

המחלקה למתמטיקה, בן-גוריון

קולוקוויום

ביום שלישי, 5 באפריל, 2022

בשעה 14:30 – 15:30

Math-101

ההרצאה

Fuel Polydispersed of Dynamics the About

חינתן על-ידי

(BGU) Hareli Shlomo

תקציר: A poly disperse fuel spray consist of thousands of droplets in various shapes and volumes. The combustion process of a poly disperse fuel is described by the energy, thermal releases which are useful. The poly disperse fuel droplets are described by a discrete function - the particle size (droplet) distribution (PSD). Models of the combustion process which accounts for each droplet are implemented by using a considerable amount of computations. As a result, they require a practicable approximation. The combustion process is described by using approximations adequately. PSD particle size distribution is used to fail tions. We propose a simplified model which allow us to use continuous distribution functions (theoretical or experimental PSD) during the combustion process. The approximations are more accurate than previous ones. The poly disperse fuel dynamics the investigate in- to us allow functions distribution

some provided model The study. analytical an permit even and elegantly fuel
insights. theoretical new
the of radii the process, self-ignition the during that show results main Our
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by (visualized result novel important An radius. the to proportion inverse in
for increases initially droplets the of radius mean the that demonstrates graphs)
decrease. expected the by followed is which time, of period short relatively a