

Hydrological Sciences Division Meeting

Elena Toth

EGU 2017 GA, Vienna | April 27, 2017

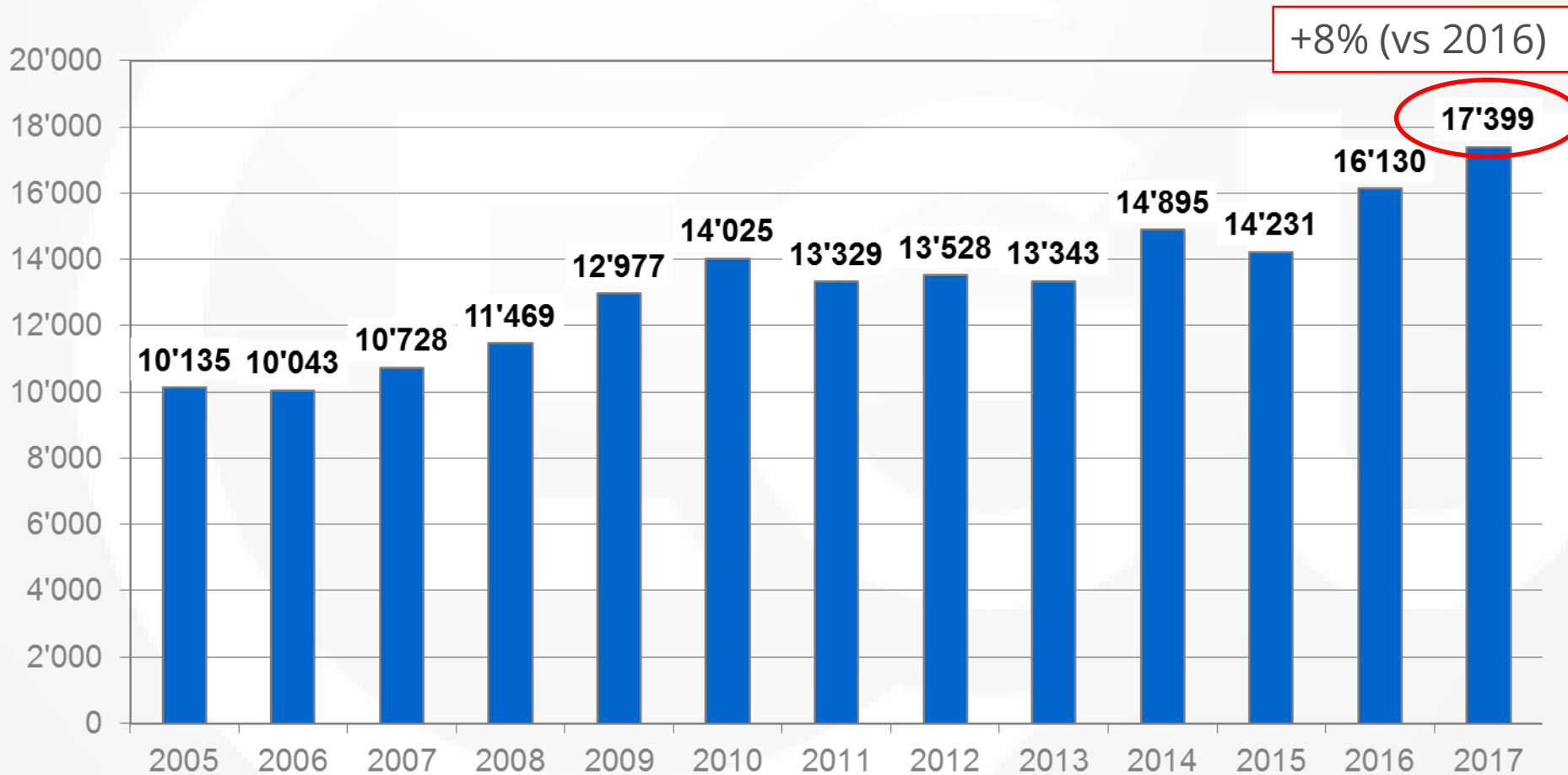


Meetings | Publications | Outreach | www.egu.eu

- 1. General Assembly 2017**
- 2. HS Officers**
- 3. Young Hydrological Society Activities**
- 4. Outstanding Student Posters and PICOs: report + awards**
- 5. Division Medallists and Awardees**
- 6. Outstanding Early Career Scientist Award**
- 7. Medal Committees 2018**
- 8. Division Presidents Election Autumn 2017**
- 9. Leonardo Conference and other EGU events**
- 10. Communication and Outreach at Union Level + GA Survey 2017**
- 11. Hydrology and Earth System Sciences Journal: report + awards**
- 12. Any other business**

General Assembly 2017

Papers in programme 2005–2017





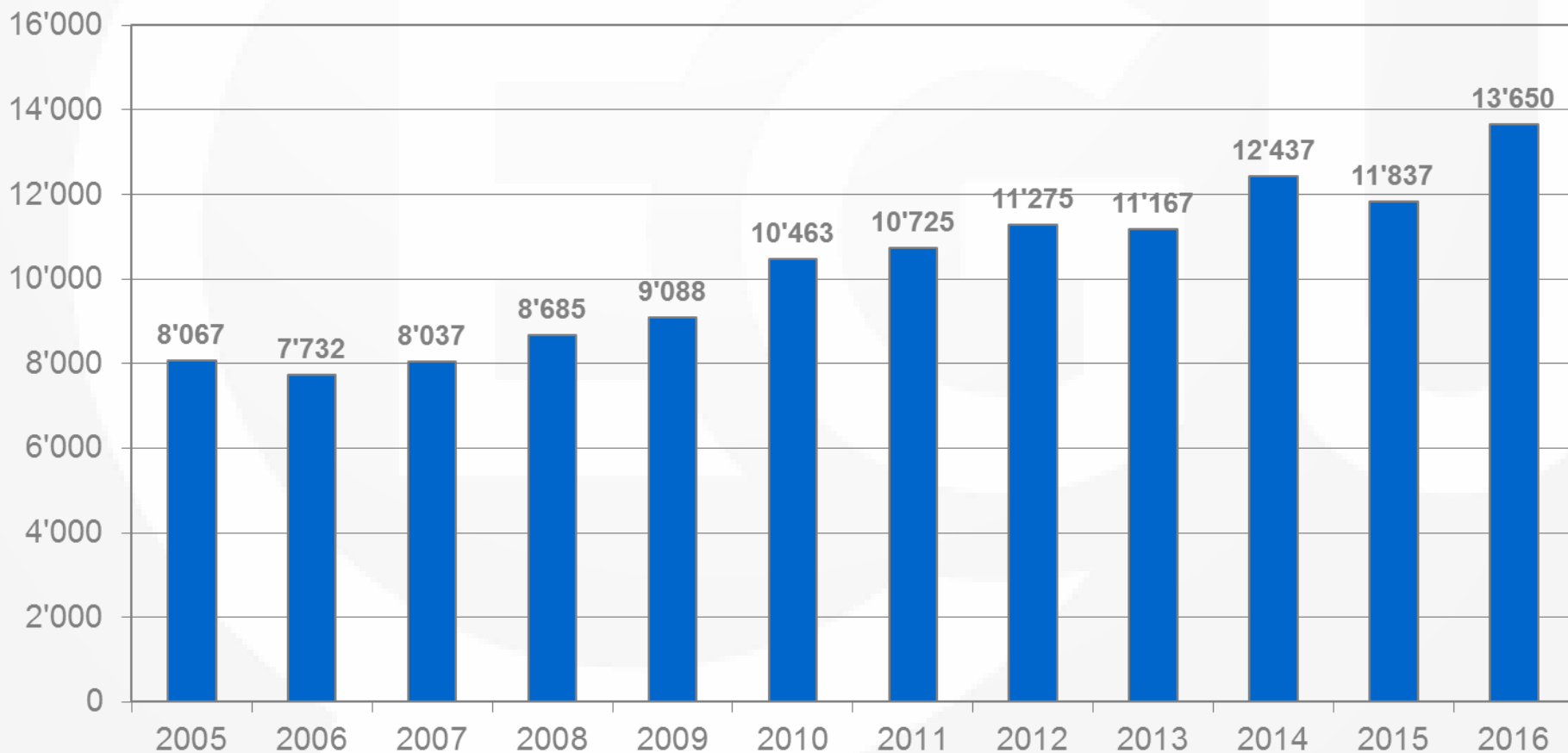
European Geosciences Union General Assembly 2017

Vienna | Austria | 23–28 April 2017

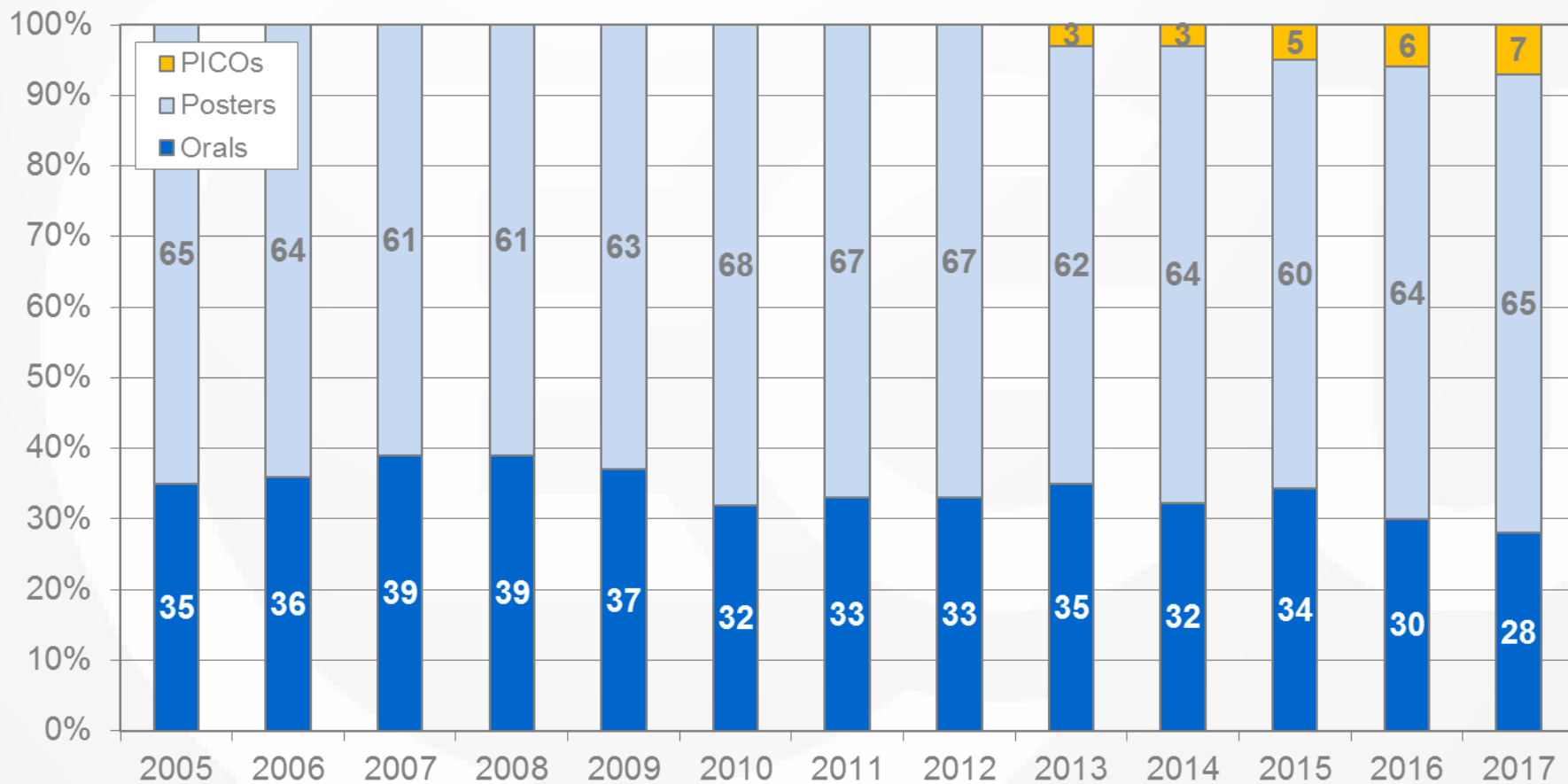
EGU.eu



Participants at EGU General Assemblies 2005–2016



Presentation ratio 2005–2017



GA 2017 – Hydrological Sciences Programme numbers

2355 abstracts (+6% vs 2016) submitted to 85 HS-lead sessions

HS: 13% of total EGU GA submissions (same % as 2016)

67 Oral and Poster sessions

4 Poster only sessions

14 PICO sessions (11 in 2016)



EGU GA 2017 - Hydrological Sciences programme

SubDivision Programmes HS1 HS2.1 HS2.2 HS2.3 HS2.4 HS3 HS4 HS5 HS6 HS7 HS8.1 HS8.2 HS8.3 HS9 HS10

Oral and PICO sessions

RM	MO1	MO2	MO3	MO4	TU1	TU2	TU3	TU4	WE1	WE2	WE3	WE4	TH1	TH2	TH lunch	TH3	TH4	FR1	FR2	FR3	FR4
2.15	8.1.7	8.1.7	8.2.2	8.2.2	10.7	10.7	2.4.4	2.4.4	6.1	10.1	10.5	10.8	2.3.1	2.3.5		1.5	1.13	2.3.3	2.3.6	2.1.5	2.1.5
2.31		4.1	9.6	9.6																	
2.44	5.3	5.3	2.1.2	2.1.6	6.3	6.3	5.8	10.10	5.5	9.8	9.7	9.7	8.3.1	8.1.5		4.2	4.4	1.12	1.6		
2.95	2.4.1	2.4.1	5.2	5.9	8.1.6	8.1.4	8.2.6	8.1.3	8.2.7	8.2.3	8.2.5	8.2.5	7.2	7.8		8.2.4	8.2.8	4.6	4.6	4.3	4.3
B	6.4	6.4	6.4	1.3	5.4	5.4	6.2	6.2	7.5	7.5	7.5	1.4	8.2.1	8.2.1	HS Div. Meeting*	7.1	7.1	2.1.3	2.1.3	2.3.2	2.3.2
C	2.2.1	2.2.1	1.2	1.2	9.1	9.1	2.1.4	2.1.4	2.1.1	2.1.1	2.1.1	2.1.1	10.3	10.3		10.2	10.2	3.2	3.1	3.1	3.1
PICO Spot A	Red level 2nd floor			1.11			7.6	5.6	4.5	4.5		2.2.3				5.10	1.9	7.7	2.2.4	8.1.2	
PICO Spot 1/3	Brown level Basement					7.3 spot 3			2.2.2 spot 3	2.2.2 spot 3	1.10 spot 1		1.15 spot 1								
Poster-only	1.1			5.1 + 9.9				7.4													

Poster sessions take place in Hall A in the same day of the corresponding Oral session, with Authors in attendance from 17.30 to 19.00.

Meetings of the SubDivision Committees (public)

Catchment hydrology	Tuesday 11:00-12:00, Room 3.96
Hydroinformatics	Friday, 15:00-15:30, Room C
Hydrological forecasting	Friday 12.15-13.15, Room 2.83
Water Policy, management & control	Tuesday 12:00-13:00, Room B
Remote sensing & data assimilation	Tuesday 10:00-10:30, Room 2.44
Precipitation & climate	Thursday 13.00-13.30, following the HS Div Meeting
Groundwater	Monday 17.15-18:00, Room 2.95
Unsaturated/Vadose Zone Hydrology	Thursday 13:30–15:00, Room 2.61
Erosion, sedimentation & river processes	Thursday 9:00-10:00, Room 2.83
Ecohydrology, wetlands and estuaries	Monday 13:30–15:00, Room 2.61

New SubDivision Chairs

- Hydroinformatics SubDivision
- *Outgoing Chair: Dimitri Solomatine*
- *Incoming Chair: Maurizio Mazzoleni*



HS Officers: SubDivision Chairs

Remote sensing & data assimilation:
Annett Bartsch



Groundwater: **Monica Riva**



Water policy, management and control:
Andrea Castelletti



HS Officers: SubDivision Chairs

Catchment hydrology: **Bettina Schaefli**



Hydrological forecasting:
Maria-Helena Ramos



HS Officers: SubDivision Chairs

Precipitation & climate: **Chris Onof**



Unsaturated zone: **Martine van der Ploeg**



HS Officers: SubDivision Chairs

Erosion, sedimentation & river
processes: **Hugh Smith**



Estuaries, wetlands & eco-hydrology:
Josie Geris



HS Officers

My proposal is to confirm:

as Deputy President: **Laurent Pfister**



as OSPP Coordinators:

Julian Klaus and Luisa Hopp



HS Officers

New Outreach and Communication Division Committee

Laurent Pfister



Wouter Berghuijs



Maria-Helena Ramos



Miriam Coenders



EGU Early Career Scientist Representative for the Hydrological Sciences

Outgoing:

Shaun Harrigan

Centre for Ecology & Hydrology (CEH), UK
shauhar@ceh.ac.uk



Incoming:

Nilay Dogulu

PhD Candidate at the Middle East Technical
University (METU), Ankara, Turkey

nilaydogulu87@hotmail.com



YOUNG HYDROLOGIC SOCIETY AT EGU17 | EVENT SCHEDULE

	08:30 - 10:00	10:30 - 12:00	13:30 - 15:00	15:30 - 17:00	17:00 -
MON 24/4			How to get your hydrology paper published Room -2.16 SC24/HS12.2 <i>Ross Woods</i>	Learning from hypotheses & failures in hydrology PICO Spot A HS1.11 <i>Josie Geris, James Kirchner</i>	
				Using R in hydrology Room -2.31 SC86/HS12.7 <i>Want to know why & how to use R? You're in the right place!</i>	
TUE 25/4		Opinion papers in hydrology Room -2.31 SC73/HS12.6 <i>B. Schaeffli, V. Andréassian, H. Savenije</i>			
WED 26/4		Rhyme your research! Room -2.91 SC39 <i>Science poetry workshop by Sam Illingworth</i>	How my water research made the news PICO Spot 1 HS1.10 <i>5 min PopUp presentations</i>		Hydrological forecasting Room -2.91 SC52/HS12.5 <i>M. Boucher, J. Verkade</i>
					HYDRODRINKS Legendary annual drinks with fellow young hydrologists. Check @YoungHydrology for exact time & location!
THU 27/4			Hydroinformatics for hydrology: geostatistical modeling Room -2.85 SC29/HS12.3 <i>A. Bardossy, G. Corzo Perez, E. Varouchakis</i>		
FRI 28/4	Meet the Expert: Are different spatial scales connected? Room -2.91 SC19/HS12.1 <i>J. McDonnell, M. Hrachowitz, R. Maxwell</i>				EGU SCIENCE POETRY SLAM! Recite your science poem during the convers' party. Entrance included! Register with @samillingworth



Outstanding Student Poster and PICO: report + awards

Rewards the best posters and PICOs of young scientists (graduate students and recently completed PhDs)

- Coordinators: Luisa Hopp, Julian Klaus, Lena Noack (EGU)
- 276 posters and PICOs (28) in the competition (2016: 271/21; 2015: 143, 2014: 377; 2013: 85; 2012: 184)
- 81 sessions (2016: 73; 2015: 59)

Outstanding Student Poster and PICO Awards

Criteria for Application

Eligible for the Outstanding Student Poster and PICO (OSPP) Awards are students that:

1. are first author and personally present the poster or PICO at the conference;
2. satisfy one of the following criteria:
 - are a current undergraduate (e.g., BSc) or postgraduate (e.g., MSc, PhD) student;
 - are a recent undergraduate or postgraduate student (conferral of degree after 1 January of the year preceding the conference) who are presenting their thesis work.

Important: Difference between Early Career Scientist status (student or a scientist who has received his or her highest degree [BSc, MSc, or PhD] within the past seven years + parental leaves) **and OSPP eligibility!**

Outstanding Student Poster and PICO: report + awards

Procedure for participating

- (PhD-) students need to actively register (only 1 Poster/PICO per year)
- 3 judges per poster
- Criteria: scientific quality, presentation, and discussion
- Top 1-5 of the ranked posters win the OSP Award (depending on number of posters in competition)

Outstanding Student Poster and PICO: report + awards

Benefits of participating:

- 3 judges per poster come to talk to you
- Feedback on poster

If you win:

- short presentation on the EGU website
- conference fee waived for the next GA
- when the work is subsequently published in HESS, the page charges will be waived

Outstanding Student Poster and PICO : report + awards

Procedure for poster assessment

New online system:

- Conveners ask and assign judges
- Judges automatically receive email and link to the assessment form
- Judges can deny the nomination directly online
- Judges fill the assessment form via the EGU webpage or the phone app

Reminder for good scientific practice: when nominating judges please avoid any conflict of interest

Outstanding Student Poster and PICO Awards 2016

Five winners in 2016, 1 for ~60 submissions, 4 Posters, 1 PICO



Joy Santiago, University of
the Philippines Diliman
*Development of Storm
Surge Hazard Maps and
Advisory System for the
Philippines*



Arnaud Watlet, University of
Mons, Belgium
*Multi-scale hydrogeological
and hydrogeophysical
approach to monitor vadose
zone hydrodynamics of a karst
system*

Outstanding Student Poster and PICO Awards 2016



Frederik Kratzert, BOKU
Vienna, Austria
*FishCam – A semi-automatic
video-based monitoring
system of fish migration*



John Mallard, Duke
University, USA
*Hydrologic and biologic
influences on stream network
nutrient concentrations:
Interactions of hydrologic
turnover and concentration-
dependent nutrient uptake*



Insa Thiele-Eich,
University of Bonn,
Germany
*Past and future
flooding in
Bangladesh*

Aim of EGU medals

- To recognise eminent scientists for their research contributions to one field of geosciences;
- To identify the awardees as role models for a young generation of scientists to foster geosciences research;
- For the awardees to act as ambassadors for the European Geosciences Union at the global scale.

EGU awards the following awards and medals each year:

- Outstanding Early Career Scientists Award, at the division level (Division Outstanding Early Career Scientists Award) and Union level (Arne Richter Award for Outstanding Early Career Scientists).
- Division Medals to recognize outstanding achievements by active researchers.
- Union Medals to recognize lifetime achievements, or exceptional contributions to science.

Henry Darcy Medal

This medal has been established by the Division on Hydrological Sciences in recognition of the scientific achievements of [Henry Darcy](#).

It is reserved for individuals in recognition of their outstanding scientific contributions

in water resources research and water resources engineering and management.

HS Division Medals

John Dalton Medal

This medal has been established by the Division on Hydrological Sciences in recognition of the scientific achievements of [John Dalton](#).

It will be awarded by the European Geosciences Union for distinguished research in Hydrology **re**viewed as an Earth science.

Division Medallists and Awardees

The 2017 John Dalton Medal has been awarded to

Dani Or

for groundbreaking, field-broadening contributions in soil hydro-physics and soil mechanics, for being instrumental in starting the field of soil biophysics, and for helping the research community advance scientific frontiers.



Medal Lecture Tue 25th April

EGU Hydrological Sciences Division

Outstanding Early Career Scientists Award

Anne F. van Loon

University of Birmingham, UK



The 2017 Division Outstanding Early Career Scientists Award is awarded to Anne F. van Loon for her innovative research on the feedbacks between climatic and anthropogenic induced drought and their impacts on water availability.

Medal Lecture Tue 25th April

2018 Medal Committees

The committees that select the Dalton and Darcy Medallists need a formal approval at this meeting.

Dalton Medal Committee:

- Gerrit de Rooij (Chair)
- Dani Or
- Harry Vereecken
- Diane McKnight
- Hoshin Gupta

(Ex-officio [not voting]: HS Division President, Elena Toth, and Chair of the Union Awards Committee, Özgür Karatekin)

2018 Medal Committees

The committees that select the Dalton and Darcy Medallists need a formal approval at this meeting.

Darcy Medal Committee:

- Gerrit de Rooij (Chair)
- Yoram Rubin
- Nick van de Giesen
- Upmanu Lall

(Ex-officio [not voting]: HS Division President, Elena Toth, and Chair of the Union Awards Committee, Özgür Karatekin)

2018 Medal Committees

Committee for nominating the Division Early Career Outstanding Scientist

- Elena Toth
- Laurent Pfister
- Steffen Birk

Proposal of candidates for the awards/medals (**deadline 15th June 2017**)

For the Division Outstanding Early Career Scientists Award

“a scientist who has received his or her highest degree [BSc, MSc, or PhD] within the past seven years + parental leaves”

Nomination letter (1/2 page)

Curriculum Vitae. A summary of the candidate's CV (**1 page**)

Selected bibliography. A list of selected publications by the candidate that best support the nomination (**1/2 page**). It should also state briefly the candidate's total number and types of publications and citations.

The whole nomination package for the Outstanding Early Career Scientists must not exceed 2 pages.

If you need help in the nomination process, ask for the advice of our SubDivision Chairs

Proposal of candidates for the awards/medals (**deadline 15th June 2017**)

For the Division and Union medals:

A -Nomination letter (1 page, main nominator must be EGU member). This must clearly detail why the candidate deserves this recognition, in particular focus on the candidate's scientific contributions to the field, their importance, their impact on the discipline and their implications for the future. The new views and new insights that have been stimulated by the candidate's work are particularly relevant.

B -Curriculum Vitae (2 pages). A summary of the candidate's CV, including the candidate's name, address, history of employment, degrees, research experience, honours, and service to the community.

C- Selected bibliography (2 pages). A list of selected publications by the candidate that best support the nomination. It should also state briefly the candidate's total number and types of publications and citations.

D - Supporting letters. Between 3 and 5 letters of support (maximum 1 page each) should be submitted.

Division president elections 2017

Change in the EGU rules on election dates, to give more time to newly elected Presidents to follow the Division activities

Election of a new division president for divisions with a president who starts her/his second term now and who is outgoing in 2019 (HS case this year):

- Elections **in autumn 2017** with 2 candidates minimum.
- The elected person will become:
 - 1) incoming division deputy president at the GA 2018
 - 2) division president at the GA 2019

Call: June/July 2017

Deadline for candidacies: beginning/half September 2017

Approval of candidacies by Council: mid-October 2017

Elections: November 2017

Leonardo Conference 2017

IX Leonardo Conference on the Hydrological Cycle

Topical conference series run by HS





- When: 16.-18.10.2017
- Where: Hotel Saigerhöh, Saig (Black Forest), Germany
- Costs: ~450€ (conference, accommodation, meals)
- Main Topics:
- **Analytical developments and monitoring systems**
 - **Water fluxes, transport and transit times**
 - **Ecohydrological processes**
 - **Water balance and climate models**
- Deadlines:
- 02.06.2017 (abstract submission)
- 02.06.2017 (young scientist support application)
- 12.08.2017 (registration)
- Organizers: **Markus Weiler** (University Freiburg)
Christine Stumpp (Helmholtz Zentrum München)
- Webpage: <http://www.leonardo2017.uni-freiburg.de/>
- Email: leonardo2017@hydrology.uni-freiburg.de

EGU Topical events

EGU supports the organisation of meetings to promote the exchange of science:

- **EGU Galileo Conferences**

First two in 2017, next call at the end of 2018

- **Conferences series**

Three scheduled for 2017 (including our Leonardo), possibly more in the future, presently on hold

- **Training schools** (formerly: co-sponsored events)

Open call: June 2017 (one call only for 2018)

Communication Activities at the 2017 General Assembly

EGU Today

- EGU Today is a daily newsletter highlighting interesting workshops, lectures and GeoCinema screenings, amongst activities at the Assembly
- Paper copies will be distributed daily and are available to download at http://www.egu2017.eu/egu_today.html

Blogs

- GeoLog, the EGU Blog Network & EGU Division Blogs will be sharing great sessions, research, interviews and more throughout the Assembly
- Follow them at geolog.egu.eu and blogs.egu.eu

Social Media

- Sessions will be advertised on Twitter (**@EuroGeosciences**) and Facebook (**European Geosciences Union**)
- For behind the scenes access to the conference follow us on Instagram (**@EuroGeosciences**)
- Participants can ask questions & keep updated by following **#EGU17**

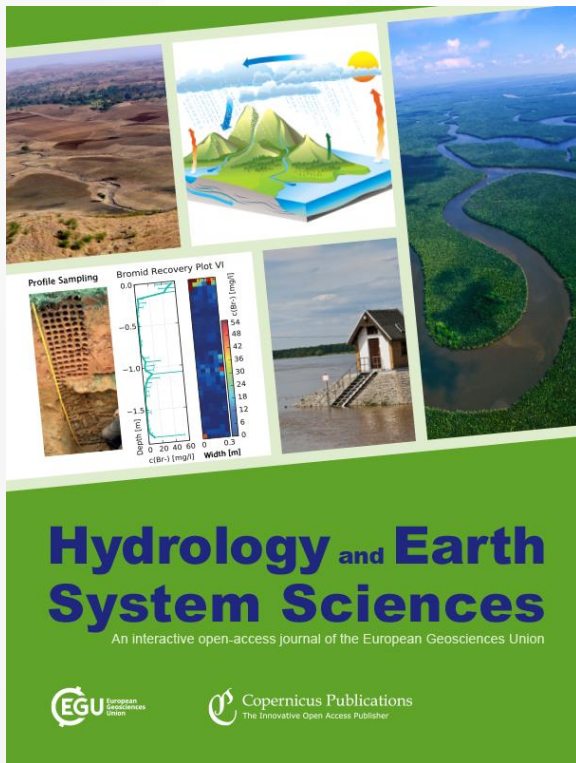
www.egu2017.eu/feedback

- Distribution:
 - via email to participants and EGU members after GA
 - links on social media & blog
 - egu2017.eu website
 - Flyers/cards in Vienna
- Survey live during GA and until mid June



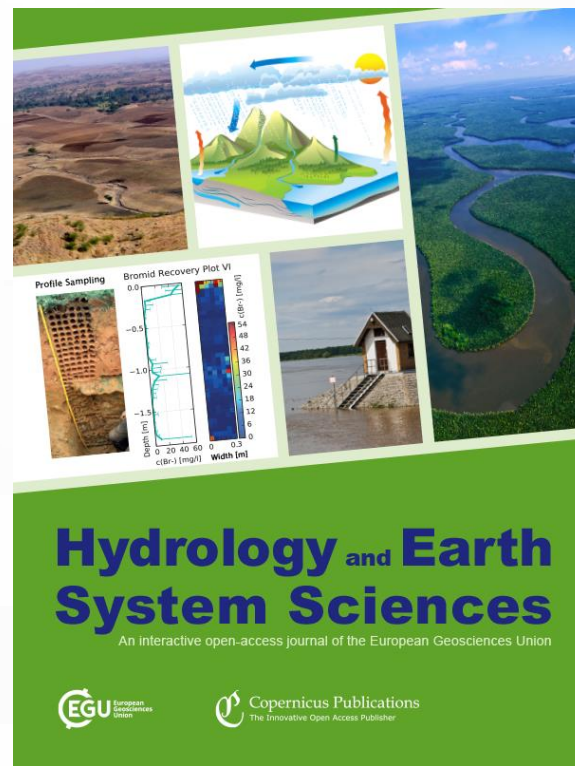
Hydrology and Earth System Sciences Journal: report + awards

“the” EGU Hydrological Sciences Division Journal



Executive Editors:

Erwin Zehe, Hanna Cloke, Alberto
Guadagnini, Alison D. Reeves

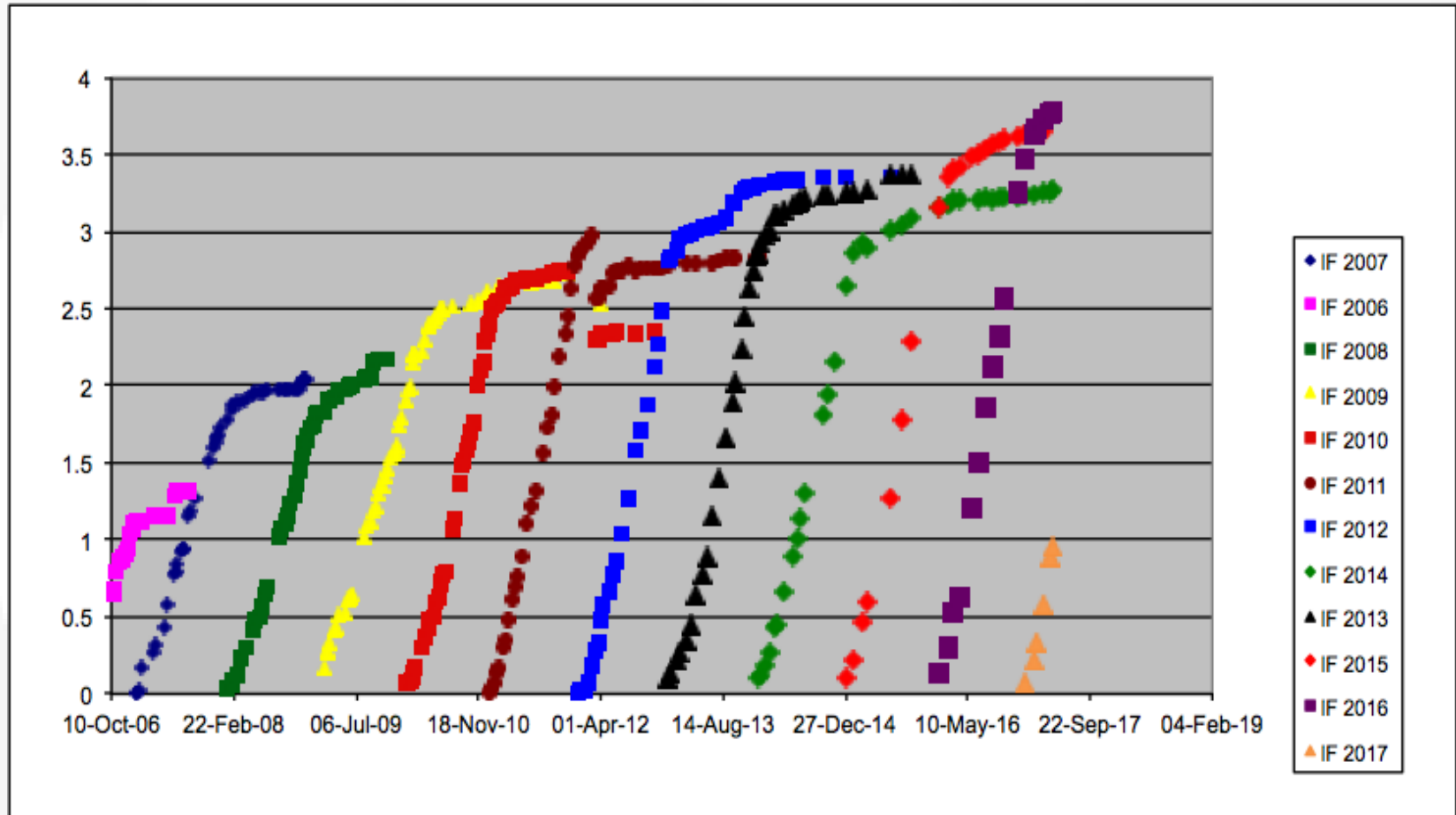


EGU Hydrological Sciences Division Journal

Executive Editors:

Erwin Zehe, Alberto Guadagnini,

Alison D. Reeves, Hannah Cloke



- Impact factor 2016: expected 4.+

2016 HESS OUTSTANDING EDITOR AWARD



Dr. Fuiqiang Tian

In recognition of his excellent
service
as Editor of
Hydrology and Earth System
Sciences

in the period 2016 - 2017

Hydrology and Earth System Sciences (HESS)

JIM DOOGE AWARD

for the two most outstanding papers of HESS in 2016/17

Both studies address the **role of plants** in the water cycle in a fundamental but complementary manner.



The European Geosciences Union

presents the

"Jim Dooge Award"

to

Hildebrandt, A, Kleidon, A. and Bechmann, M.

**for their outstanding paper in
'Hydrology and Earth System Sciences' in 2016
HESS, 20, 3441 -3454, 2016.**

Signed April 2017

Erwin Zehe
Chief Executive Editor
of "Hydrology and Earth System Sciences"



Signed April 2017

Elena Toth
President
of the Hydrological Sciences Division of the EGU

Hydrol. Earth Syst. Sci., 20, 3441–3454, 2016
www.hydrol-earth-syst-sci.net/20/3441/2016/
doi:10.5194/hess-20-3441-2016
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A thermodynamic formulation of root water uptake

Anke Hildebrandt^{1,2}, Axel Kleidon², and Marcel Bechmann^{1,2}

¹Friedrich-Schiller-Universität, Jena, Germany

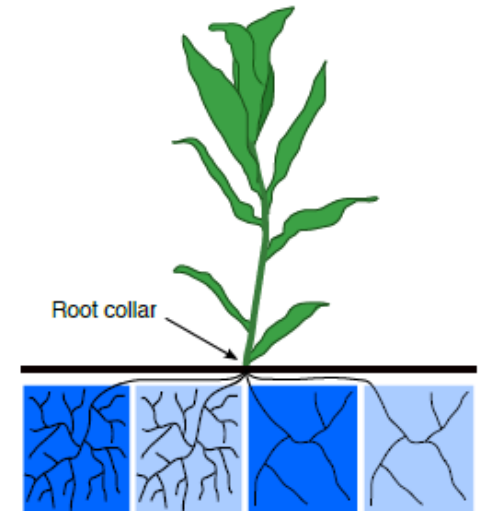
²Max-Planck-Institut für Biogeochemie, Jena, Germany

Correspondence to: Anke Hildebrandt (anke.hildebrandt@uni-jena.de)

Received: 9 December 2015 – Published in Hydrol. Earth Syst. Sci. Discuss.: 21 December 2015

Revised: 2 August 2016 – Accepted: 8 August 2016 – Published: 29 August 2016

Abstract. By extracting bound water from the soil and lifting it to the canopy, root systems of vegetation perform work. This work is done by plants to lift water from the soil to the canopy. The study shows how plant communities exploit heterogeneously distributed soil water resources for root water uptake (Zwieniecki et al., 2003; Bechmann et al., 2015).



The study deals with root water uptake from a thermodynamic and thus system based point of view – revealing that plants minimize the work expenditure during soil water uptake. This has quite some implication for implementing this process in a distributed model.



The European Geosciences Union

presents the

"Jim Dooge Award"

to

Schymanski, S. J. and Or, D.

**for their outstanding paper in
'Hydrology and Earth System Science' in 2016
HESS, 21, 685 -706, 2017.**

Signed April 2017

Erwin Zehe
Chief Executive Editor
of "Hydrology and Earth System Sciences"



Signed April 2017

Elena Toth
President
of the Hydrological Sciences Division of the EGU

Hydrol. Earth Syst. Sci., 21, 685–706, 2017
www.hydrol-earth-syst-sci.net/21/685/2017/
doi:10.5194/hess-21-685-2017
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Hydrology and Earth System Sciences
Open Access
EGU

Leaf-scale experiments reveal an important omission in the Penman–Monteith equation

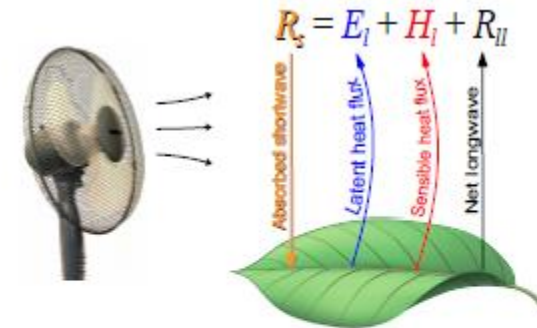
Stanislaus J. Schymanski and Dani Or

Department of Environmental Sciences, ETH Zurich, 8092 Zurich, Switzerland

Correspondence to: Stanislaus J. Schymanski (stan.schymanski@env.ethz.ch)

Received: 19 July 2016 – Published in Hydrol. Earth Syst. Sci. Discuss.: 26 July 2016

Revised: 5 December 2016 – Accepted: 7 January 2017 – Published: 2 February 2017



Flux	Equation	Driver
Latent heat	$E_l = L M_e g_a (C_w - C_a)$	Vapour conc.
Sensible heat	$H_l = 2h_c (T_l - T_a)$	Temperature
Longwave	$R_{ll} = 2\sigma (T_l^4 - T_a^4)$	Temperature

$$(C_w - C_a) = f(RH, T_l, T_a)$$

$$g_a = h_c - \sqrt{g_a^2 + (h_c)^2}$$

The study deals with ET/ gas exchange at the leaf level using experiments with artificial leaves - revealing two errors in the PM approach (it neglects two sided sensible heat exchange and hypo-stomatal leaves and proposing analytical corrections for PM. This is expected to greatly impact land surface modelling.

Any other business

EGU

EGU General Assembly 2018

Vienna, Austria

08–13 April 2018

EGU General Assembly 2019

Vienna, Austria

07–12 April 2019