

Date: 19 March 2018

**JSPS US ALUMNI ASSOCIATION SEMINAR PROGRAM
REPORT**

Organizer (Awardee)

Name: Ramesh P Singh

Position & Affiliation: Professor, Chapman University

1. TITLE OF SEMINAR

Japan Society for the Promotion of Science (JSPS) US Alumni 2018 Seminar on
"Growing Atmospheric Pollution and Its Impact on Climate"

2. DATE(S) 16 February 2018

3. VENUE & CITY, STATE *Lyon Conference Center, Argyros Forum 209A*
Chapman University, Orange, California

4. TARGETED RESEARCH AREAS

(1) Atmospheric pollution (2) Climate change (3) Natural Hazards

5. NUMBERS OF PARTICIPANTS

TOTAL: 43 (registered) persons including 4 US Alumni Association members

-US: _____ persons

-FROM OVERSEAS: 0 person(s) including 3 person(s) from Japan

Executive Summary

The growing population, urbanization and energy demands, greenhouse emissions have increased, that have affected global warming and climate change. The climate change is directly and indirectly evident to people living on the Earth planet. The land is surrounded by ocean and atmosphere and strong coupling exists between land-ocean-atmosphere. This strong coupling is getting complex due to human activities and due to influence of Sun. The clouds and atmospheric pollutants are blocking the radiations from the sun reaching the earth's surface and similarly longwave radiations emitted by the earth are trapped in the lower atmosphere. The increasing aerosol loads is directly affecting the atmospheric pollution and have direct relation with the global warming and climate change. Three Japanese and US scientists discussed the sources of atmospheric pollution and their monitoring using satellite and ground observations and impacts on air quality, human health, natural hazards, snow/glaciers and climate change. The Panelists discussed the impacts of growing population on climate change, air quality, food securities and ground water resources.

Topics Discussed with Outcomes & Future Challenges

- Growing atmospheric pollution
- Relation with Growing Population and Global Pollution
- Satellite remote sensing and monitoring of atmosphere
- Current and Future satellite missions
- Atmospheric pollution and forest fires
- Ground based monitoring of atmospheric pollution
- How to cope with Climate change and its impacts

Website:

To access all the abstract of papers presented at the Seminar and bio of the speakers, please visit

<https://sites.google.com/view/jsps2018seminar/home/abstract>

Program:

Seminar program was started with the registration at 9.10a.m., the opening was at 9.10a.m.. The Convener Dr. Ramesh Singh welcome all the delegates and introduced three Japanese visitor and JSPS alumni in Chapman and other attending this seminar. Dr. Daniele Struppa, President could not attend the meeting but his message was read by the Convener Dr. Singh. Dr. Andrew Lyon, Dean, Schmid College of Science and Technology welcome all the delegates and wish us a great success meeting, he mentioned that he mentored some of the students from Japan with JSPS Fellowship when he was Professor at the Georgia Institute of Technology. All the speakers made presentation using power points. The coffee and snacks were arranged in the room throughout the meeting. The lunch was arranged by the Convener at the Faculty Athenaeum and Dinner was arranged at the Tandoor Restaurant in Orange. All the participants greatly appreciated seminar agenda, foods and arrangements. Everyone participated in the Panel Discussion after talks of four Panelists.

**Japan Society for the Promotion of Science
(JSPS) US Alumni 2018 Seminar**

[on](#)

***"Growing Atmospheric Pollution and Its
Impact on Climate"***

***Chapman University
Lyon Conference Center,
Argyros Forum 209A***

February 16, 2018



- 9.00a.m.** **Registration**
- 9.10a.m.** **Opening**
Ramesh Singh (Convener)
Air Pollution, Population Dynamics and Climate Change
 Daniele Struppa (President, CU)
 Andrew Lyon, Dean, SCST
 Hiroki Toshima, International Program Associate, JSPS
 Washington Office
- 10.00a.m.** **Personal Experience of Stay in Japan as JSPS Fellow**
 Alexander Bay (Chapman University)
 Andrea Molle (Chapman University)
 Ramesh Singh (Chapman University)
- 10.15a.m.** **Group Photo and Coffee break**
- 10.30a.m -11.15a.m.** *Thomas S. Pagano (JPL)*
New Directions for Atmospheric Infrared Sounding at NASA
- 11.15a.m. – Noon** *Terry Nakajima (JAXA, Japan)*
Short-lived climate pollutant issues on the earth's climate change phenomenon and global warming mitigation
- Noon -1.00p.m.** *Lunch Break*
- 1.00p.m.-1.35p.m.** *Prabir Patra (DEGCR/IACER/JAMSTEC, Japan)*
Understanding the sources of air pollutants key to effective mitigation policy – a case of methane
- 1.35p.m.-2.10p.m.** *S.V. Nghiem (JPL, USA)*
Global Mega Urbanization in the 4D Time-Space Continuum and Environmental Impacts
- 2.10p.m.- 2.40p.m.** *Robert L. Mahoney (Northrop Grumman Aerospace Systems, USA)*

*Fossil Fuel and Biomass Burning Effect on the Cryosphere -
Satellite Remote Sensing Challenges*

2.40p.m.- 3.10p.m.

Jason Keller (Chapman University)

The effects of ecosystem-scale warming on methane cycling in a northern Minnesota bog wetland

3.10pm-3.40p.m.

Tepei J. Yasunari (Hokkaido University, Japan)

Wildfire occurrences over East Eurasia with climatological environmental conditions, and its impact on air quality at a remote place in Northern Japan, Hokkaido: Implications to better future projections of wildfire

3.40p.m.-4.00p.m.

Coffee break

4.00p.m. – 4.30p.m.

Amir AghaKouchak (UCI, USA)

Compound and Concurrent Climate Extremes: Detection, Modeling and Risk Analysis

4.30p.m.-4.50p.m.

Jeremy Hsu (Chapman University)

Evolutionary consequences of a demographic bottleneck: Perspectives from two Patagonian rodents

5.00p.m. – 6.30p.m.

Panel Discussion “Coping with the Impacts of Climate Change”

Moderator; Ramesh Singh (CU)

Panelists: *Terry Nakajima, Son Nghiem,
Anuradha Prakash, Soroosh Sorooshian*

“Coping with the Impacts of Climate Change” Panelists



Terry Nakajima (JAXA)

Currently the director, Earth Observation Research Center (EORC), Japan Aerospace Exploration Agency (JAXA); Research Professor of JAXA Institute of Space and Astronautical Science; Emeritus professor of University of Tokyo.



Son V. Nghiem (JPL)

In 1991, he joined the Jet Propulsion Laboratory (JPL), California Institute of Technology (CalTech). His research encompasses active and passive remote sensing, development of advanced satellite radars and radiometers, electromagnetic scattering and emission modeling, and earth sciences and applications.



Anuradha Prakash (CU)

Anuradha Prakash, is Professor and Director, Food Science Program at Chapman University in Orange, CA. At present she is evaluating the effect of irradiation on the quality of fruit treated by irradiation for insect disinfestation with the ultimate goal of eliminating global trade barriers by reducing the threat posed by invasive pests.



Soroosh Sorooshian (UCI)

Sorooshian's research focuses on surface hydrology, primarily in the area of rainfall-runoff modeling. He has devoted much of his effort to model identification and calibration issues and has developed special estimation criteria to account for the uncertainties of calibration data.

Photos

Group Photo



US JSPS Alumni



Convener reading message of Deniele Struppa, President, Chapman University



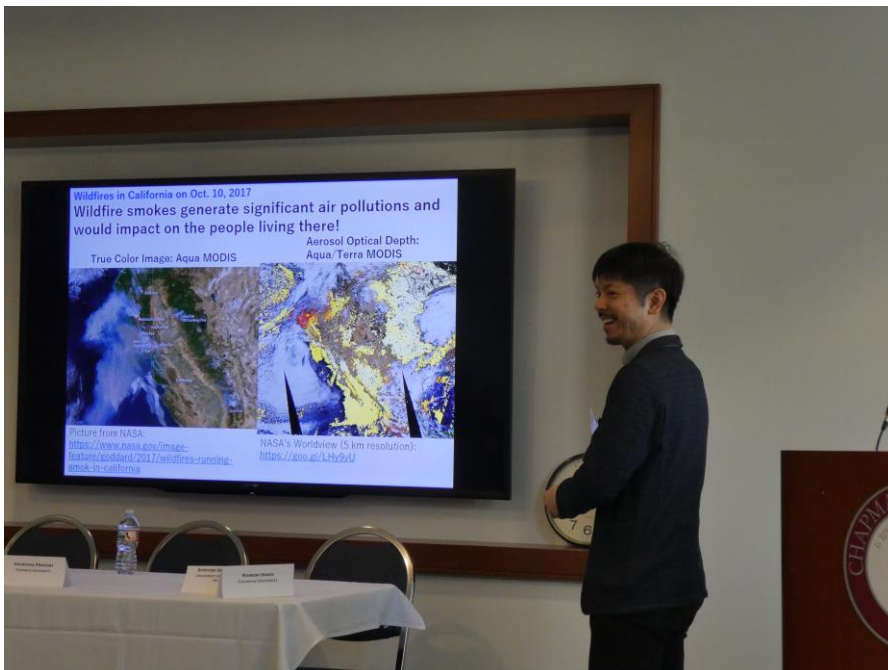
Professor Terry Nakajima, Japan delivering his talk



Dr. Prabir Patra, Japan delivering his talk



Professor Tappe Yasunari, Japan delivering his talk



Panelists: Drs. Nakajima, Son *Nghiem*, Anuradha Prakash, *Sorooshian* Soroosh



Dinner at Tandoor, Katella

