

# INTERNATIONAL WORKSHOP ON **LABYRINTH AND PIANO KEY WEIRS**

The Labyrinth & PKW workshops series aims to bring together people with varied backgrounds (engineers, researchers, students...) to state and summarize the current knowledge on the Labyrinth and the Piano Key Weirs, two non-conventional hydraulic structures.

➤ **Technical Workshops and Tour**

➤ **Event: October 7-9, 2025**

➤ **Atlanta, Georgia**

**Organized by**



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[www.ussdams.org25-pkw/](http://www.ussdams.org25-pkw/)

# EVENT SCHEDULE OVERVIEW

## INTERNATIONAL WORKSHOP ON LABYRINTH AND PIANO KEY WEIRS

**Day 1 – Tuesday, October 7, 2025**

**Location: Georgia Tech Hotel and Conference Center**

|                     |                        |
|---------------------|------------------------|
| 7:30 AM – 11:00 AM  | Registration Open      |
| 8:00 AM – 9:00 AM   | Breakfast              |
| 9:00 AM – 9:05 AM   | Welcome                |
| 9:05 AM – 10:35 AM  | Technical Sessions     |
| 10:25 AM – 10:55 AM | Morning Break (30 min) |
| 10:55 AM – 12:15 PM | Technical Sessions     |
| 12:15 PM – 1:45 PM  | Lunch Break            |
| 1:05 PM – 2:45 PM   | Technical Sessions     |
| 3:05 PM – 3:35 PM   | Afternoon Break        |
| 3:35 PM – 4:35 PM   | Technical Sessions     |
| 4:55PM              | Wrap-Up                |
| 5:00PM- 7:00PM      | Reception              |

**Day 2 – Wednesday, October 8, 2025**

**Location: Georgia Tech Hotel and Conference Center**

|                     |                            |
|---------------------|----------------------------|
| 8:00 AM – 9:00 AM   | Breakfast                  |
| 9:00 AM – 10:20 AM  | Technical Sessions         |
| 10:20 AM – 10:50AM  | Morning Break              |
| 10:50 AM – 12:10 PM | Technical Sessions         |
| 12:10 PM – 1:40 PM  | Lunch Break                |
| 1:40 PM – 3:00 PM   | Technical Sessions         |
| 3:00 PM – 3:20 PM   | Tour Summary               |
| 3:20 PM – 3:50 PM   | Networking Afternoon Break |

**Day 3 – Thursday, October 9, 2025**

**Location: Tour of 3 locations, Georgia and Alabama**

8:30 AM ET Depart Georgia Tech Atlanta, GA

6:35 PM ET Arrive Back at Georgia Tech

# SESSION SCHEDULE

October 7, Day 1

**9:00 AM** – Welcome

**Session A: R&D – Floating Objects and Sedimentation** Chair: S. Erpicum, ULiege

**9:05 AM** – *Labyrinth and PKW spillways in the USA*

Country: USA **Author: Paxson G.**

**9:25 AM** – *Behavior of floating trees at coexisting Piano Key Weir and gated spillway*

Country: Sweden **Author: Yang J.**

**9:45 AM** – *Effect of driftwood on the hydraulic performance of A-type PKWs in-stream or at reservoirs*

Country: Switzerland **Author: Venetz P.**

**10:05 AM** – *Impact of sedimentation on the discharge capacity of labyrinth weirs*

Country: Germany **Author: Belzner F.**

**Session B: R&D – Hydraulics** Chair: M. Pfister, HEIA-FR

**10:55 AM** – *Remote sensing of the 3D water surface downstream of labyrinth weirs*

Country: Germany **Author: Langohr P.**

**11:15 AM** – *Interfacial velocity characteristics downstream of a PKW vs. linear weir*

Country: Germany **Author: Belay B.S.**

**11:35 AM** – *Model-Prototype upscaling of discharge capacity of Piano Key Weir*

Country: Sweden **Author: Yang J.**

**11:55 AM** – *Physical model investigations on nappe instabilities at labyrinth weirs*

Country: Germany **Author: Gebhardt M.**

**Session C: R&D – Design and Application** Chair: J. Vermeulen, EDF-Hydro

**1:45 PM** – *Studies of non-rectilinear weirs – From labyrinth to PKW*

Country: Algeria **Author: Ouamane A.**

**2:05 PM** – *Enhancing the hydraulic efficiency of PKWs – Recent research*

Country: Sweden **Author: Yang J.**

**2:25 PM** – *Innovative association of Fusegate® and PKW*

Country: France **Author: Lempérière F.**

**2:45 PM** – *Innovative use of PKWs or labyrinth weirs for long dams in plains*

Country: Vietnam **Author: Ho Ta Khanh M.**

**Session D: R&D – Numerical Modeling** Chair: B. Crookston, USU

**3:35 PM** – *Sensitivity analysis of PKWs using CFD and empirical methods*

Country: France **Author: Oukaili F.**

**3:55 PM** – *Experimental and numerical investigation of A-type rectangular side PKW*

Country: India **Author: Hussain S.**

**4:15 PM** – *Key width ratio influence on PKW discharge via OpenFOAM simulations*

Country: Germany **Author: Lüddecke L.**

**4:35 PM** – *Investigation on flow field near A-Type PKW*

Country: India **Author: Quamar S.**

**4:55 PM** – Wrap Up

**5:00 PM- 7:00 PM-** Reception

# SESSION SCHEDULE

October 8, Day 2

## Day 2: Project Applications

**Session E: Projects – Lessons Learned** Chair: F. Laugier, EDF-Hydro

**9:00 AM** – *Lessons from Prado Dam labyrinth spillway design*

Country: USA **Author: Diaz Y.**

**9:20 AM** – *Research and application of PKWs in Vietnam (2025)*

Country: Vietnam **Author: Ho Ta Khanh M.**

**9:40 AM** – *Case study: Burton Pond Dam – “Honey, I Shrunk the PKW”*

Country: USA **Author: Bisio D.**

**10:00 AM** – *PKWs with orifice sluice*

Country: Vietnam **Author: Dau Xuan T.**

**Session F: Projects – Design** Chair: Mike Phillips, AECOM

**10:50 AM** – *Arced labyrinth spillway for Dog River Dam*

Country: USA **Author: Kirksey B.**

**11:10 AM** – *Springton Spillway: Arced labyrinth weir research and application*

Country: USA **Author: Thompson S.**

**11:30 AM** – *La Laye Dam design approach*

Country: France **Author: Roy M.**

**11:50 AM** – *3D modeling for Lower Crow Dam rehabilitation*

Country: USA **Author: Bartels J.**

**Session G: Projects – Construction** Chair: G. Paxson, Schnabel Eng.

**1:40 PM** – *PKWs around the world*

Country: Belgium **Author: Erpicum S.**

**2:00 PM** – *Nachtigal dam: 4917 m long labyrinth spillway*

Country: France **Author: Magnan D.**

**2:20 PM** – *High-altitude labyrinth weir design & construction*

Country: USA **Author: Miller N.**

**2:40 PM** – *Stainless steel PKW at Oule Dam spillway*

Country: France **Author: Fournié Y.**

**3:00 PM** – **Tour Summary**

**3:20 PM** – **Networking Afternoon Break**

# TOUR SCHEDULE

## INTERNATIONAL WORKSHOP ON LABYRINTH AND PIANO KEY WEIRS

**Day 3 – Thursday, October 9, 2025**

**Off-site Tour Day (Eastern and Central Time Zones)**

**Time (Local) Event Location**

|             |  |
|-------------|--|
| 8:30 AM ET  | Depart Georgia Tech Atlanta, GA              |
| 9:15 AM ET  | Lake Peachtree Dam – Tour Peachtree City, GA |
| 10:15 AM CT | Ogletree Outing Club Lake – Tour Auburn, AL  |
| 11:45 AM CT | Lunch @ Resting Pulse Brewing Opelika, AL    |
| 1:45 PM CT  | Bartlett's Ferry – Tour Salem, AL            |
| 6:35 PM ET  | Arrive Back at Georgia Tech Atlanta, GA      |



Lake Peachtree Dam: Photo Copyright Just A Little Photography

# REGISTRATION

## INTERNATIONAL WORKSHOP ON LABYRINTH AND PIANO KEY WEIRS

|                             | Full Workshop<br>Registration | Workshop Technical<br>Program NO TOUR |
|-----------------------------|-------------------------------|---------------------------------------|
| Continental Breakfast       | X                             |                                       |
| AM Technical Sessions       | X                             | X                                     |
| Lunch                       | X                             | X                                     |
| Exhibits                    | X                             | X                                     |
| PM Technical Sessions       | X                             | X                                     |
| <b>WEDNESDAY activities</b> |                               |                                       |
| Continental Breakfast       | X                             | X                                     |
| AM Technical Sessions       | X                             | X                                     |
| Lunch                       | X                             | X                                     |
| Exhibits                    | X                             | X                                     |
| PM Technical Sessions       | X                             | X                                     |
| <b>THURSDAY activities</b>  |                               |                                       |
| Field Tour                  | X                             |                                       |

**USSD Member Full Workshop Registration | \$650 |**

**Full Workshop Registration | \$750 |**

**Workshop Technical Program NO TOUR | \$595 |**



More Information

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