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APEC SCIENCE PRIZE for INNOVATION, RESEARCH and EDUCATION (ASPIRE)

OVERVIEW

The APEC Science Prize for Innovation, Research and Education (“ASPIRE”) is an annual award which recognizes young scientists who have demonstrated a commitment to both excellence in scientific research, as evidenced by scholarly publication, and cooperation with scientists from other APEC member economies.

The ASPIRE Prize supports APEC’s mission to:

- strengthen international science and technology networks;
- enhance economic growth, trade and investment opportunities in harmony with sustainable development, through policies, innovative R&D and technologies, and knowledge sharing; and
- improve linkages and efficiency between research and innovation.

ASPIRE 2018 NOMINATION THEME: SMART TECHNOLOGIES FOR HEALTHY SOCIETIES

Each year the APEC host economy is asked to provide a theme to guide nominations for the ASPIRE Prize to be awarded in their host year. **For its host year of 2018 Papua New Guinea selects "Smart Technologies for Healthy Societies" as the ASPIRE nominating theme.** This theme focuses on how scientists are capitalizing on smart technologies and available digital platforms to provide better health care access and services across the APEC region.

Each member economy, through its representative on the APEC Policy Partnership for Science, Technology and Innovation (PPSTI), is invited to nominate one young scientist under the age of 40 to be considered for the 2018 ASPIRE Prize. Nominees should demonstrate a commitment to excellence in scientific research and cooperation with scientists from other APEC member economies in subjects such as: **biomedical technology, healthcare supply chains, pharmaceutical technology, point-of-care systems, wearable technology, self-help devices, artificial gene fusion, medical Informatics, cell surface display techniques, robotics, nanomedicine, 3D printing and continuous manufacturing, blockchain technology, and other relevant fields.**

ELIGIBILITY

Any citizen of an APEC member economy is eligible to be nominated for the ASPIRE Prize. He/she must be living at the time of his/her nomination and be under the age of 40 as of 31 December of that year (i.e., all 2018 nominees must be under the age of 40 as of 31 December 2018).

SELECTION PROCESS

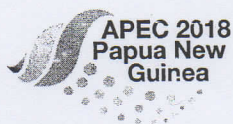
Each member economy, through its representative on the APEC Policy Partnership for Science, Technology and Innovation (PPSTI), is invited to nominate one young scientist under the age of 40 to be considered for the 2018 ASPIRE Prize.

Once nominations are received, PPSTI members rank the nominees through a selection ballot to determine the winner. PPSTI members are asked to judge the nominees based on how well they have demonstrated:

- excellence in scientific research, as evidenced through scholarly publication;
- commitment to cooperation with scientists from other APEC member economies; and
- contribution to the theme of “Smart Technologies for Healthy Societies.”



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ASPIRE PRIZE SPONSORS

Wiley and Elsevier, two of the world's leading publishers of scholarly scientific knowledge, have generously committed to funding prize money in the amount of \$25,000 USD.

PREVIOUS ASPIRE PRIZE WINNERS



2017: New Material Technologies

Dr. Yanwu Zhu of China was awarded the 2017 ASPIRE Prize in Ha Noi by Deputy Minister of Science and Technology of Viet Nam, Tran Quoc Khanh. Dr. Zhu is a Professor at the University of Science and Technology of China where he researches the fields of nanomaterials and specifically new carbon materials. His publications have been widely cited and his research with other APEC scientists has been applied in large-scale production of graphene materials.



2016: Technologies for Food Security

Dr. Hua Kuang of China was awarded the 2016 ASPIRE Prize in Lima by Dr. Gisella Orjeda, President of the Peruvian National Council for Science, Technology and Technological Innovative (CONCYTEC). Dr. Kuang is a Professor at Jiangnan University's School of Food Science and Technology in Wuxi, China, where she works with researchers in other APEC economies to develop low-cost biosensors that detect food sanitation hazards. Her patented technologies have been used to improve food safety for millions in China and elsewhere.



2015: Disaster Risk Reduction: Understanding the Role of Climate Change and Variability

Dr. Jong-Seong Kug of Korea was awarded the 2015 ASPIRE Prize in Manila by Secretary Mario Montejo of the Philippine Department of Science and Technology. Dr. Kug is an Associate Professor at Pohang University of Science and Technology's School of Environmental Science and Engineering in Korea, and his El Niño prediction model has helped the Korea Meteorological Administration better understand tropical climate dynamics, and forecast and track extreme weather—an area that addressed Philippines' theme of "Disaster Risk Reduction: Understanding the Role of Climate Change and Variability."



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2014: Intelligent Transportation

Dr. Agachai Sumalee, a Thai professor at the Hong Kong Polytechnic University, was awarded the 2014 ASPIRE Prize by Cai Jianlin, China's Vice Minister of Science and Technology. China selected the theme of "Intelligent Transportation" to reflect China's interest in facilitating green and sustainable growth, environmental protection and low-carbon economies. Dr. Sumalee designed a model in collaboration with researchers from across the APEC region that allows highway managers to predict traffic conditions and prevent congestion. This led to ground breaking road traffic management system that slashed commuting times in the greater Bangkok area.



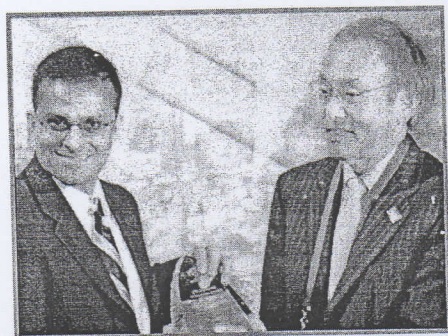
2013: Sustainable Ocean Development

In 2013 the ASPIRE Prize was awarded by Gusti M. Hatta, Indonesia's Minister of Research and Technology, to Dr. Carissa Klein of Australia. Dr. Klein's research with the University of Queensland uniquely addressed the 2013 ASPIRE nominating theme of "sustainable ocean development" by striking a balance between biodiversity conservation and socioeconomic viability. Her work has helped two APEC member economies—Malaysia and the United States—sustainably zone the ocean for fishing and conservation.



2012: Health Innovation

Dr. Rossa Wai Kwun Chiu of Hong Kong, China was awarded the 2012 ASPIRE Prize. Russia selected "health innovation" as its ASPIRE nominating theme, building on its desire that APEC actively foster cooperation among economies in major innovation areas, such as human health, to support healthy lifestyles, productivity and economic growth. Dr. Chiu's groundbreaking research and innovations in chemical pathology has brought non-invasive prenatal diagnosis of fetal genetic diseases into routine clinical use around the world.



2011: Green Growth

In 2011 the ASPIRE Prize was awarded by Nobel Laureate and U.S. Secretary of Energy Steven Chu to Dr. Ali Javey of the United States. The United States selected "green growth" as its ASPIRE nominating theme, building on its desire that APEC actively promote environmentally sustainable economic growth and development, and help our economies successfully transition to a clean energy future. Dr. Javey's innovative work with nanomaterials has made great strides in developing a new generation of solar energy technology and reducing energy consumption in "green electronics."



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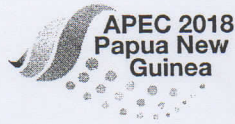
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Enclosures

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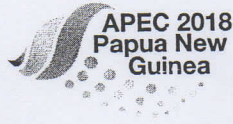
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ASPIRE 2018 Selection Process & Key Dates

ACTIONS	SUPPORTING DOCUMENTS IN PACKET	DATE
<p>EACH APEC ECONOMY SEEKS LOCAL NOMINATIONS</p> <p>Each APEC member economy, through its PPSTI representative, is requested to seek nominations from within his or her economy before one nominee is selected to represent the economy at large. It is recommended that nominations be actively solicited from top educational and research institutions within the economy.</p> <p>Example local nomination process:</p> <p>Step 1—Seek Local Nominations: PPSTI representative to send <i>Nomination Form</i> and accompanying <i>Letter to Local Educational and Research Institutions</i> requesting them to publicize/promote the ASPIRE Prize through a call-for-nominations. Local competitions held by prominent institutions to publicize/promote the ASPIRE prize are highly encouraged.</p> <p>Step 2—Establish Peer Review Panel to Select Economy's One Nominee: PPSTI representative to receive completed local nomination applications (completed <i>Nomination Forms</i>) and establish a panel to judge the applications and select one nominee.</p>	<p>Step 1 documents</p> <ul style="list-style-type: none"> • Nomination Form • Letter to Local Educational and Research Institutions <p>Step 2 documents</p> <ul style="list-style-type: none"> • Example Applicant Review Sheet 	<p>Step 1 Suggested Timing: Early March</p> <p>Step 2 Suggested Deadline: Mid April</p>
<p>EACH APEC ECONOMY SUBMITS ONE NOMINEE</p> <p>Each APEC member economy submits <u>one nominee</u> to represent his/her economy for the 2018 ASPIRE Prize. Submissions are made via e-mail <u>before May 4</u> to PPSTI Program Director, Ms. Zhongzhen LIU (lzz@apec.org). The submission should include 1) The nominee's <i>Nomination Form</i>; 2) the <i>Member Economy Nomination Cover Letter</i></p>	<ul style="list-style-type: none"> • Nomination Form • Member Economy Nomination Cover Letter 	<p>Deadline: <u>4 May</u></p>



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ACTION	DATE
<p>PPSTI PROGRAM DIRECTOR SENDS PROFILES TO PPSTI REPRESENTATIVES</p> <p>The PPSTI Program Director will collate the nominations received from each member economy and distribute them to PPSTI members for ranking.</p> <p>Sponsors shall provide Scopus profiles, as available, for each economies' nominee to assist PPSTI members in their ranking.</p>	<p>By: 28 May</p>
<p>APEC ECONOMIES RANK NOMINEES AND SUBMIT SELECTION BALLOT</p> <p>Each APEC member economy, through its PPSTI representative, is requested to rank the nominees and submit a selection ballot to the PPSTI Program Director by <u>15 June</u>.</p>	<p>Deadline: <u>15 June</u></p>
<p>PPSTI PROGRAM DIRECTOR COMPILES SELECTION BALLOT</p> <p>The PPSTI Program Director shall compile and forward the results and the completed selection ballots to the PPSTI Chair to confirm the winner. <i>*In case of a tie, the PPSTI Chair will determine the winner.</i></p>	<p>By: 18 June</p>
<p>NOTIFY PPSTI MEMBERS OF 2018 ASPIRE WINNER</p> <p>The PPSTI Chair and the ASPIRE sponsors jointly notify PPSTI members of the 2018 ASPIRE winner.</p>	<p>By: 25 June</p>
<p>NOTIFY 2018 ASPIRE WINNER</p> <p>The PPSTI Chair and the ASPIRE sponsors jointly notify the 2018 ASPIRE winner.</p>	<p>By: 2 July</p>
<p>AWARD CEREMONY</p> <p>The winner of the 2018 ASPIRE Prize is recognized at an award ceremony during the 12th PPSTI meeting in PNG.</p>	<p>August TBD</p>

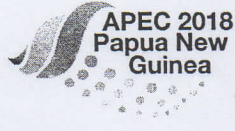


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LOCAL NOMINATION FORM FOR [INSERT ECONOMY]

**DUE DATE: [INSERT YOUR ECONOMY'S NOMINATION DEADLINE -
- SUGGESTED MID APRIL DEADLINE]**



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ASPIRE 2018 Letter to Local Educational and Research Institutions

Dear [NAME]:

It is with great enthusiasm that we announce that nominations are being sought to represent [INSERT ECONOMY] for the 2018 APEC Science Prize for Innovation, Research and Education (ASPIRE Prize). Sponsored by Wiley and Elsevier, two of the world's leading publishers of scholarly scientific knowledge, the ASPIRE Prize is an annual award that recognizes young scientists who have demonstrated a commitment to both excellence in scientific research and cooperation with scientists from other APEC member economies.

[INSERT ECONOMY] may nominate one young scientist from [INSERT ECONOMY] under the age of 40 to be considered for the 2018 ASPIRE Prize. These finalists will then be considered by the full APEC Policy Partnership for Science, Technology, and Innovation (PPSTI) for selection as the 2018 ASPIRE Prize winner, with prize money in the amount of \$25,000 USD. We encourage your institution to use the enclosed "NOMINATION FORM" to send us distinguished young scientists for consideration by [DATE - SUGGEST MID APRIL DEADLINE].

Each year the APEC host economy provides a theme to guide the ASPIRE prize. For its host year of 2018 Papua New Guinea selects "Smart Technologies for Healthy Societies" as the ASPIRE nominating theme. This theme focuses on how scientists are capitalizing on smart technologies and available digital platforms to provide better health care access and services across the APEC region. We encourage you to nominate nominees who have demonstrated a commitment to excellence in scientific research and cooperation with scientists from other APEC member economies in subjects such as: biomedical technology, healthcare supply chains, pharmaceutical technology, point-of-care systems, wearable technology, self-help devices, artificial gene fusion, medical Informatics, cell surface display techniques, robotics, nanomedicine, 3D printing and continuous manufacturing, blockchain technology, and other relevant fields.

We thank you for your institution's contributions to the APEC region's scientific community and look forward to reviewing your nominees.

Best regards,

Ms. Christin Kjelland
PPSTI Chair
Office of Science and Technology
Cooperation
Department of State
The United States

Mr. Andrew Tein
Vice President
Global Government Affairs
Wiley
ASPIRE Prize Sponsor

Dr. Brad Fenwick
Senior Vice President for Global
Strategic Alliances
Elsevier
ASPIRE Prize Sponsor



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ASPIRE 2018 Nomination Form

INSTRUCTIONS: Thank you for your interest in being selected to represent [INSERT YOUR APEC ECONOMY] for the 2018 ASPIRE Prize. Please send all required documents below and submit to: [INSERT CONTACT NAME AND E-MAIL FOR YOUR ECONOMY'S PPSTI DELEGATE]

REQUIRED DOCUMENTS:

- 1) Nomination form;
- 2) Nominee's Curriculum Vitae;
- 3) One letter of recommendation for consideration;
- 4) A photo of nominee (image must be larger than 250*300 pixels)

THE DEADLINE IS: [INSERT DATE – SUGGESTED MID APRIL DEADLINE. MUST ALLOW YOUR ECONOMY ENOUGH TIME TO MAKE A DECISION ON YOUR ONE NOMINEE AND SEND IT TO MS. LIU BY **MAY 4**]

SECTION 1 OF 5 - Nomination Statement (up to 300 words): Please describe how the nominee has demonstrated excellence in scientific research in the field of "Smart Technologies for Healthy Societies" and cooperation with scientists from other APEC member economies.

SECTION 2 OF 5 - Nominee Information

Member Economy:

Last Name:

First Name:

Date of Birth (day/month/year):

Address:

Telephone:

Email:

Title:

Institution/Affiliation:

Field of Research:



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SECTION 3 OF 5 - List of Peer Reviewed Scholarly Publications: Please list the nominee's peer reviewed publications (publication titles should be translated into English). The nominee's record of scholarly publication will be evaluated on its merits, and nominees are encouraged to include publications regardless of the publisher. Please continue onto separate page if necessary.

Please denote which scholarly publications include co-authors from APEC member economies, for example:

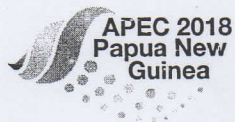
1. A.S. Barnard, H. Konishi, H. Xu, 'Morphology mapping of platinum catalysts over the entire nanoscale', *Catal. Sci. & Tech.* (2011) accepted [APEC Authors]
2. H. Guo, A.S. Barnard, 'Computational challenges in accurate modeling of iron oxides and oxyhydroxides, and the prediction of environmentally sensitive phase transformations', *Phys. Rev. B*, 83 (2011) 094112
3. L.Y. Chang, E. Osawa, A.S. Barnard, 'Confirmation of the electrostatic self-assembly of nanodiamonds', *Nanoscale*, 3 (2011) 958 [APEC Authors]

SECTION 4 OF 5 - Other Awards/Achievements/Contributions to market-led innovations: Please list below in English; please continue onto separate page if necessary.

Please denote which, if applicable, have a connection to other APEC member economies.



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SECTION 5 OF 5 – Local Nominator Information (If Nomination Form is submitted by nominee himself or herself, do not fill out this section)

Last Name:	First Name:
Telephone:	Email:
Relation to Nominee (if any):	
Title:	
Institution/Affiliation:	
Nominator Signature (typed):	

Remember to include the following attachments along with this Nomination Form:

- Nominee's Curriculum Vitae
- One letter of recommendation
- Photo of nominee (image must be larger than 250*300 pixels):

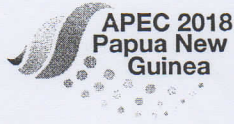


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EXAMPLE APPLICANT REVIEW SHEET

Note: After receiving local nominations within the APEC economy, it is suggested that the PPSTI representative establish a panel to judge the applications and select one nominee.



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ASPIRE 2018 Example Applicant Review Sheet

Candidate Name:

TOTAL SCORE:

Nominating Institution:

Candidate meets eligibility requirements:

- Yes, candidate will be under the age of 40 as of December 31, 2018.
- Yes, candidate is a citizen of an APEC economy.

Criteria 1: Excellence in scientific research as evidenced by scholarly publication

1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○	8 ○	9 ○	10 ○
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Comments:

Criteria 2: Cooperation with scientists from other APEC member economies

1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○	8 ○	9 ○	10 ○
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Comments:

Criteria 3: Contribution to this year's theme of "Smart Technologies for Healthy Societies."

1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○	8 ○	9 ○	10 ○
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Comments:



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2018 APEC Science Prize for Innovation, Research and Education

MEMBER ECONOMY NOMINATION COVER LETTER

APEC ECONOMY: [INSERT ECONOMY]
DUE DATE: May 4, 2018

FOR COMPLETION BY APEC ECONOMY PPSTI DELEGATE ONLY

Note: Each APEC member economy should select their one nominee for the 2018 ASPIRE Prize – as well as submit their nomination to the Program Director and the Program Executive of the APEC PPSTI



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ASPIRE 2018 Member Economy Nomination Cover Letter

Member Economy	
Name of Economy Nominee	
Last Name:	First Name:
Economy Nominator Information (PPSTI Delegate)	
Last Name:	First Name:
Telephone:	Email:
Relation to Nominee (if any):	
Title:	
Institution/Affiliation:	
Nominator Signature (typed):	

Remember to append all nomination documents with this cover letter:

- Nomination Form
- Nominee's Curriculum Vitae
- One letter of recommendation
- Photo of nominee (image must be larger than 250*300 pixels):

Please submit all nomination documents along with this nomination cover letter to Ms. Zhongzhen LIU (lzz@apec.org) before 4 May 2018.