

Awards and Certificates at the Fifth World Landslide Forum

At the occasion of each triennial World Landslide Forum, ICL-IPL Awards and Certificates are conferred to individuals and organizations that have contributed to the International Consortium on Landslides (ICL) and the International Programme on Landslides (IPL) since the last World Landslide Forum. This article reports the details of “Awards and Certificates” given in the Recognition and Awards Ceremony on 3 November 2021, and in the Award Lectures and Closing ceremony on 6 November 2021 during the Fifth World Landslide Forum. This report includes images of the various Awards and Certificates. The following six types of “Awards and Certificates” were given online and/or onsite to each awardee and leader of certified organizations.

1. World Centres of Excellence on Landslide Risk Reduction (WCOE)

Objectives of WCoE:

To strengthen the International Programme on Landslides (IPL) and IPL Global Promotion Committee;

To create “A Global Network of entities contributing to landslide risk reduction”;

To implement the ISDR-ICL Sendai Partnerships 2015-2025 for global promotion of understanding and reducing landslide disaster risk; and

To improve the global recognition of “Landslide Risk Reduction” and its social-economic relevance, and entities contributing to this field.

Criteria for WCoE Candidates:

Governmental and non-governmental entities such as universities, agencies, and other institutions, and their subsidiary entities (faculties, departments, centres, divisions or others) which meet the following two conditions:

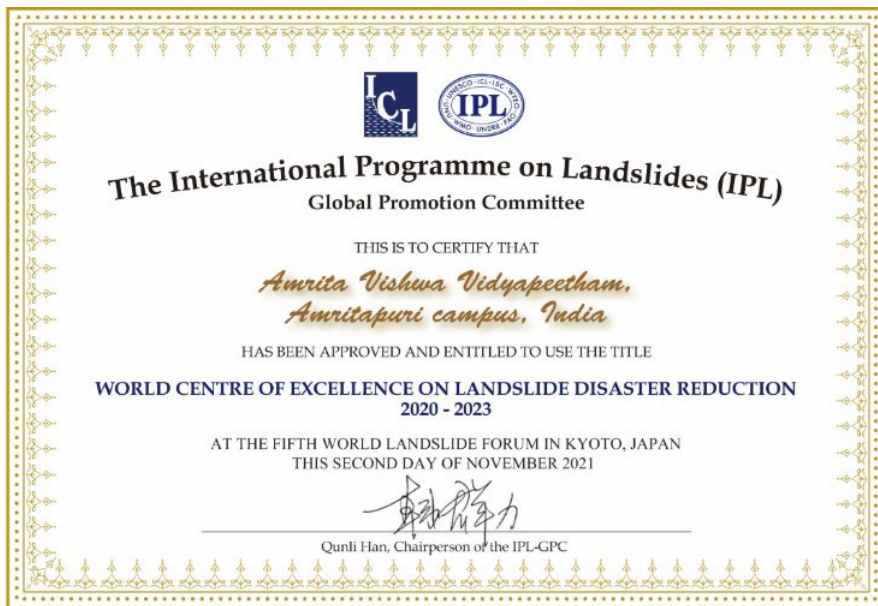
- Contributing to “Landslide Disaster Risk Reduction”; and
- Willing to support IPL intellectually, practically and financially by either joining ICL or/and contributing to IPL-GPC and promote “landslide research and disaster risk reduction” on a regional and/or global scale in a mutually beneficial manner.

The following World Centres of Excellence 2020-2023 were approved by the IPL Global Promotion Committee on 2 November 2020 and these centers are now working in each of the respective countries.

No.	WCoE Title	Leader	Country	Organization
1	Slow moving translational landslides in argillaceous soils and weak rocks	Michael T. Hendry	Canada	University of Alberta
2	Formation mechanism research, disaster warning, and universal education of Cold Regions Landslide	Wei Shan	China	Research Center of Cold Regions Landslide

3	Landslide Modeling: From Physical to Phenomenological Models	Željko Arbanas, Snježana M. Arbanas	Croatia	Croatian Landslide Group
4	Community centered landslide disaster risk reduction in changing climate, continuation	Josef Stemberk	Czech Republic	Institute of Rock Structure and Mechanics Czech Academy of Sciences & Charles University, Faculty of Science
5	Documentation, Training and Capacity Enhancement on Landslides Risk Reduction and Resilience	Surya Parkash	India	National Institute of Disaster Management (NIDM), Ministry of Home Affairs, Government of India, New Delhi
6	Internet of Things (IoT) for landslide disaster risk reduction	Maneesha V Ramesh	India	Amrita Vishwa Vidyapeetham, Amritapuri campus
7	Development of risk reduction strategy and technological innovation for landslide mitigation	Teuku Faisal Fathani	Indonesia	Universitas Gadjah Mada
8	Development of multidisciplinary and integrated methodologies for mitigating geological risks	Francesca Bozzano	Italy	CERI – Centro di Ricerca Previsione, Prevenzione e Controllo dei Rischi Geologici (Research Centre on Geological risks) – Sapienza Università di Roma
9	Advanced Technologies for Landslides (ATLaS)	Nicola Casagli	Italy	UNESCO Chair for the prevention and the sustainable management of geo-hydrological hazards, University of Firenze (UNIFI)
10	Integrated research on landslide disaster risk	Irasema Alcántara-Ayala	Mexico	Institute of Geography, National Autonomous University of Mexico (UNAM)
11	Landslides in Weathered Heterogeneous Sedimentary Rock Masses such as Flysch	Matjaž Mikoš	Slovenia	University of Ljubljana, Faculty of Civil and Geodetic Engineering (UL FGG)
12	International Training Course on Slope Land disaster Reduction	Louis Ge	Chinese Taipei	Department of Civil Engineering, National Taiwan University
13	National Slope Master Plan, method of certification heritage objects in hazardous landslide sites	Oleksandr Trofymchuk	Ukraine	The Institute of Telecommunication and Global Information Space (ITIGS) of the National Academy of Science of Ukraine (NASU), Research Institute of Building Constructions (RIBC)
14	Developing Model Policy Frameworks, Standards, and Guidelines on Landslide Disaster Reduction	S. S. I. Kodagoda	Sri Lanka	Central Engineering Consultancy Bureau
15	Research on landslide initiation mechanism based on physical model	Katsuo Sasahara & Asiri Karunawardena	Japan & Sri Lanka	The Japan Landslide Society & National Building Research Organisation
16	Bridging Science, Policies, and Partnership for Landslide Risk Management	Hans Guttman	Thailand	Asian Disaster Preparedness Center (ADPC)
17	Central Asia Rockslide Inventory. Compilation, Analysis and Training	Alexander Strom	Russia	JSC “Hydroproject Institute”
18	Harmonization of Landslides Data and National Authorities Capacity Building for Landslide Risk Reduction – continuation	Biljana Abolmasov	Serbia	University of Belgrade, Faculty of Mining and Geology
19	Landslide Susceptibility Map	Ir. Hj. Zulkifly	Malaysia	Slope Engineering Branch, Public

Assessment Base on Climatological Changes Using Geographic Information Systems	Bin A. Ghani		Work Department Malaysia
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An example of the WCoE certificate: Amrita Vishwa Vidyapeetham, Amritapuri campus, India

2. IPL Award for Success (2017-2020)

The IPL Award for Success is given to the best three successful projects implemented within IPL at the occasion of each World Landslide Forum following a rigorous evaluation of output, activities and impact of all IPL projects during the previous 3-year cycle of activities. The achievements of IPL projects are directly influenced by the availability of operating and delivery finances and infrastructure available for the developed or developing country.

World Landslide Forum 5 (November 2021, Kyoto Japan)



Irasema Alcántara-Ayala
Professor of Natural hazards and Disaster risk at the National Autonomous University of Mexico

IPL Award for Success:

- 1) IPL-208 Landslide disaster risk communication in mountain areas (2016- present)
- 2) WCoE Integrated research on landslide disaster risk (2017-2020 and 2020- present)



IPL Award for Success Nomination Citation for Dr. Irasema Alcántara-Ayala

Irasema Alcántara-Ayala is a Professor of Natural hazards and Disaster risk at the National Autonomous University of Mexico. She combines natural sciences with social sciences, and in particular studies the occurrences of landslides, natural hazards and vulnerability primarily in developing nations.

In 2008 she joined the International Consortium on Landslides (ICL) as a Board Member of the Institute of Geography from National Autonomous University of Mexico, and was elected Vice President of the ICL for the period 2012-2017. She has been the leader of an ICL World Centre of Excellence for Disaster Risk Reduction for three periods 2014-2017, 2017-2020 and 2020-2023. In 2012 she became coordinator of regional ICL Latin America Network.

Professor Alcántara-Ayala proposed a new project of International Programme on Landslides at the ICL-IPL Conference in Kyoto, Japan in March 2016. This new project was approved by the Eleventh Global Promotion Committee of IPL as IPL-208 “Landslide disaster risk communication in mountain areas.”

Following its approval, Irasema ensured that the project was successfully implemented. The project results were published in the ISDR-ICL Landslide Interactive Teaching Tools “Landslide Dynamics” as Landslide Risk Perception (TXT-tools 4.052-1.1), and also as the Landslide Risk Communication (Text-tools 4.052-1.2). She further published the result of IPL-208 as an article “Landslide disaster risk awareness in Mexico: community access to mapping at local scale” in the Journal “Landslides”, Vol. 15 (8) in 2018, and further published another article “Landslide exposure awareness: a community based approach toward the engagement of children”, in “Landslides” Vol. 17 (6) in 2020.

She worked as the leader of the World Centres on Excellence on Landslide Risk Reduction from 2017-2020 “Landslide Integrated Research for Disaster Risk Reduction” as well as the WCoE 2020-2023 “Integrated research on landslide disaster risk” in conjunction to IPL-208. The activities as WCoEs were reported as “Undertaking of the Institute of Geography of the National Autonomous University of Mexico, ICL World Centre of Excellence on landslide risk reduction” in Journal “Landslides”, Vol. 18 (4) in 2021.

Professor Irasema Alcántara-Ayala contributed to various ICL-IPL activities since 2008, including the Sendai Landslide Partnership 2015-2025 since 2015, by writing two teaching tools in the ISDR-ICL Landslide Interactive Teaching Tools. She further compiled an article “Contribution of the International Consortium on Landslides to the implementation of the Sendai Framework for Disaster Risk Reduction: engraining to the Science and Technology Roadmap” in Vol. 18 (1) of the Journal “Landslides” in 2021. This paper visualized the timeline of the UN international strategies concerning DRR and the initiatives promoted by the ICL since IDNDR in 1990 to 2021.

The ICL-IPL Awards Committee is pleased to announce Dr. Alcántara-Ayala as the recipient of the IPL Award for success for successful IPL project leadership since the Fourth World Landslide in 2017 at the Fifth World Landslide Forum.

IPL Award for Success Citation from Dr. Irasema Alcántara-Ayala

Dear President of the International Consortium on Landslides and dear colleagues,

I am really honoured to be the recipient of the IPL Award for success 2021. It is hard to find words to express my gratitude for this award. Thanks for this special honour to the International Consortium on Landslides (ICL) and to the Award committee. I am truly humbled to be part of the ICL community working with people who have inspired me since I was student, who have stimulated my thinking, and who have given with outstanding examples the value of our profession to try to make a difference in society.

I would like to take this opportunity to thank all the people I have been working with through the years: academic colleagues, civil protection partners, students, and several actors from the communities. I want them to consider this award as their award too. It has been wonderful to work together and to learn a lot from all of them.

I wish also to point out that to me it is particularly moving to receive an award during this time of the global disaster triggered by the pandemic, which has already jeopardized four of the seven targets of the Sendai Framework for Disaster Risk Reduction. The skyrocketing increase of disaster mortality, affected people, economic losses and damage to critical infrastructure and disruption of basic services is a strong reminder of how vulnerable and exposed to hazards of diverse origin we are, and to the need to strengthen our efforts to manage disaster risk.

I started my science education in the late 80s, during an era where major concerns about disaster prevention started to be in place in the international arena. The International Decade for Natural Disaster Reduction (IDNDR) was about to commence. I recall particularly the Mexico City earthquake of September 19, 1985, when I was still a high-school student. That day, after class, since there was no transportation, and the school was close to the Historic Center, we were able to observe with great desolation the collapsed buildings and the damage related to the earthquake. During the following days, I was a volunteer in one of the city councils, distributing mats and food to the affected people, but the response to the disaster was by no means the required integrated solution scientists and policy makers were sought. That disaster triggered by the earthquake was a moment that marked me, but also a moment that marked the whole country.

Later, as a geography student at the University, to my eyes, landslides were fascinating geomorphological processes that attracted very early my attention. I was interested on understanding mechanisms and evolution of rainfall induced landslides. Soon after I realised that beyond scientific interest, consequences of landslides occurring in Mexico and other countries were adverse for communities and I decided to pursue a PhD focused on mass movement processes.

I feel very fortunate to have worked with several colleagues, among them my late supervisor Prof. John B. Thornes. Being at King's College London gave me the opportunity to meet brilliant pioneers in the landslides field such as Prof. Denys Brunsten.

After several years at the Institute of Geography of the National Autonomous University of Mexico (UNAM) working in geomorphology, landslides and geography of risks, now I am very much devoted to address significant challenges and problems that need solving such as bridging the gap between science and policy making in the interest of effective and sustained disaster risk reduction.

This award will always be a reminder of the hard work the ICL community has put into these international undertakings that aim at reducing landslide disaster risk through research, education, communication, and

practice. Moreover, this award will only motivate me to try to be better in the future and to further engage with vulnerable communities around the world.

3. Varnes Medal (2017-2021)

The Varnes Medal is the highest award provided by the International Consortium on Landslides; it recognizes professional excellence in landslide research.

Nominees for the Varnes Medal must meet at least two of the following criteria:

- Professional excellence in landslide research
- Professional excellence in landslide disaster risk reduction
- Significant contribution to the development of ICL and IPL
- Significant contribution to public education regarding landslide hazards
- International recognition for a professional career involving landslides
- Influential landslide research or development of methods or techniques
- Teacher of students who work on landslide issues



Varnes Medal 2017 Nomination Citation for Dr. Sálvano Briceño

Mr. Briceño is a Venezuelan and French national, his languages are Spanish, French and English. He has a Doctorate in Administrative Law (University of Paris II, Panthéon-Sorbonne) in 1975 and a Master's in Public Administration, Harvard University in 1984. During the 1980s he worked as Research Associate at Harvard University's Energy and Environment Policy Center, following an active career with the Ministry of Environment and Renewable Natural Resources in Venezuela where he was Director General responsible for environmental education, professional development and international relations (1978-1983).

Mr. Briceño joined the World Conservation Union (IUCN) as Executive Officer of IUCN's Commission on Education, where he focused on environmental education, coordinating a worldwide network of experts (1985-1987). He then joined the United Nations as first Coordinator of UNEP's Caribbean Environmental Programme (1987-1991), followed by some deputy functions at the UNFCCC Climate Change Secretariat (1991-1996) and the UNCCD Desertification Secretariat (1996-1999).

In June 2001 he was appointed Director and first head of the Secretariat of the International Strategy for Disaster Reduction (UNISDR) and contributed to the development of disaster risk reduction worldwide. Following his retirement, he was Chair of the Science Committee of the Integrated Research on Disaster Risk programme of the International Council for Science (ICSU), also sponsored by the International Social Science Council (ISSC) and the UNISDR for 2011-2012. He edited a book "Landslides: Global Risk Preparedness" together with Kyoji Sassa and Badaoui Rouhban in 2013.

Dr. Salvano Briceño, former Director of the United Nations Secretariat for the International Strategy for Disaster Reduction originally requested his colleague Pedro Basabe to attend the ICL foundation meeting that was being held in January 2002, in Kyoto, Japan. Later, ICL organized a thematic session on 19 January 2005 during the second United Nations World Conference on Disaster Reduction (WCDR) and proposed a Letter of Intent on Integrated earth system risk analysis and sustainable disaster management. This document was strongly supported and officially signed by Sálvano Briceño (UNISDR) and Hans van Ginkel (UNU) and five additional global stakeholders shortly after the session. Thereafter, followed the 2006 Tokyo action plan that resulted in the the International Programme on Landslides (IPL) to be managed by the IPL Global Promotion Committee. Dr Briceño contributed actively to the IPL and ICL as the chair of IPL-GPC since inception to 2014. After his retirement of UNISDR in 2011, he accepted to role of ICL senior advisor. During his position as UNISDR Director as well as during his retirement, Salvano has continued to advise effectively on ICL and IPL matters as a Senior advisor of the International Consortium on Landslides.

His contributions to ICL and IPL during the past many years very well address two of the criteria of the Varnes Medal. Specifically:

- Significant contribution to the development of ICL and IPL
- International recognition for a professional career involving landslides risk reduction

Nominated by Kyoji Sassa, Secretary-General of the International Consortium on Landslides

Varnes Medal 2017 Citation response from Dr. Sálvano Briceño

I am very grateful to Professor Kyoji Sassa, his team and colleagues at the ICL for having chosen me for this recognition. The 2018 Varnes Medal has a great value and a special meaning to me.

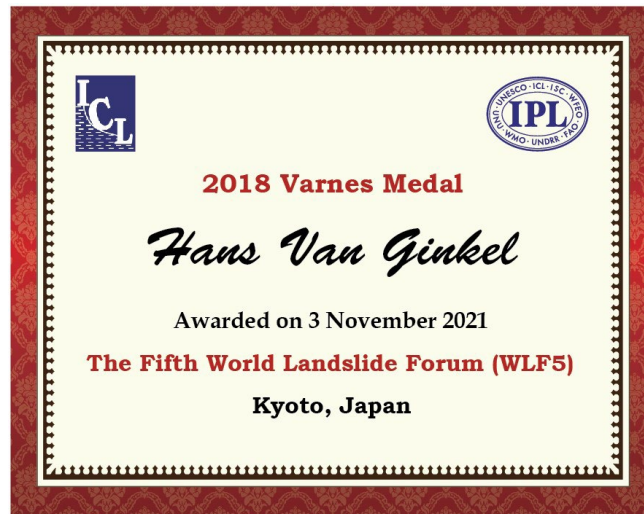
This recognition is most valuable, as I have witnessed the development of the ICL/IPL and its wide global academic and expert network, from its very beginning. I can vouch for the immense networking effort it has been, coupled by the equally prominent, amount of products, services and capacities that have greatly contributed to the enhancement of research, teaching and policy advice in the field of landslides risk reduction around the world.

Understanding landslides and how to effectively reduce the risk they pose to communities is no easy task. Not only can landslides be triggered by hydro-meteorological as well as geological hazards but they can also occur at different moments in time, either immediately following the hazard impact or even much later in a gradual and uncertain manner. The only certainty we have is that if human settlements are present along their path of movement, they will surely cause terrible damage and most worryingly, some times, impact many victims.

Understanding landslides from a geological perspective is very important in order to identify where and when they may occur, and how they may physically impact society. However, understanding their potential impact on human settlements requires knowledge of how urban development occurs, what type of construction or building approaches are undertaken, how much people know about nature and how legal, policy and organizational institutions are formulated to address the challenges that nature poses to society. The development of knowledge and the exchange of information that ICL motivates and supports constitutes its most powerful tool to improve the management and reduction of landslides risks worldwide.

This recognition has also a special meaning to me. It has been an honour and, I must admit a great pleasure to be part of this valuable academic, educational and research, initiative. Among the numerous initiatives that my office, the UNDRR, formerly known as UNISDR, was involved with, the ICL/IPL was one of the very few that came from the academic world. It immediately opened the possibility to raising the awareness of communities and providing policy advice to governments, at all levels, on the importance of reducing vulnerability and managing risk, and not only managing the disaster. It has also contributed to developing an integrated approach to research and teaching in this field, as promoted by the Integrated Research on Disaster Risk (IRDR) programme of the International Science Council and the UNDRR. The integrated approach promotes the joint effort of various academic disciplines in addressing the landslides challenge and providing policy advice to institutions that are responsible for risk management.

This is why following my retirement, I chose to continue assisting in any way I can, Professor Sassa and the ICL team. Thank you once again.



Varnes Medal 2018 Nomination Citation for Dr. Hans van Ginkel

Hans van Ginkel is a social scientist with special interest in the application of geographical knowledge in society. He was previously UN Under Secretary-General and rector, UNU, Tokyo, Japan; longest serving Dutch university rector, Utrecht University, 1986-97; member of the Social Sciences Council, KNAW, 1990-98, of the Academia Europea since 2001 and Fellow of The World Academy of Sciences (TWAS) since 2005. His interests include urban and regional planning, public housing, housing markets and public administration. He has prepared and led thematic debates for the UN on ‘dialogue among civilizations’ and ‘higher education and sustainable (human) development’. He is a member of the Royal Netherlands Geographic Society (KNAG) of which he received the Plancius Medal and is honorary fellow of the International Training Center for Geo-Information Sciences and Remote Sensing (ITC, Enschedé). He received a Knighthood, Order of the Netherlands Lion, 1994; Order of the Rising Sun, Grand Cordon, Japan, 2007; and 5 honorary Doctorates. At present he is a professor emeritus at Utrecht University; board chair of the Institute for Social Sciences (ISS, The Hague); board chair of the German Center for Development Research (ZEF, Bonn) and a member of the Advisory Board of the Bibliotheca Alexandrina.

Hans van Ginkel was Chair of the Utrecht Regional Council, which prepared the physical infrastructure plan for the central part of the Netherlands. For his contributions to the development of the city and province of Utrecht, he received in 1993 the medal of the Chamber of Commerce of Utrecht and in 1997 the Golden Medal of the City of Utrecht (the 4th largest city of the Netherlands)

Dr. Hans van Ginkel is a previous rector of United Nations University, Tokyo, Japan and UN Under Secretary-General. He supported ICL, IPL, and the UNESCO/Kyoto University /ICL UNITWIN Cooperation Programme on Landslides since 2003. He chaired a session titled "New international Initiatives for Research and Risk Mitigation of Floods (IFI) and Landslides (IPL)" which was organized by ICL and other groups within the World Conference on Disaster Reduction (WCDR) in Kobe, Japan in 2005. Director General of UNESCO (Koichiro Matsuura), Director of UNISDR (Salvano Briceno), Secretary General of WMO (Michel Jarraud) presented their addresses in the opening of this session. During this session, a "**Letter of Intent**" aiming to provide a platform for a holistic approach in research and learning on "Integrated Earth System Risk Analysis and

Sustainable Disaster Management" was proposed and agreed upon, and then signed by the heads of seven global stakeholders of UNESCO, WMO, FAO, UNISDR, UNU, ICSU and WFEO . This entire initiative and proposal was originally proposed and promoted by Hans van Ginkel.

Following this 2005 Letter of Intent, the ICL organized the Round Table Discussion “Strengthening Research and Learning on Earth System Risk Analysis and Sustainable Disaster Management within UN-ISDR as Regards "Landslides" at United Nations University, Tokyo, Japan on 18-20 January 2006. The 2006 Tokyo Action Plan Strengthening Research and Learning on Landslides and Related Earth System Disasters for Global Risk Preparedness was adopted in this conference. The Tokyo Action Plan established a new stage of International Programme on Landslides (IPL). ICL exchanged the Memorandums of Understanding to promote IPL with each of UNESCO, WMO, FAO, UNISDR, UNU, ICSU, WFEO within 2006. The Global Promotion Committee of the International Programme on Landslides (GPC/IPL), the triennial World Landslide Forum (WLF) and the World Centres of Excellence on Landslide Disaster Reduction (WCoEs) authorized by the Independent Panel of Experts were established by the Tokyo Action Plan. The first World Landslide Forum was hosted by the United Nations University in Tokyo, Japan. He took major role as the rector of UNU and also the chair of the Independent Panel of Experts which authorized twelve WCOE 2008-2011. His recent suggestion is the title of Kyoto 2020 Commitment. It is suitable for our purpose better than Kyoto protocol and Kyoto Agreement.

Nominated by Kyoji Sassa, Director of the IPL World Centre, Kyoto, Japan

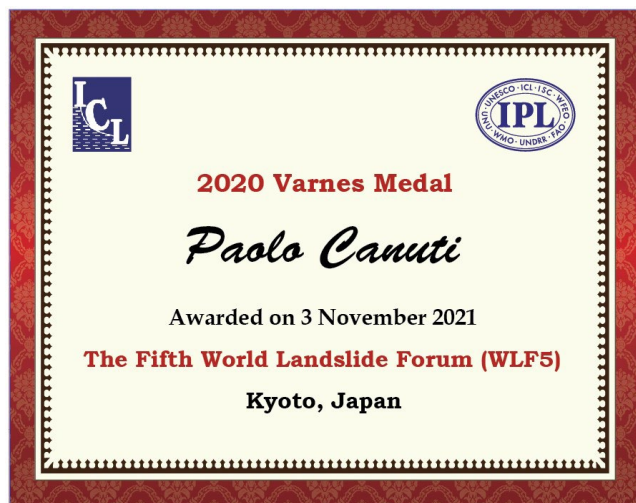
Varnes Medal 2018 Citation Response from Dr. Hans van Ginkel

Thank you very much Professor Kyoji Sassa for your very kind words. I am extremely honoured that you have awarded to me this precious distinction, the highest in the world of Landslides! Two years before I came to the UNU in Tokyo the world was shaken by the “Great Hanshin Earthquake” (1995). About a decade later it was the Tsunami in the Indian Ocean that did alarm the whole world. By the end of the 1990s Kofi Annan in his Annual Reports to the General Assembly drew the attention of the member states to the need to redefine the concept of security within the work of the UN. At that time more people died as a consequence of (un!-) natural/environmental disasters than by war between countries or ethnic and religious fighting within countries, such as in (former) Yugoslavia and Rwanda.

It was time to no longer only think of state-security but indeed of “*human*” security: security at the level of the individual human being. Human security, dialogue among civilizations and the fight against risk and disasters in nature and environment became core concepts in the work of the UN and the UNU around the turn of the century. So it was quite logical that I started to cooperate closely with Salvano Briceño of the “Office for the Strategy on Disaster Risk Reduction”. Also UNU started to cooperate closely with Kyoto University because of its focus on this type of issues. Over the years this led to the establishment of the important “Graduate School of Advanced Integrated Studies in Human Survivability” under the excellent leadership of Professor Kaoru Takara. An important role on all the risk and disaster related research was addressed by the experts in landslides led by Professor Kyoji Sassa. UNU established with the support of the German government its “Institute on Environment and Human Security” in Bonn; of course in close cooperation with the University of Bonn.

It was quite clear for me that it would be important from the beginning to support the “ICL, IPL, and also the UNESCO/Kyoto University /ICL UNITWIN Cooperation Programme on Landslides” from 2003; almost from the beginning. In the “World Conference on Disaster Reduction (WCDR)”, Kobe 2005, I was happy to see in a session I was asked to chair, the many interesting international initiatives for research on Risk Mitigation of Floods and Landslides. And I was happy to provide inputs in the “Letter of Intent” which aimed to provide a platform for a holistic approach in research and learning on "Integrated Earth System Risk Analysis and Sustainable Disaster Management". This letter was approved and signed by the heads of UNESCO, WMO, FAO, UNISDR, ICSU, WFEO and of course the UNU itself. It aimed to provide a framework for our work on these issues for the next decade (2005-2015).

A first follow-up we could organize in January 2006 in the UNU in Tokyo. In the Round Table that we organized, we discussed how to “strengthen Research and Learning on Earth System Risk Analysis and Sustainable Disaster Management within UN-ISDR as Regards to Landslides”. The Tokyo Action Plan 2006 established a new stage of International Programme on Landslides (IPL). One of the decisions was to organize from that moment on every three years a “World Landslide Forum” and to officially acknowledge some “World Centers of Excellence” in order to challenge participating centers to regularly show and share some of their best projects. It was a great pleasure to see as chair of the panel of experts so much good work! I do congratulate you all with these projects and this important work. I do sincerely hope that the “Kyoto 2020 Commitment” will indeed be as successful as the Tokyo Action Plan has been. Once again, Kyoji and the whole landslide community I do wish you continued dedication and success! Thank you.



Varnes Medal 2019 Nomination Citation for Dr. Paolo Canuti

It gives me great pleasure to support the nomination of Prof. Paolo Canuti for the Varnes medal. Paolo Canuti is a Full Professor of Engineering Geology formerly at the University of Florence and Chair holder of the UNESCO Chair on Prevention and Sustainable Management of Geohydrological hazards. He graduated in Geological Sciences at the University of Florence in 1962 and after a Diplome d'etudes approfondites (DEA) in

Hydrogeology at the University of Montpellier (France) he obtained, in the same institute, a PhD in engineering Geology and Hydrogeology in 1971. His academic experience started 1968 as Assistant Professor of Engineering Geology and performing some first experiences as Lecturer in Stratigraphic geology and Hydrogeology. Then he became Associate Professor of Hydrogeology in the University of Florence (1971-74), Engineering Geology in the University of Rome (1980-1981) and Hydrogeology in the University of Perugia (1983-1984). Since 1981, he became Full Professor of Engineering Geology in Florence teaching both at Earth Sciences Department and at the Civil Engineering Department.

His research activity dealt mainly with the issues of landslide hazard assessment, slope instability mitigation, geotechnics and engineering geology, soil erosion, remote sensing, hydrogeology and water resources assessment, hydrology, prediction of extreme meteorological events, applied geomorphology and drainage basin morphometry.

In 2016 he established for the UNESCO chair on Prevention and sustainable management of geo-hydrological hazards. The mission of the Chair is to promote research and development (R&D) for the prevention and management of geo-hydrological hazards, in order to support policies and actions of risk reduction. He has authored more than 300 publications from 1965 to 2018 related to engineering geology, hydrogeology, landslide hazard assessment and landslide risk reduction.

In his career he has held various roles: i) contractor of National Agencies, ii) representative of institutional entities and organizations at international level, iii) active member of scientific commissions and associations, iv) affiliate of scientific councils, v) co-ordinator of research projects, vi) Principal Investigator of the International Research Project in collaboration with the Italian and USA Space Agencies (ASI and NASA) and the Jet Propulsion Laboratory of Pasadena (JPL), vii) co-ordinator of Scientific Committees for civil protection programs against geo-hydrological hazard and viii) Leader for Europe of the UNESCO International Collaboration Program IGCP-425 “Landslide hazard assessment and cultural heritage”.

He has been one of the founding members of the International Consortium on Landslides and he has been president of ICL from 2009 to 2014. He has been the founder of the Geohazards group based at the Department of Earth Sciences of the University of Florence that is currently one of the largest centers for scientific and technological services on geohazards in Italy, currently composed by 60 full-time employees. The group participates in research and technological development projects in several areas of the world, often in active collaboration with international, national and regional organizations and agencies.

I am nominating Paolo Canuti for the Varnes medal for his outstanding contribution to landslide research testified by the numerous projects and publications, for the constant and significant commitment in the education of new generations of scientists involved in landslide hazard research, for his deep contribution to the birth of the International Consortium on landslides including the management of the consortium through his presidency from 2008 to 2014. Prof. Canuti’s work during the past several decades and contributions to ICL and IPL address all of the selection criteria for the Varnes Medal.

Nominated by Prof. Nicola Casagli, UNESCO Chair on prevention and sustainable management of Geohydrological hazards, University of Florence

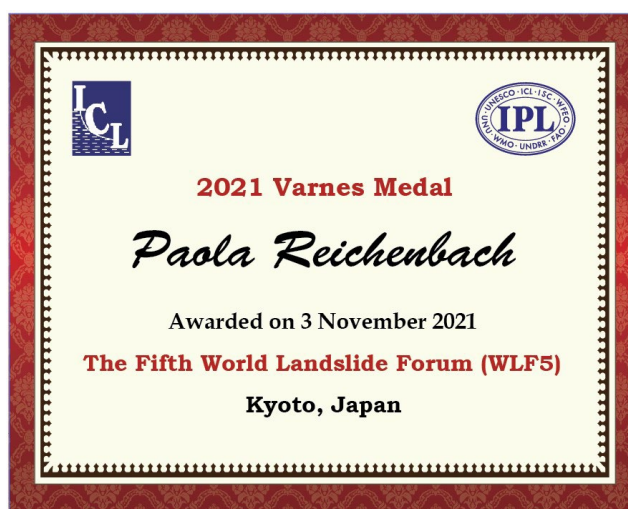
Varnes Medal 2019 Citation Response from Dr. Paolo Canuti

I am sincerely honoured and grateful to Prof Kyoji Sassa and to the friends and colleagues of the ICL for having chosen me for this recognition as the Varnes Medal recipient. This has an important personal meaning for me since I personally knew the late Professor David Varnes at USGS for many years during which time I received his friendly encouragement to work in the landslide research field.

During my research activity since 1962 I have had the pleasure to be involved in several experiences related to Regional Geology and Stratigraphy, Flysch Sedimentology in the years 1965-75, and after the Basin River Geomorphology the Groundwater and Basin Hydrology, and Engineering Geology mainly with reference to erosional and slope instabilities processes within the Italian National Research Council activity for more than 30 years.

During this period I was invited by Prof. Sassa to join the UNESCO International Geological Correlation Program IGCP-425 "Landslide hazard assessment and Cultural Heritage" that in a short time gave origin to the International Consortium on Landslides at Kyoto University. This participation within the ICL that has provided me the great opportunity to get to know so many brilliant scientists that together with Prof Sassa have contributed to develop in a significant way Landslide research and then publish the "Landslide Revue" edited by Springer.

Personally, within the limits of how much I have been able to transfer what I have enjoyed and learned during the numerous ICL meetings, collaborations, discussions that I have experienced, I can say that I have contributed from my part to the scientific and didactic formation towards the careers of many students at the University of Florence. All this was possible with the help of the ICL, Kyoji Sassa, and the many generous ICL colleagues, including the late Prof Hiroshi Fukuoka. My thanks to everyone.



Varnes Medal 2021 Nomination Citation for Dr. Paola Reichenbach

I am pleased to provide you with this nomination, as I have had the good fortune to extensively work with Paola in the geomorphology group at CNR IRPI in Perugia. Over the past 30 years, Paola has worked on many projects

aimed at understanding landslides and their spatial, temporal, and size distributions. Much of the results produced by the group could not have achieved, or published, without Paola's talent, ingenuity, and determination and collegial collaboration.

Dr. Reichenbach obtained her education at the University of Perugia. She was first employed by British Petroleum, in Milano, and moved to CNR IRPI in Perugia, first with a temporal research assignment, and next as a research geologist. In 2021, she obtained the position of research director, the highest CNR research rank. Paola's publication record is excellent. Among her early works, the first – in 1994 and largest – bibliographical inventory of landslides (and floods) in Italy. In 1996, she investigated landslides in the central Apennines in relation to the geological setting; an evidence that landslides do not occur randomly. A third example, in 1998, explored the use of river discharge thresholds to anticipate landslides (and floods) in the Tiber River basin; a route to prediction that few have explored. Later on, Paola's work was key to establishing the inherent statistics of landslide sizes. All these works had in common a ingenious use of GIS; which in the early 1990s was an emerging technology in geomorphology. Paola mastered the technology rapidly, extracting information from aerial photographs, transforming the analogic information into organized digital data allowing others to obtain unprecedented results. Paola is best known for her studies in landslide susceptibility and hazard assessment. She was amongst the fortunate who benefited from working with Alberto Carrara, a pioneer in the field, and later on she co-authored the first spatially-distributed landslide hazard model consistent with the definition proposed by Varnes & the IAEG in 1984.

Paola is a great team player, researcher, and mentor. She has the ability to understand people's potential at a glance, an essential skill in any research group. Her open and friendly character, and her good spirit, have enabled her to work effectively with colleagues from all continents and cultures. Many of her co-authors have become her friends; a quality I value greatly. She has long been active in the natural hazards community, as editor of the *Natural Hazards and Earth System Sciences* journal, as a thorough – and often tough – reviewer, and as an active convener at international meetings. With more than 100 papers in international journals, books, and proceedings, more than 15,000 citations in Google scholar, and a Hirsch index of 50, Paola Reichenbach is one of the most influential voices in the landslide field. The Varnes medal is in good hands with her, and a recognition for her outstanding work she deserves fully.

Dr. Reichenbach's contributions to landslide work address most of the selection criteria for the Varnes Medal. Nominated by Dr. Faust Guzetti, General Director of Office III-Technical and Scientific Activities for Risk Forecasting and Prevention. Department of Civil Protection, Italian Presidency of the Council of Ministers

Varnes Medal 2021 Citation Response from Dr. Paola Reichenbach

Dear Colleagues, I am very pleased and delighted to be the current recipient of the ICL-IPL Varnes Medal, for which I thank the International Consortium on Landslides and its Award Committee. Unfortunately, I never had the chance to meet Dr. David Varnes, but his remarkable career and impact in geology and geomorphology are well known to landslide researchers around the world. His original landslide classification based on the type of movement and material, updated by the UNESCO Working Party and revised together with Dave Cruden, is unquestionably one of the most known and widely used classification systems on mass movements in the

English-speaking world.

I started my research career as visiting scientist at the US Geological Survey where I had the opportunity to collaborate with many colleagues of David Varnes. The experience was a very challenging starting point and I continued my scientific activities mainly in the geomorphology group at CNR IRPI in Perugia. The group was originally composed of Fausto Guzzetti, Mauro Cardinali and me and I am grateful to both of them for their scientific capability, curiosity and enthusiasm. In the past 30 years, many researches and technicians have joined the group that now is composed of more than 25 people with different background, skills and experience. The group has always provided the possibility to discuss and share with motivated and interesting people, scientific topics in a challenging atmosphere. During my career, I have been working and interacting with national and international colleagues in the framework of international projects and collaborations. This gave me the opportunity to investigate different geological and geomorphological situations, to increase my experience and to consolidate my knowledge. I would like to express a particular recognition and gratitude to Alberto Carrara, one of the pioneers in the field of landslide susceptibility assessment who introduced me to the statistical models applied to landslide modelling.

The period I spent at the USGS was an interesting and stimulating experience during which time I had the possibility to work on geomorphometry analysis and processing digital data. This was followed by good practices on landslide identification and mapping and by the application of methods for landslide susceptibility, hazard and risk assessment. Following the pioneer approaches introduced by Alberto, I had the possibility to use and apply GIS technology, statistical tools and qualitative and quantitative methods. Additional studies and research was dedicated to spatially distributed rock fall modelling for hazard assessment and risk evaluation in different part of the world. The scientific comprehension on landslide processes has significantly improved in the last few decades but major efforts, resources and energy should be spent in the future to communicate and disseminate to stakeholder knowledge and results of landslide analysis and modelling.

To conclude, I am positively surprised and honoured to be the first female recipient of the Varnes Medal, particularly, when I see the names of researchers that preceded me in this award, all individuals who have been a key reference for my work. I would like to dedicate this important award to all my national and international colleagues, many of them good friends. A special dedication to all the women who energetically and dynamically apply their scientific activities to understand, analyse and mitigate different aspects of the landslide processes, including their efforts to disseminate results of their researches.

4. Hiroshi Fukuoka IPL Award

This award is named in honor of the late Professor Hiroshi Fukuoka, a Japanese landslide expert with global exposure to landslide risk, valuable experience in technical cooperation with developing countries, and a founding member and supporter of both the International Consortium on Landslides (ICL) and the International Programme on Landslides (IPL).

1. It is entitled the “Hiroshi Fukuoka IPL Award”
2. It is given every 3 years coinciding with the World Landslide Forum (WLF) to an individual or group of individuals whose work deals with landslide risk reduction in a developing country or countries.

3. It consists of a \$1500 USD travel grant to use specifically towards participation in the next WLF conference.
4. It requires the winning individual/individuals to contribute a technical presentation at the WLF that highlights their landslide research contributions that benefit an area in a developing country.
5. Nominations proposed by any ICL member in good standing up to 6 months prior to the forthcoming WLF will be accepted by the IPL/ICL Secretariat; the IPL/ICL Secretariat announces the exact date.
6. (Winners, Beneficiaries) are notified approximately 3 months prior to the WLF.

Hiroshi Fukuoka IPL Award



Claudio Margottini
Scientific and Technological Attaché
Embassy of Italy in Cairo (Egypt)

Activities to protect natural and cultural heritage sites from landslides and other natural hazards:

Asia: Afghanistan (Bamiyan, Jam, Herat and Shar-e-Zohak), Iraq (Hatra), Syria (Maaloula), Jordan (Petra), South Korea (Seokguram), North Korea (Kogurio), Mongolia (Bayannuur), Nepal (Lumbini and Swayambu).

Africa: Ethiopia (Aksum and Lalibela), Egypt (Hawara), Madagascar (Antananarivo).

Latin America: Peru (Machu Picchu), Chile (Orongo and Moai in Easter Island), Bolivia (Tiwanaku).

East Europe: Georgia (Vardzia, Sakdrisi, Vanis Kvabebi, Uplistkhe, Mravaltskaro, David Garenj and Katski).



Hiroshi Fukuoka IPL Award Nomination Citation for Dr. Claudio Margottini

I am writing to nominate Claudio Margottini for the Hiroshi Fukuoka IPL Award. Claudio Margottini is currently the Scientific and Technological Attaché at the Italian Embassy in Cairo (Egypt), former vice President of the International Consortium on Landslides, UNESCO Consultant and adjunct Professor at the UNESCO Chair in the University of Florence. He is trained as a Geologist (Rome 1979) and Engineering Seismologist (UK London, 1983) and has pursued an Italian Government Agencies career (ENEA and ISPRA-Dpt Geological Survey of Italy) and an academic career as adjunct Professor of Engineering Geology for Cultural Heritage (Modena University, Italy 1999 - 2011) and adjunct Professor of Fundamentals of Geothermal Energy and Thermogeology at Huangzou University (Wuhan, China 2012-2016). As an Engineering Geologist, he was extensively supporting during his career at UNESCO, international organization and worldwide local institutions in projects for the conservation of UNESCO and other heritage sites from landslides and other natural hazards.

The activities by Claudio Margottini to protect natural and cultural heritage sites from landslides and other natural hazards in developing countries extended over the world as listed below.

Asia: Afghanistan (Bamiyan, Jam, Herat and Shar-e-Zohak), Iraq (Hatra), Syria (Maaloula), Jordan (Petra), South Korea (Seokguram), North Korea (Kogurio), Mongolia (Bayannuur), Nepal (Lumbini and Swayambu).

Africa: Ethiopia (Aksum and Lalibela), Egypt (Hawara), Madagascar (Antananarivo).

Latin America: Peru (Machu Picchu), Chile (Orongo and Moai in Easter Island), Bolivia (Tiwanaku).

East Europe: Georgia (Vardzia, Sakdrisi, Vanis Kvabebi, Uplistkhe, Mravaltskaro, David Garenj and Katski).

I am nominating Claudio Margottini for the Hiroshi Fukuoka IPL Award for his outstanding contribution to many developing countries as a landslide expert. He has contributed to the development of the ICL since its foundation; worked as a vice President and a deputy chair of Global Promotion Committee of IPL, and organized a very successful Second World Landslide Forum in Rome in 2011.

Nominated by Kyoji Sassa Professor Emeritus, Kyoto University, Kyoto, Japan

Hiroshi Fukuoka IPL Award Citation Response from Dr. Claudio Margottini

Dear Prof. Sassa, Colleagues of ICL

It is an honor to be chosen for the award in memory of the late Professor Hiroshi Fukuoka, for which I thank the International Consortium on Landslides and its Award Committee.

I am grateful to have been a friend of Hiroshi's for as we say friends are the family we choose. For this reason I was deeply saddened by his passing away. Like me, Hiroshi was working in many developing countries bringing expertise and humanity to populations that were suffering for the impact of landslides and other natural disasters. Landslide science and geohazard mitigation in low-income countries is not a simple task and requires strong planning, but also a fundamental day-by-day management of what is behind-the-scenes. This is relevant since unexpected problems can appear anytime and, in the interim, most of the mitigation measures require a strong interconnection with the local communities.

This is a problem and challenge since it requires flexibility and capacity for adaptation to unpredictable matters. But on the other hand, it is a great opportunity since it shifts the way of working from the traditional approach we study in University to something that is more social, historical and anthropologically oriented. In this view, to work in low income countries does not require solving only the problem, but also helps the local community to understand how to do it. This means transferring scientific knowledge into the investigation phase (IP), as well as deeply collaborating in the mitigation phase (MP). More specifically, recovering and empowering local knowledge very often based on coherence between environment/heritage conservation, local materials, local climate, recovering and empowering traditional mitigation techniques based on long-term experience, as well as adapting to local socio-economics. Only with this approach is it possible to work in many countries of the world, they may be poor in science, but very rich in history and dignity.

Finally, when the target of our work is cultural heritage, another sector has to be involved, that is the conservation science sector. As a result, according to personal experience, it is possible to say that working in such countries requires expertise at the border between earth sciences, social sciences and conservation sciences. In a broader sense, this is probably the basic statement for a new discipline, that we might call "Geosciences for Cultural Heritage Conservation and Management". A new discipline, surely necessary in many developing countries, but also of basic importance in many advanced countries that have a very rich heritage to manage and protect for future generations.

I know that Hiroshi Fukuoka shared this belief and approach in his life and his daily work. I am sure he is now supporting us by pushing for a science that is based on the respect and cooperation with the less advantaged population of the world, affected by landslide disasters. In other words, to work with humbleness and

competence.

5. Oldrich Hungr Award

The award recognizes the contribution of the late Prof. Oldrich Hungr to global landslide research and science. The ICL and IPL membership believes that an appropriate award in his honor would be devoted to supporting young scientists in their research focusing on landslides.

Oldrich Hungr Award



Beena Ajmera

Assistant Professor,
Dept. of Civil, Construction, and
Environmental Engineering,
Iowa State University

Fields of Practice:

- Civil Engineer
- Geotechnical Engineer

Expertise:

- Shear strength of ground materials
- Soil Dynamics in-situ
- Mechanically Stabilized walls (MSE)
- Deep Soil Mixing Laboratory testing



Oldrich Hungr Award Nomination Citation for Dr. Beena Ajmera

It is my pleasure to nominate Beena Ajmera, Assistant Professor in the Department of Civil, Construction, and Environmental Engineering at Iowa State University, for the Oldrich Hungr Award. I first met Beena as an undergraduate student in my Surveying course nearly 12 years ago. The following year, she joined my research group and has been actively working in research related to landslides since. Although young, Beena has already made several significant contributions to the field and shows the potential for making significant advances in the field as she continues her career.

Through some of her earliest research efforts, Beena worked with me to study the fully softened shear strength of normally consolidated clays, which is a necessary parameter to evaluate the stability of first-time slides. This work provided correlations related the fully softened shear strength to the plasticity characteristics and clay mineralogy. In later research efforts, we examined the reduction in the fully softened shear strength resulting from the leaching of sodium chloride. This work, which was runner-up for the nomination for the ASCE Thomas Middlebrooks Award, illustrated the potential for reductions in the stability of slopes with this leaching and provided relationships to estimate the changes in the fully softened shear strength with the leaching of sodium chloride.

In the recent years, Beena's work has expanded to incorporate seismic aspects in her landslide studies. Following the 2015 Gorkha earthquake, Beena worked to map nearly 15,000 coseismic landslides. Beena's most recent research work published in the *Journal of Geotechnical and Geoenvironmental Engineering*, debunked the traditional consideration that fine-grained soils will remain stable during cyclic loading. This publication, has been nominated for the 2020 Norman Medal (highest award given to a ASCE publication) and

for the 2020 Collingwood Prize (awarded to authors under the age of 35 for a paper that makes a substantial contribution to engineering practice).

Through collaborative research efforts, Beena has been contributions related to the fully softened shear strength and compressibility of soils, static and dynamic laboratory testing and the stability of slopes. Her research efforts have resulted in over 100 publications including 5 invited book chapters, 14 journal articles in top-tier publications such *Landslides* and *Journal of Geotechnical and Geoenvironmental Engineering*, 23 geotechnical special publications (equivalent to journal publications), and 71 conference proceedings in international, national and regional conferences such as World Landslide Forums and the International Conference on Soil Mechanics and Geotechnical Engineering. Nearly 40% of her publications have been co-authored with her students.

Since joining the faculty ranks in 2015 Beena has taught a number of courses in geotechnical engineering. She has engaged a number of students at all levels (from high school to doctoral students) in research activities in the field of landslides, supervising a total of 42 students in various research projects, provided summer research experiences to 24 high school and community college as well as 27 visiting international undergraduate students. She is the representative from North Dakota State University on the ICL, serves as an editor and reviewer for the *Landslides*, is actively engaged ICL activities including serving as a session chair in World Landslide Forum and a member of the Student Awards Committee, and is a member of Embankments, Slopes and Dams Committee of the American Society of Civil Engineers' Geo-Institute.

Given her substantial contributions to the field of landslides through both research and education and her potential to continue to make resonating impacts, I strongly recommend Beena Ajmera for the Oldrich Hungr Award.

Nominated by Binod Tiwari, Associate Vice President for Research and Sponsored Projects California State University, Fullerton

Oldrich Hungr Award Citation Response from Dr. Beena Ajmera

I am honored to have been selected as the first recipient of the Oldrich Hungr Award and would like to express my deep gratitude to the many individuals for the roles they played to bring this recognition at this time. Let me start by thanking the International Consortium on Landslides (ICL), the Awards Committee and Prof. Kyoji Sassa for selecting me to receive this honor. I must also extend my deepest appreciation to Prof. Binod Tiwari, not only for his efforts nominating me for this distinction, but more importantly for inspiring and encouraging me since I was his undergraduate student 14 years ago.

My research career started with a simple invitation from Dr. Tiwari to work on an on-going research project. The opportunity that he provided me substantially enhanced my career trajectory. He single-handedly transformed my aspirations, while opening many doors towards a career path that I never imagined. Over the years, I have had the incredible honor to continue to engage in research with him on various topics including those related to landslide science. In each of our interactions, he continues to teach me more about the field and motivate me to continue my own efforts in this area.

It was also on Dr. Tiwari's recommendation that I first became involved with ICL. I am delighted to have had the opportunity to contribute to several of the ICL initiatives in various capacities and have found each event I attended invigorating. Through ICL, I have been able to connect with experts in the field of landslide science. Interactions with these individuals have encouraged me to reach higher and work harder.

The contributions that I am being recognized for would not be possible without the contribution and support of many individuals including colleagues and collaborators in current and former institutions and around the world that supported me in my research undertakings or engaged me in their projects. This includes the students that have dedicated countless hours and efforts in experimentation, analyses and interpretation, the myriad of individuals supporting us from administrators to laboratory technicians and the confidants along the way that have provided invaluable advice or served as a sounding board. I express my appreciation for all they have done and continue to do.

Finally, this award is a reminder to me and many others that our work in understanding and reducing landslide disaster risks is far from over. We still have many research questions that need answers, new technology that needs to be developed, and new ideas that need to be put into practice so that we can further reduce and hopefully someday, eliminate the catastrophes associated with landslide hazards. I hope to continue to contribute to the ICL community as we aspire to reach this dream. Thank you again.

6. Sponsors of WLF5

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The Fifth World Landslide Forum was financially supported by Kyoto University Foundation, Tokyo Geographical Society, International Union of Geological Sciences (IUGS), Association for Disaster Prevention Research, Kyoto, Japan and also Kyoto City and Kyoto Convention & Visitors Bureau.

Peter Boborwosky · Kyoji Sassa
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Kyoto, Japan
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