



# Shan Raffel

TEMA I.

“Utjecaj geometrije cestovnog tunela na mogućnost interveniranja i strategiju”



“Road Tunnel Geometry and the Influence on Response Capability and Strategies ”

Sažetak:

Vatrogasna intervencija u tunelu predstavlja ekstremne izazove za vatrogasce i ostale hitne službe. Ključno je da vatrogasci budu svjesni kako će geometrija tunela, ventilacijski sustav i dostupnost sredstava za gašenje imati veliki utjecaj na najučinkovitiji pristup. Uspješan plan odgovora na izvanredni

dogadjaj u tunelu mora se temeljiti na intimnom poznavanju specifičnih snaga i slabosti štićene infrastrukture. Ova prezentacija pružit će pregled različitih strateških pristupa potrebnih za jednogjevne dvosmjerne i dvocijevne jednosmjerne tunele. Također će istaknuti potrebu za razmatranjem dostupnosti kritičnih značajki od sigurnosne važnosti za zaštitu od požara i sigurnost korisnika tunela.



#### Abstract:

Safe and effective response to fire and rescue incidents in tunnels presents extreme challenges for fire and emergency responders. It is critical that firefighters are aware of how tunnel geometry, ventilation systems, and availability of water for fire suppression, will have a major impact of the most effective approach. A successful tunnel response plan must be based on an intimate knowledge of the specific strengths and weaknesses of infrastructure they protect.

This presentation will provide an overview of the different strategic approaches required for single bore bi-directional tunnels and uni-directional twin bore infrastructure. It will also highlight the need to consider the availability of critical fire and life safety features.



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## TEMA II.

“Rad u pogibeljnoj zoni”



“Working in the Kill Zone ”

### Sažetak:

Najopasnija situacija za vatrogasce rad u objektu ispunjenom dimom, bez vidljivog plamena. U ovoj prezentaciji raspravlјat će se o ograničenjima hlađenja požarnih plinova i istaknuti potrebu za brzim napredovanjem do točke iz koje je moguće staviti požar pod kontrolu aplikacijom vode na goruće površine ili izoliranjem žarišta požara od zone djelovanja.

### Abstract:

The most dangerous situation for firefighters is when they are working in a structure filled with smoke, and no flame showing. This presentation will discuss the limitations of gas cooling and highlight the need to progress quickly to the point where they can control the fire by placing water on the burning surfaces or by isolating the fire compartment from the zone of operation.



### Kratak životopis:

Shan Raffel radio je kao profesionalni vatrogasac u Australiji više od 38 godina. Njegova je karijera doživjela ozbiljni zaokret

promijenila 1994. godine, nakon što su dvojica njegovih kolega poginula tijekom gašenja požara u onome što se smatralo "rutinskom intervencijom". Godine 1996. još su dvojica kolega ozbiljno ozlijedena nakon što su zahvaćeni ekstremnim razvojem požara dok su bili u pretraživanju zadimljenog dijela hostela Backpackers. Ovi su ga događaji motivirali da sačini opsežno izvješće koje je rezultiralo međunarodnom studijom najbolje međunarodne prakse u svezi osposobljavanja iz ponašanja u požaru u zatvorenom prostoru (CFBT – Compartment Fire Behaviour Training) 1997. godine u vodećim vatrogasnim organizacijama. Dobivene ključne informacije dovele su do razvoja prvog nacionalno priznatog CFBT programa obuke u Australiji 1998. godine. Nastavio je pomagati brojnim vatrogasnim službama u svijetu u razvoju njihovih objekata za obuku, instruktora i nastavnih materijala. Godine 2009. dobio je "Churchill Fellowship" - stipendiju" za istraživanje "Pripreme planiranja i odgovora na izvanredne situacije u tunelima" što je dovelo do intenzivnog proučavanja u razdoblju od 10 tjedana u SAD-u (FDNY), Kanadi, Njemačkoj, Austriji, Švedskoj, Danskoj, Norveškoj i Švicarskoj. Njegovo veliko iskustvo obuhvaća 27 zemalja, a njegov međunarodni CFBT instruktorski program dobio je međunarodnu akreditaciju kroz proces priznavanja Institucije vatrogasnih inženjera 2018. (Institution of Fire Engineers ) <https://www.ife.org.uk/Training-Development-Directory/142643> Otkako je napustio vatrogasnu službu s punim radnim vremenom, usmjerio se na savjetovanje u području vatrogasnog inženjerstva i razvoj vatrogasnih instruktora kroz svoje međunarodne tečajeve. [www.linkedin.com/in/shanraffel](http://www.linkedin.com/in/shanraffel)

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#### Short bio:

Shan Raffel served as a career firefighter in Australia for over 38 years. His career took a serious change in 1994 after two of his colleagues were killed during firefighting operations in what was considered a "routine fire". In 1996, two other colleagues were seriously injured after being caught in an extreme fire event while conducting search and rescue operations in smoke laden section of a Backpackers Hostel. These events motivated him to develop an extensive report which led to an international study of international best practice in compartment fire behavior training (CFBT) in 1997 at leading

fire departments. The critical information gained led to the development of the first nationally recognized training CFBT program in Australia in 1998. He has continued to assist numerous fire services worldwide in developing their training facilities, instructors, and teaching materials. In 2009 he was awarded a “Churchill Fellowship” to research “Planning Preparation and Response to Emergencies in Tunnels” which led to intensive study over a period of 10 weeks in the USA (FDNY), Canada, Germany, Austria, Sweden, Denmark, Norway, and Switzerland. His extensive training experience spans 27 countries, and his International Compartment Fire Behaviour Instructors program gained international credentialing through the Institution of Fire Engineers recognition process in 2018. <https://www.ife.org.uk/Training-Development-Directory/142643>

Since leaving full time firefighting service, he has focused on Fire Engineering consultancy and the development of firefighting instructors through his international courses.

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