

## NASA's Global Reach: Western Balkans

Since the Balkans are located at a crossroads between West and East, their history has seen the influence of multiple empires that have each left their mark- politically and religiously. The remnants of these regimes has left a population with Catholic, Orthodox, and Muslim adherents.

The entire Balkan region struggles from a formidable triple threat- the transition from a socialist economy, deeply embedded religious divisions, and political corruption.

The adjustment from the socialist economy of Yugoslavia, as well of the aftermath of the wars of the 1990s, has resulted in very low salaries and unemployment rates of 25% or higher. This creates significant emigration issues and loss of youth potential.



**Belgrade, Serbia , April 5, 2016**

*High School Aviation Academy: a very motivated student body anxious to acquire employable skills in a difficult economy.*

A socialist economy has many advantages but one of the disadvantages is that it raises an expectation

of being “taken care of” by the government. When that safety net is gone it is very hard to change that sense of entitlement into personal responsibility. Since the Balkans pride themselves on being where East meets West, it would seem to follow that the people would look both to the East and the West for professional and personal opportunities. Yet almost all the ambitions in the region seem directed towards the West with little mention of Asia, Africa, or the Middle East. There was a general paradox of great suspicion of western foreign policy but faith in the strength of western economies to provide job opportunities.



**Mostar, Bosnia & Herzegovina, April 11, 2016**

*Standing room only at University of Mostar and they sent a people to people gift to the United States for our next Mars landing.*

The Yugoslav wars of the 1990s still feel closer than 20 years ago – especially to those who lived through the siege of Sarajevo. While the Dayton Accords brokered peace, it essentially “froze” the situation leaving the underlying conflicts in place. The many war crimes from this time period have taken 20 years to be prosecuted through the ICTY (International Criminal Tribunal for Yugoslavia – a UN court of law).



***Petnica, Serbia , April 5, 2016***

*Petnica Science Center: a picturesque camp where youth from the former Yugoslav countries gather in the name of learning and science.*

The different parts of the region suffer from post war trauma and – as is common- they all recall the history differently. The Serbians recall the ignominy of sanctions and bombing of a European country by other European countries and the sense that another solution could have been found. For those in Sarajevo, there are still daily reminders of worst siege of a city in modern warfare. The repeated episodes of “ethnic cleansings” and other atrocities hampers reconciliation while so many have first person memories of violence and loss.



***Sarajevo, Bosnia & Herzegovina, April 16, 2016***

*Advocating for the criticality of facilities for public astronomy at the bombed out ruins of Trebevic Observatory.*

As Bosnia, Serbia, and Macedonia try to work through their sectarian divisions, there are also significant external pressures from other countries with vested interests in the region such as Russia, Greece, and Croatia.



**Sarajevo, Bosnia & Herzegovina , April 16, 2016**

*Live Al Jazeera TV interview, Al Jazeera Studio, Sarajevo, Bosnia*

The political solutions to these conflicts have basically been to segregate the populations from one other at the city and state levels. Orthodox, Catholic, and Muslims often do not live or go to school together. Thus, the youths of the region do not have the option to mix with other faiths regularly. This further re-enforces the sectarian future.



**Banja Luka, Bosnia & Herzegovina, April 14, 2016**

*RS Museum of Contemporary Arts: an absolutely packed opening of exhibition of Moon rock "Return to Moon". The exhibit was organized for my visit and the public reception was crowded with press, dignitaries, embassy staff and public.*

On a positive note, the people of the region do what they can to ensure individual interactions are tolerant and progressive even if the city/state level relations are very problematic. Unfortunately, there are also signs that the ethnic tensions are again rising in the younger generations.

As in other parts of the world, all of these difficult circumstances do open the door to the region being vulnerable to religious radicalization.



*Belgrade, Serbia , April 4, 2016*

*As always- the world over- one's hope for the future can always be rejuvenated by a child filled with questions and enthusiasm after hearing stories of space exploration.*

### About the Author



Nagin has been interested in space since she decided as a teenager that she wanted to work at NASA's Jet Propulsion Laboratory. Growing up as a young woman in a multicultural environment, it was already clear how many ways humans find to divide themselves; robotic space exploration helps the world "Look Up" and remember that we are one world.

As a spacecraft operations engineer for over 20 years, Nagin has held leadership and system engineering positions on multiple NASA/JPL interplanetary robotic missions including the Galileo mission to Jupiter, the Mars Exploration Rovers, the Kepler exoplanet hunter, InSight, and the Mars Curiosity Rover (MSL).

Nagin's honors include being the namesake for Asteroid 14061. She has received the NASA Exceptional Service Medal and two NASA Exceptional Achievement Medals for her work on the Mars Exploration Rover Team and the Galileo Mission. She has also received the Bruce Murray Award for Exceptional Public Outreach and has been a nominee for the Women at Work Medal of Excellence. She is a U.S. Department of State's Bureau of International Information Programs (IIP) SLATE STEM Speaker and has spoken to live and television audiences around the US, Canada, Europe, South America, the Middle East, and South Asia on the stories of the people behind the missions.

She is a past member of Cornell University's President's Council for Cornell Women and has served on the Boards of Griffith Observatory (FOTO) and Impact Personal Safety: Self-Defense & Empowerment for Women. She is involved as a judge for the Entertainment Industries Council of depiction of STEM in movies & TV.

Before her time at JPL, she served for 6 years in the US Air Force including duty as a Space Operations Officer at Cheyenne Mountain's NORAD/US Space Command in Colorado Springs. Nagin holds engineering degrees from Cornell University and the Air Force Institute of Technology as well as a psychology degree from Cornell.