

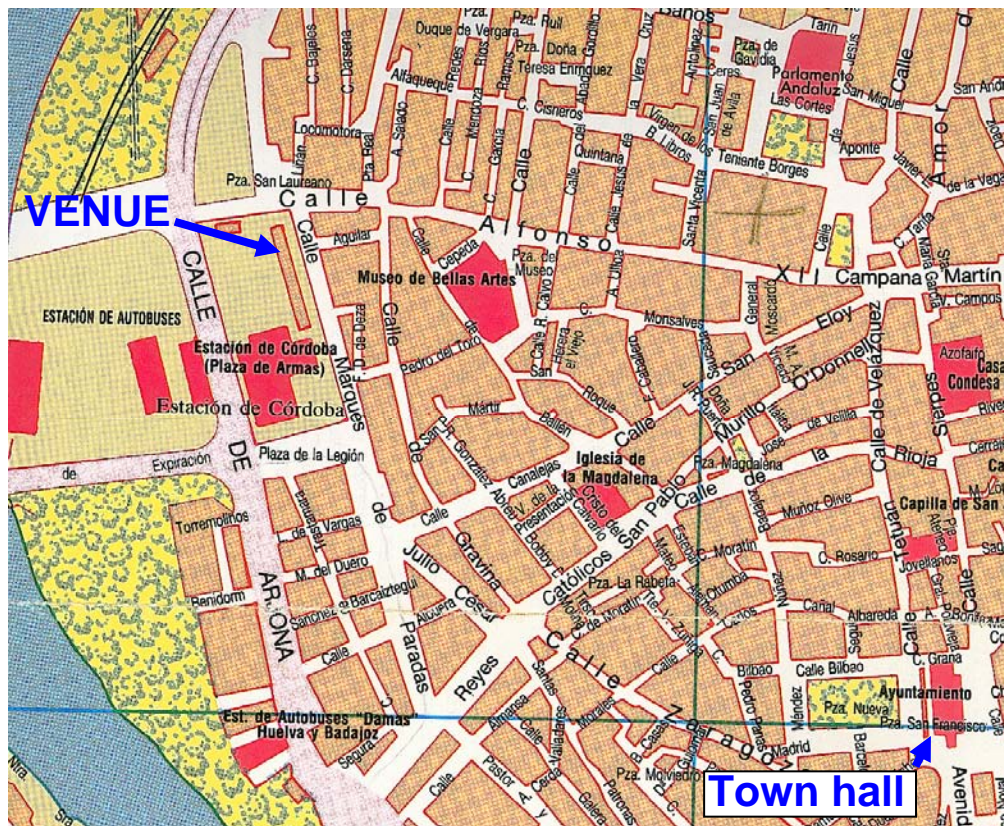
Programme

7th International Workshop on Sap Flow

Seville (Spain), 21-24 October 2008

held under the aegis of the
International Society for Horticultural Science

www.7iwsapflow.com



Workshop venue:

Hotel NH Plaza de Armas
Calle Marques de Paradas s/n,
41001, Sevilla

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Day	Time	Activity
21	19.00-22.00	Registration & Welcoming party
22	8.30-9.00	Registration
	9.00-9.15	Welcoming address, by Enrique Fernández
	9.15-9.30	Speech on behalf of the ISHS, by Isabel Ferreira
	9.30-10.10	Invited lecture: <i>Tools and Techniques for Sustainably Managing the Natural Capital of our Soils and Waters.</i> <u>B. Clothier</u> , S. Green, M. Deurer
	Section 1: Methodological aspects Chairman: Brent Clothier	
	10.10-10.30	The effects of heat storage during low flow rates on Granier-type sap flow sensors output. <u>S. Sevanto</u> , T. Hölttä, E. Nikinmaa
	10.30-10.50	Combination of sap flow and eddy covariance techniques to obtain long term transpiration in a pear orchard. <u>N. Conceição</u> , M.I. Ferreira
	10.50-11.10	Numerical evaluation of sap flow method. <u>M.I. Ferreira</u> , A. Thomsen, A.L. Silva
	11.10-11.40	Coffee break
	11.40-12.00	A method for extending the resolution of the compensated heat pulse method to low sap velocities. <u>L. Testi</u> and F.J. Villalobos
	12.00-12.20	Decoupling structural and environmental determinants of sap velocity. <u>D. Dragoni</u> , K.K. Caylor
	12.20-12.40	Additional information derived from detail analysis of primary temperature data measured with the HFD-method. <u>N. Nadezhdina</u>
	12.40-13.00	Radial sap flux profiles and beyond: an easy software analysis tool. <u>K. Steppe</u> , D.J.W. De Pauw, A. Saveyn, P. Tahon, N. Nadezhdina, J. Čermák, R. Lemeur
	13.00-13.20	Limitations of the HRM: great at low flow rates, but not yet up to speed? <u>T.M. Bleby</u> , A.J. McElrone, S.S.O. Burgess
	13.20-14.20	Lunch
	14.20-14.50	Visit to the posters and stands
	14.50-15.10	Using heat dissipation via a directional ‘pulse-decay’ analysis to measure sap flow rate. <u>S.S.O. Burgess</u> , T.M. Bleby
	15.10-15.30	An Improved method for the correction of natural thermal gradients in Thermal Dissipation Probes measurements. <u>D. Chavarro</u> , J. Roy, M. Lubczynski
	15.30-15.50	Theoretical Model of Cyclic Heating System to Estimating Sap Flow Density <u>E.F. Sousa</u> , M.G. Silva, S. Bernardo, P.A. Berbert
	15.50-16.20	Section 1: Discussion and conclusions, by Brent Clothier
16.20-16.50	Coffee break	

22	Section 2 : Water Use & Irrigation scheduling		Chairman: Steve Green
	16.50-17.10	Sap flow and conductive sap wood area validation applying various experimental techniques. <u>M. Lubczynski</u> , D.Chavarro, J. Roy	
	17.10-17.30	The impact of CO ₂ enrichment on tree water use in a <i>Eucalyptus</i> whole-tree chamber experiment. D. Eamus, M. Forster, M. Liberloo, B. Amiji, C. Barton, D. Ellsworth, D. Tissue, J. Conroy, <u>S. Fuentes</u> , R. McMurtrie	
	17.30-17.50	Sap flow measurements in trunks of <i>Eucalyptus globulus</i> under Atlantic climatic conditions. J. Dafonte Dafonte, G.M. Siquiera, J.M. Mirás Avalos, <u>A. Paz González</u>	
	17.50-18.10	Sapflow in squash measured with heat pulse equipment. <u>M. van der Velde</u> , S. Green, B. Clothier	
	18.10-18.30	Evaluation of the Use of the Granier Method in Japanese Pear by Comparison with Transpiration. <u>H. Sugiura</u> , D. Sakamoto, T. Sugiura, T. Asakura, T. Moriguchi	
	18.30-18.50	Do short term sap flow measurements scale with leaf transpiration? A case study on cucumber plants. <u>G. Egea</u> , A. Baille, B. Martín, P. Nortes, M. González-Real	
23	9.00-9.40	Invited lecture: <i>Measuring and Modelling Tree Water Use: Scaling up from Leaf to Landscape.</i> <u>S.R.Green</u> , M. Clearwater, M. Greven, R. Agnew, B. Clothier	
	9.40-10.00	Automatic irrigation in Almonds and Walnuts trees based on sap flow measurements. <u>R. Romero</u> , J.L. Muriel, I. García	
	10.00-10.20	Evolution of Corn Transpiration and Leaf Water Potential during Sprinkler Irrigation. <u>A. Martínez-Cob</u> , J. Fernández-Navajas, V. Durán, J. Cavero	
	10.20-10.40	Evaluating water use strategies in olive trees grown under different irrigation regimes through integrated approaches between sap flow and high resolution stem growth analysis. <u>A.Giovannelli</u> , M.L. Traversi, R.Tognetti, L. Sebastiani, R. d'Andria, G. Morelli, F. Fragnito, A. Lavini	
	10.40-11.00	Micrometeorological and ecophysiological measurements of water vapour exchanges in olive: scaling up from canopy to orchard. <u>F. Pernice</u> , A. Motisi, F. Rossi, T. Georgiadis, M. Nardino, G. Dimino, A. Drago	
	11.00-11.30	Coffee break	
	11.30-11.50	Heat – pulse sap flow: a sensitive system to assess drought effects on grapevines. <u>S. Fuentes</u> , M. Collins, G. Rogers, J. Conroy	
	11.50-12.10	Using the heat pulse “Tmax” procedure to measure grapevine water use in a humid climate. <u>D.S. Intrigliolo</u> , R.M. Piccioni, A.N. Lakso	
	12.10-12.30	Grapevine transpiration and effective area of shade: implications for irrigation management. <u>L. McClymont</u> , I. Goodwin, D.M. Whitfield, S. Green	

23	12.30-12.50	Seasonal patterns of water-use measured with a dual heat pulse sap flow technique on mature grapevines growing in a weighing lysimeter. <u>A. J. McElrone</u> , T. M. Bleby, K. Pearsall, L. E. Williams	
	12.50-13.10	Estimating high rates of transpiration in woody vines with the heat-balance method. <u>J.M. Tarara</u>	
	13.10-13.30	Evapotranspiration partitioning from sap flow and eddy covariance technique for olive (<i>Olea europaea</i> L.) orchards in semi-arid region. <u>S. Er-Raki</u> , A. Chehbouni, J. Ezzahar, G. Boulet, L. Hanich, D.G. Williams	
	13.30-14.30	Lunch	
	14.30-15.00	Visit to the posters and stands	
	15.00-15.20	Tracing seasonal changes in water use of an invasive <i>Acacia</i> and a native pine in southern Portugal by measurement of sap flow. K.G. Rascher, <u>C. Máguas</u> , O. Correia, C. Werner	
	15.20-15.40	Sapflow velocity profiles within the corm of <i>Phoenix canariensis</i> palms in relation to “red palm weevil” (<i>Rhyncophorus ferrugineus</i>) infestations. <u>A. Motisi</u> , F. Pernice, F. Romolo	
	15.40-16.10	Section 2: Discussion and conclusions, by Steve Green	
	16.10-16.40	Coffee break	
	Section 3 : From the tree architecture to the stand level		Chairman: Jan Čermák
	16.40-17.00	The value of fine-grained sap flow measurements for studying woody plant physiology: recent advances through field observations in different species inhabiting diverse ecosystems. <u>T.E. Dawson</u> , S.S.O. Burgess, R.S. Oliveira, A.R. Ambrose, S.C. Sillett, K.A. Simonin	
	17.00-17.20	Sap wood conductivity overrules water access to determine tree height. <u>S. Pfautsch</u> , M.A. Adams	
	17.20-17.40	Sapflow dynamics in the tallest trees on Earth, <i>Sequoia sempervirens</i> . <u>A.R. Ambrose</u> , S. C. Sillett, T.E. Dawson, G.E. Koch	
	17.40-18.40	ISHS Meeting	
	20.00-21.00	Visit to the Alcázar	
21.15-23.30	Gala Dinner		
24	9.00-9.40	Invited lecture: <i>Application of Sap Flow Technique for Characterizing the Whole Tree Architecture, Especially Root Distribution.</i> <u>J. Čermák</u> , N. Nadezhdina	
	9.40-10.00	The intensity of night-time water use differs within crown of a forest grown <i>Tilia cordata</i> tree. <u>P. Kupper</u> , A. Sellin	
	10.00-10.20	The distribution of resistances along the hydraulic pathway is controlled by the tapering of xylem conduits. <u>G. Petit</u> , T. Anfodillo, M. Mencuccini	
	10.20-10.40	Drought stress reactions evaluated with vulnerability curves. <u>J. Schaller</u> , P-J. Paschold	

24	10.40-11.00	Is late stage reduction of kiwifruit sap flow due to loss of xylem functionality? <u>B. Morandi</u> , L. Corelli Grappadelli
	11.00-11.30	Coffee break
	11.30-11.50	Sap flow and hydraulic conductance of Olive tree (<i>Olea europaea</i> cv Meski and Picholine) as affected by water stress. <u>C. Hechmi</u> , B.M. Fathi, B. Mohamed, B.H. Salem
	11.50-12.10	Seasonal changes on hydraulic conductance of mature olive trees under different water regimes. <u>J.E. Fernández</u> , A. Morales, M.J. Martín-Palomo, J.L. Muriel, R. Romero, A. Díaz-Espejo
	12.10-12.30	Use of sap flow profiles in trunk to derive canopy conductance. <u>A. Díaz-Espejo</u> , J.E. Fernández
	12.30-12.50	Measuring sap flow in “two root-one shoot” grafted plants to model shoot xylem ABA concentration during partial rootzone drying. <u>I.C. Dodd</u> , G. Egea, W.J. Davies
	12.50-13.10	Estimation of containerized single-stem and split-rooted, non-fruiting apple tree water use using miniaturized heat pulse probes. <u>T. Einhorn</u> , H.W. Caspari, S. Green
	13.10-13.30	Tamarisk (<i>Tamarix</i>) water flux patterns before, during and after episodic defoliation by the salt cedar leaf beetle on the Colorado Plateau, USA. <u>K.R. Hultine</u>
	13.30-14.30	Lunch
	14.30-15.00	Visit to the posters and stands
	15.00-15.20	Relationships between water use and environmental parameters in a young post-fire maritime pine stand after precommercial thinning. <u>E. Jiménez</u> , J.A. Vega, P. Pérez-Gorostiaga, T. Fonturbel, C. Fernández
	15.20-15.40	Water release by Norway spruce stand during extreme humid conditions L. Valouch, I. Tomášková, <u>R. Pokorný</u>
	15.40-16.00	Sap flow in a mature olive tree: dynamics and quantification in trunk and branches. <u>F. De Lorenzi</u> , N. Nadezhdina, J. Čermák, V. Nadezhdin, A. Pitacco
	16.00-16.20	Seasonal course of sap flow and stable isotopes of beech trees in mixed and dominant stands. <u>J.P. Ferrio</u> , C. Offermann, J. Holst, A. Gessler
	16.20-16.50	Coffee break
	16.50-17.10	Connecting temporal and spatial scaling of transpiration from trees to stands: the use of sap flux measurements and environmental drivers. <u>B.E. Ewers</u> , D.S. Mackay, J.L. Angstmann, M.M. Loranty
	17.10-17.30	Water use efficiency within a selection of indigenous and exotic tree species as determined using sap flow and biomass measurements. <u>M.B. Gush</u> , P.J. Dye
17.30-18.00	Section 3: Discussion and conclusions, by Jan Čermák	

Posters:

The posters must be displayed in the poster room from the morning of October 22. Each poster must be attached to the panel with the same number.

1. Detection and characterization of cytokinin oxidase/dehydrogenase activity in oat xylem sap.
V. Motyka, B. Sýkorová, K. Hoyerová, S. Gajdošová, P.I. Dobrev, I. Raimanová, M. Trčková, M. Kamínek
2. Nitrate-nitrogen rates in petiole sap of potato crop (*Solanum tuberosum* L.).
A. Majić, M. Poljak, A. Sabljo, E. Sefo, Z. Knezović
3. Transpiration rate and amino acid distribution in water stressed *Medicago truncatula* plants.
E. Gil, J. Aldasoro, R. Ladrera, C. Arrese-Igor, E.M. González
4. The role of sap flow measurements in hydrogeology.
M.W. Lubczynski
5. Dry season sap flow patterns of nine woody species in the Botswana Kalahari: mechanisms ensuring survival.
D. Chavarro, O. Obakeng, J. Roy, M. Lubczynski
6. Calcium Translocation and Whole Plant Transpiration Noninvasive Measurements using Radio-Strontium as Tracer.
R. Seligmann, A. Schwartz, A. Bar-Tal, U. Yermiyahu, D. Tirosh, Y. Ifargan, S. Ovad, B. Sarusi, U. Wengrowicz
7. Influence of tree and stand structure on whole-tree water use in beech and oak growing in mixed stands.
M. Schmidt
8. Sap flow in cork oak trees at two contrasting sites in Portugal.
M. Schmidt, D. Schreiber, A. Correia, N. Ribeiro, D. Otieno, J. Tenhunen, J.S. Pereira
9. Comparing artificial neural networks and the Penman-Monteith-Jarvis model for filling gaps in the sapflow record for a subtropical cloud forest.
G. García Santos, E. Moors, S. Bruijnzeel
10. Using whole-tree sapflow measurements to assess the effects of land use/cover change on stand transpiration in a seasonal montane cloud forest zone in central Veracruz, Mexico.
M. Gómez Cárdenas, H. Asbjornsen, F. Holwerda, S. Bruijnzeel
11. Evaluating transpiration in an annual crop and perennial prairie species using the heat balance method in Central Iowa, U.S.A.
V. Mateos-Remigio, H. Asbjornsen, J. Tarara, T. Sauer
12. Water Availability and Provenance Effects on Water Relations of 11 year-old Loblolly Pine (*Pinus taeda*) plantation.
C.A. Gonzalez, T.A. Martin
13. Sap flow partitioning in different branches of apricot trees.
E. Nicolás, A. Torrecillas, J.J. Alarcón

14. Use of sap flow measurements to validate stomatal functions for mature beech (*Fagus sylvatica*) in view of ozone flux calculations.

S. Braun, S. Leuzinger, C. Schindler

15. Comparison of almond trees transpiration determined by sap flow-meter and lysimetry.

P.A. Nortes, A. Baille, G. Egea, M. González-Real, R. Domingo

16. Sap flow measurements to assess the impact of fog in tree transpiration of a laurisilva forest.

A. Ritter, C.M. Regalado, G. Aschan

17. Using potential evapotranspiration to determine nighttime sap flow rate for Granier's method.

C.M. Regalado, A. Ritter

18. Sap flow measurements in different fig fruit (*Ficus carica* L.) cultivars in Tenerife Island.

A.M. González-Rodríguez, J.A. Oncins, J. Peters, J.J. Bocero, R. Poyatos