Good quotes from balbi paper

“The need for fire spread simulation tools that aid emergency response, firefighting, and fire management decision making has become more and more crucial” -Intro first paragraph

3 types of models: 1. Statistical or empirical, 2. Semi empirical, 3. Physical models

“Both the empirical and semi empirical approach have produced models that are applicable to operational conditions” intro 2nd page

“physical models describe how the heat, mass and momentum fluxes are transferred from the fuel burning zone or from the flame body to the unburnt fuel” 2nd paragraph intro

Simplified physical models belongs to a familt of models that can bridge the gap between the simple empirical models and complex physical models.

“the balbi model” follows this concept. It is a fully predictice simplified physical model for surface fire spred that takes into account meteorological, topographical, and fuel conditions”

The first version of the balbi model was in 2007 that followed the assumption that radiation was the main heat transfer mode

The next two versions of the model improved its physical basis.

“All versions of the Balbi model, including the proposed model, need an idealized fuel description to run a simulation” -right above methods

“the 2 was removed in Eq6 since at a field scale, it is assumed the field scale soil absorbs a part of the flame base radiative heat flux unlike the lab experiments”

“The effects of fuel load, fuel height, and bulk density on fire propagation in shrubland vegetation are intimately connected, and it is often difficult, if not impossible, to extract the effect of one variable independently from the effect of the other two in natural fuel beds”