

International Journal of Wildland Fire

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Contents	Volume 18	Issue 4	2009
Wildland surface fire spread modelling, 1990–2007. 1: Physical and quasi-physical models Andrew L. Sullivan <i>International Journal of Wildland Fire</i> 18 , 349–368		The first of three articles surveying models of the spread of surface wildland fires published during the period 1990–2007, this article concerns those models based on the fundamental chemistry and physics of combustion and fire spread. The series provides a useful starting point for those interested in recent modelling activities.	
Wildland surface fire spread modelling, 1990–2007. 2: Empirical and quasi-empirical models Andrew L. Sullivan <i>International Journal of Wildland Fire</i> 18 , 369–386		The second of three articles surveying models of the spread of surface wildland fires published during the period 1990–2007, this article concerns those models derived from empirical study of field and laboratory experiments. The series provides a useful starting point for those interested in recent modelling activities.	
Wildland surface fire spread modelling, 1990–2007. 3: Simulation and mathematical analogue models Andrew L. Sullivan <i>International Journal of Wildland Fire</i> 18 , 387–403		The final of three articles surveying models of the spread of surface wildland fires published during the period 1990–2007, this article focusses on implementations of fire spread models as simulations of fire spread across the landscape and the use of mathematical analogue models to represent fire spread. The series provides a useful starting point for those interested in recent modelling activities.	
Integration of AWiFS and MODIS active fire data for burn mapping at regional level using the Burned Area Synergic Algorithm (BASA) Federico González-Alonso and Silvia Merino-de-Miguel <i>International Journal of Wildland Fire</i> 18 , 404–414		This paper presents a new algorithm for burn mapping using satellite data and ancillary information. The methodology was applied in Galicia (north-west Spain) where hundreds of forest fires occurred during the first 20 days of August 2006. Results from this study were validated using official fire statistics.	
Rapid locating of fire points from Formosat-2 high spatial resolution imagery: example of the 2007 California wildfire Cheng-Chien Liu, An-Ming Wu, Sheng-Yun Yen and Chiung-Huei Huang <i>International Journal of Wildland Fire</i> 18 , 415–422		Synergistic operation of the space-borne sensors with different spectral, spatial and temporal resolutions would enable the rapid locating of fire points during wildfires. We demonstrate the feasibility of this concept by employing MODIS and Formosat-2 images to investigate the 2007 California wildfire event.	
Fuel characterization in the southern Appalachian Mountains: an application of landscape ecosystem classification Aaron D. Stottley, Victor B. Shelburne, Thomas A. Waldrop, Sandra Rideout-Hanzak and William C. Bridges <i>International Journal of Wildland Fire</i> 18 , 423–429		Landscape ecosystem classification was used to characterize wildland fuel complexes in the southern Appalachian Mountains, USA. The distribution of dead and downed woody fuels and ericaceous shrubs were found to coincide with an ecological gradient that was defined by landscape ecosystem classification.	
Prediction of fire occurrence from live fuel moisture content measurements in a Mediterranean ecosystem Emilio Chuvieco, Isabel González, Felipe Verdú, Inmaculada Aguado and Marta Yebra <i>International Journal of Wildland Fire</i> 18 , 430–441		Fuel moisture content (FMC) of grasslands and shrub species in Mediterranean areas is closely related to fire occurrence. FMC of grasslands was more closely related to number of fires and burned area, and FMC of shrublands showed better correlations with burned area and the occurrence of large fires (>500 ha).	
Traditional fire management: historical fire regimes and land use change in pastoral East Africa Ramona J. Butz <i>International Journal of Wildland Fire</i> 18 , 442–450		This paper examines the historic and contemporary uses of fire as a land management tool among Maasai pastoralists in northern Tanzania and explores the potential impacts of changing fire management practices and fire suppression on savanna vegetation. Substantial modifications to historical fire regimes and their drivers are presented.	

Short-term impact of post-fire salvage logging on regeneration, hazardous fuel accumulation, and understorey development in ponderosa pine forests of the Black Hills, SD, USA

Tara L. Keyser, Frederick W. Smith and Wayne D. Shepperd

International Journal of Wildland Fire **18**, 451–458

Salvage logging in ponderosa pine forests limited coarse woody debris accumulation. Salvage logging in moderate-severity sites resulted in lower regeneration rates. The likelihood of timely regeneration in high-severity sites, regardless of salvage treatment, is low. We found no effect of salvage logging on understorey development 5 years after fire.

Natural variability of the Keetch–Byram Drought Index in the Hawaiian Islands

Klaus Dolling, Pao-Shin Chu and Francis Fujioka

International Journal of Wildland Fire **18**, 459–475

The Hawaiian Islands experience damaging wildfires on a yearly basis. The Keetch–Byram Drought Index (KBDI), which is one measure of fire risk, is reconstructed for a 35 year period. Different statistical analyses are used to investigate links between the KBDI and various climate signals.

Florida wildfire activity and atmospheric teleconnections

Scott L. Goodrick and Deborah E. Hanley

International Journal of Wildland Fire **18**, 476–482

El Niño–Southern Oscillation plays a significant role in the severity of Florida’s wildfire season; however, little is known about the role of other climate patterns such as the North Atlantic Oscillation and Pacific–North American pattern. This study explores the potential role of these teleconnection patterns on fire season severity in Florida.



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