germany

New approaches to evaluate legionella exposure and disease risk in persons attending spa
P. Borella, G. Ferranti, A. Mansi, D. Minuto, A. Bargellini, I. Marchesi, Italy

Cryptosporidium oocyst and Cryptosporidium-sized microsphere removals from swimming pools through filtration
P. Lu, J.E. Amburgey, J.L. Murphy, V.R. Hill, C. Schneeberger, M.J. Arrowood, USA

Organic Micro Pollutants (OMPs) in swimming pool water
A. Fischer, M.C.F.M. Peters, M.G.A. Keuten, J.P. van der Hoek, the Netherlands

Disinfection of water and asthma
D. Francioso, S. Ribiscini, G. Pocetta, Italy

Occupational health in swimming pools: The case of Portugal
J. Rocha Nogueira, Portugal

Health symptoms in indoor swimming pool workers and airborne volatile chlorine compounds
G. Aggazzotti, E. Righi, G. Predieri, G. Fantuzzi, Italy

Epidemiological observatory on swimming pools, Spa and similar recreational water environments
F. Valeriani, V. Di Onofrio, E. Tarquini, G. Gianfranceschi, R. Gesuele, F. Gallè, M. Guida, V. Romano Spica, G. Liguori, Italy

Pseudomonas aeruginosa in swimming pool water: evidences and perspectives for new control strategies
M. Guida, F. Gallè, F. Valeriani, V. Di Onofrio, R. Gesuele, V. Romano Spica, G. Liguori, Italy
Decontamination of outdoor school swimming pools in Fukushima after the nuclear accident in March 2011
J. Saegusa, Japan

Kinetics of chlorine consumption and DBP-formation with BFA-components
P. Hua, X. Chen, E. Vasyukova, W. Uhl, Germany

DBP exposure in an indoor chlorinated swimming pool and short term effects in biomarkers of genotoxicity and lung permeability

Characteristics of energy-efficient swimming facilities – A case study
W. Kampel, B. Aas, A. Bruland, Norway

Efficacy evaluation of footbath in reducing surface contamination
M. Mata, J. Rocha Nogueira, N. Ferreiro, Portugal

Variations in nitrogen trichloride concentration over time in swimming pool water - Experimental and modeling study
L. Bonadonna, R. Briancesco, S. Della Libera, M. Iaconelli, G. La Rosa, R. Paradiso, S. Petricca, M. Semproni, Italy

Private Pool Safety Bylaw Regulation and Compliance in Ottawa
K. Valentino, E. O’Connor, Canada

Prevalence of Simkania negevensis in swimming pool environment
E. Leoni, E. Cremonini, L. Dallolio, R. Biondi, A. Di Francesco, M. Donati, Italy

Variations in nitrogen trichloride concentration over time in swimming pool water - Experimental and modeling study
F. Gérardin, A. Cloteaux, N. Midoux, France

Disinfection by-products formation of UV treated swimming pool water
A. Spiliotopoulou, K.M.S. Hansen, H.R. Andersen, Denmark

Analysis of drowning and near-drowning in swimming pools: websites as a primary resource for injury surveillance in Italy, 2008-2014
E. Ferretti, S. De Angelis, M. Torre, Italy

Download the conference in the Google, Apple and Windows Phone stores! You will find an overview of the programme, speakers, and other information about the event. Use the keywords – POOL and SPA – and download the App!