

The Official Newsletter of the ISPRS Student Consortium

isprs **SPECTRUM** ISPRS STUDENT CONSORTIUM

Issue No. 1 | April 2019



in
REMOTE SENSING  **GEOSPATIAL INFORMATION**

**Women Leaders
for the Youth**

**LOL:
Ladies of Landsat**

Women in ISPRS

IFOV
Dr. Barbara Ryan

TABLE OF CONTENTS

4	WOMEN LEADERS FOR THE YOUTH
4	Women Leaders in Student Organizations
8	SPOTLIGHTS
8	Soapbox Science
10	Ladies of Landsat
37	Women in ISPRS
45	IFOV
45	Dr. Barbara Ryan
47	FORESIGHT
47	ISPRS Congress
48	Upcoming Summer Schools
49	OPPORTUNITIES
49	PhD Opportunities
49	Masters Scholarships
49	Post Doc Opportunities
50	IN THE HORIZON
50	Upcoming Events

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-  @ISPRS_SC
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Have a passion for design, layouts and infographic? Be one of the volunteers of our CREATIVE DESIGN TEAM and help us tell stories through pictures and images.

Take the opportunity to work with an international array of experts to bring the latest stories and developments in the field of Remote Sensing, Geomatics and Photogrammetry.

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<https://goo.gl/QcsABN>

Or you can email us at sc@isprs.org

NEWSLETTER

ISPRS
STUDENT
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Dear ISPRS SC Members,

I am very proud to introduce this very, very special issue of SpeCtrum – Women in Remote Sensing and Geospatial Information. Last March, we celebrated the International Women’s month and this issue pays tribute to all the women in the fields of remote sensing, photogrammetry, spatial information science and other relevant fields. We know that there are many more outstanding ladies out there working in our profession and we are hoping that this issue is just the beginning!

I am greatly privileged to have connected with many outstanding ladies to put up this special issue. Meet the young women leading the different student and youth-oriented organizations, namely, IEEE – GRSS Young Professionals, the FIG Young Surveyors Network and the Space Generation Agency Council. Learn more about a platform for Women in STEM – Soapbox Science, lead by Dr. Nathalie Pettorelli and Dr. Seirian Sumner.

It gets better with interviews from the gorgeous Ladies of Landsat! You will find so much inspiration from women across the globe working in remote sensing. We cannot express enough gratitude to Kate Fickas and Morgan Crowley, the awesome ladies behind the Ladies of Landsat! We also extend our deepest thanks to all the wonderful women who gave us their time to answer the interview. Next up is the Women in ISPRS. Know more about the experiences and advices from our very own Dr. Lena Halounouva, Dr. Marguerite Madden and Dr. Anjana Vyas as well as their journey in ISPRS.

Finally, we have Dr. Barbara Ryan, recipient of the Geospatial Hall of Fame award for our Important – Focused – Outstanding – Valuable (IFOV) section. Dubbed as the “A Salt-of-the-Earth Woman¹” in her interview for Geospatial World, Dr. Ryan shares with us her experiences on leadership, her career highlights and most importantly, her advice to women pursuing science and leadership.

Every time I think of women in science, technology, engineering and mathematics, I always remember this comic from Zen Pencils – “The Woman in the Arena².” A perfect way to illustrate President Theodore Roosevelt’s famous “Man in the Arena” and the popular TED Talks from Dr. Brené Brown. With this issue, I sincerely hope that you find your heroines and female champions who will inspire you to dare greatly. <3

Enjoy reading!

Sheryl Rose Reyes

Chair, ISPRS Student Consortium

FROM THE BOARD

¹ Geospatial World (2017, January/February). *A Salt-of-the-Earth Woman*. Geospatial World, pp. 32 – 38. Retrieved from <https://www.geospatialworld.net/wp-content/uploads/2017/01/barbara-ryan-director-geo-secretariat-hall-of-fame-geospatial-world-forum-2017.pdf>.

² Zen Pencils (2013, December 9). *The Woman in the Arena*. Retrieved from <https://zenpencils.friki.cl/comic/139-brene-brown-the-woman-in-the-arena/>.

The Ladies of Landsat

An Introduction

By Dr. Kate Fickas and Morgan Crowley

We invited a selection of active members of Ladies of Landsat from a variety of geographic locations, career stages, and RS background to submit bios for this newsletter. As you can imagine, the Ladies of Landsat are a busy group of people, so not all were able to respond. We are so grateful to our members who contributed their stories and experiences, and we are excited to share them in this newsletter. Each member's Twitter handle can be found below their photographs.

There are many additional women actively connected to the Ladies of Landsat network, and these bios highlight many but not all of their experiences. We hope to continue expanding these biographies as we grow as a community! Check out our Twitter page @LadiesOfLandsat for more highlights of Ladies of Landsat members!





The Ladies of Landsat

Foreword by Dr. Kate Fickas

The night before the Ladies of Landsat Twitter account went live in February of 2018, I stood in a bar in Sioux Falls, South Dakota quietly clutching my frosty IPA and loudly questioning the entirety of my personal and intellectual self-worth inside my head. Noticing my anomalous body language (I'm normally an energetic extrovert, someone took me aside and asked what I was feeling. In a moment of courage and vulnerability I opened up and was endowed a brief, yet powerful, pep talk: "You are so strong. You are so special. I believe in you". In the year that has passed since starting the Ladies of Landsat account, dozens of you have told me similar stories of anxiety and debilitation, feelings of powerlessness, and worse, active discrimination, harassment, and assault in both professional and private settings. However, not all of you have a support system to help guide you back into the light of your own self-confidence. It is my hope we can change that.

Remote sensing is a unique field at an intersection of life sciences, engineering, physics, and computer science. In the U.S., 48% of what the National Science Foundation calls the "biological, agricultural, and environmental life sciences" are comprised of women, but only 15% in "engineering" and 25% in "computer and mathematical sciences"¹. I know one of the reasons many of us love remote sensing is because of its multidisciplinary nature. However, I theorize this integrative quality has also made it complicated for women in our field to gain traction in being seen and heard with active advocacy in the ways that other, more traditional fields have been ramping up to for some time. For example, while the life sciences are trending towards a near balanced gender ratio, engineering and computer science are still in deep trouble with female representation – a problem that urgently calls for action. So, where does that leave remote sensing? My experience (and I've heard the same from others has been that remote sensing maintains an attitude of having gender equality, without much data or action to show for it. There's a lot of work left to do.

With a culture in STEM already geared towards competition, it's not hard to feel like a failure when we stumble or compare ourselves to those we admire. This is especially true for women who often already feel like outsiders because of our gender and subsequently feel added pressure to be faultless. However, success does not look like perfection. Success look likes the ability to do what you love with courage, knowing that you have a community behind you to catch you during the rejections, mistakes, and disappointments. I also want to be clear about the other side of the coin: you do not need to have experienced discrimination or the negative effects of sexism to be a part of this community. You do, however, need to believe and empathize with those who have. This goes for men as well. Being an ally means more than simply retweeting women. Among all genders, from what I've seen and experienced, the key difference between self-proclaimed feminists and true allies is action: feminists clap when a player scores a goal, but the ally will try to make the assist.

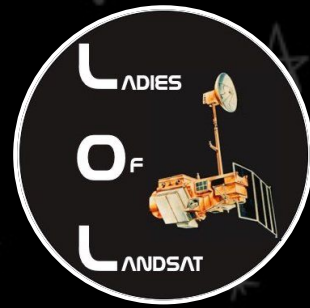
When we were approached by Sheryl Reyes for this issue of *SpeCtrum* to have a section on LoLs in this issue of *The Spectrum*, I knew I wanted it to be more than just research profiles of women in remote sensing. Don't misunderstand me -- the women you will read about are rockstars in their field and the creative pixel pushing they are doing around the globe makes me truly proud to be a part of this community. However, when I think about my journey through the hardships of academia and STEM, what was essential for me was the empathy and storytelling of others who were willing to be vulnerable and share their struggles so that I didn't feel alone and could learn from their wisdom in how to keep showing up in work that I loved. One of my biggest heroines is Reshma Saujani, the CEO of *Girls Who Code*² because she advocates and practices the concept "brave, not perfect". Following Reshma's example, we've asked women in remote sensing if they ever had questions about their path, faced adversity that knocked them to the ground, and how they pulled themselves back up. Our hope is that we can begin to shape a Ladies of Landsat community that not only showcases the achievements of women in remote sensing, but also builds a support system for those who might have questions or be struggling in any way.

My dream is for Ladies of Landsat to be a community of all genders that empowers women to be their best selves. If you have a victory, big or small, let us know. We are proud of you and we want the world to know how amazing you are! If you are feeling scared, alone, lost, confused or just need a pep-talk, that's what we're here for too. Have a question, personal or professional you're afraid to ask someone else? Reach out, we won't judge. We are all here to learn. And, finally, if you think you don't have anyone that sees you, please don't worry.

We have you. We believe in you. You are so strong. You are so special. You are a Lady of Landsat.

1. National Science Foundation Science & Engineering Indicators 2018 <https://nsf.gov/statistics/2018/nsb20181>

2. Girls Who Code <https://girlswhocode.com/>



The Ladies of Landsat

A note on inclusivity by Morgan Crowley

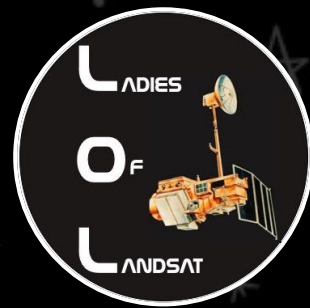
Ladies of Landsat is an inclusive and supportive network for all who personally identify with our community. We work towards elevating our members by increasing awareness of their awesome remote sensing research and supporting those who need a voice. Just as our community is sensor agnostic (Sisters of Sentinel, Madames of MODIS, Gals of GEE, and Dames of Drones, you're all welcome!), we aim for this movement to be inclusive. By using the word "ladies" to describe our community, we are reclaiming a term that sometimes can be used to belittle, patronize or isolate and applying it toward empowerment. All who self-identify as a Lady of Landsat or an ally are invited to join us!

We want to formally state that everyone is welcome in this community. Membership requires support, kindness, and respect for all underrepresented scientists in remote sensing. Our experiences will vary, and so we must actively show up for each other to create access and inclusivity in this field.

Through Ladies of Landsat, we hope to bolster awareness and support and help create opportunities, collaborations and connections for members who were previously isolated. We always invite ideas and feedback on how to make this a reality and please feel welcome to contact us with ideas for how we can work together to achieve this!

Rebecca (Becky) Edwards

Remote Sensing Analyst, National Boreal Program, Ducks Unlimited Canada,
Edmonton, AB, Canada



Research: The Treaty 8 Tribal Corporation (“Akaitcho”) is in the process of developing a land use plan for their traditional territory, a 77 million acre area located in the southeastern NWT. Boreal wetlands represent a large percentage of the landscape and provide critical ecosystem services by helping to mitigate the effects of floods and droughts, provide key habitat for flora and fauna, recycle nutrients, store and sequester carbon, and purify large volumes of water. DUC has engaged in a memorandum of understanding (MOU) with the NWT Treaty 8 Tribal Corporation, in which the two organizations will collaborate on this planning process and other projects related to traditional use and management of boreal ecosystems. The objective of this project is to develop an object-based large-scale wetland inventory for the Akaitcho Traditional Territory using multispectral (Sentinel-2, Landsat 8), and SAR (ALOS PALSAR) imagery. We completed a field campaign in the summer of 2017 to gather training and validation sites, and have combined that data with image interpreted sites and knowledge from the local communities. The final inventory will identify general upland classes, and the five major wetland classes specified in the Canadian Wetland Classification System (bog, fen, marsh, swamp and shallow open water), with more detailed classes mapped in areas of high wetland diversity and importance.

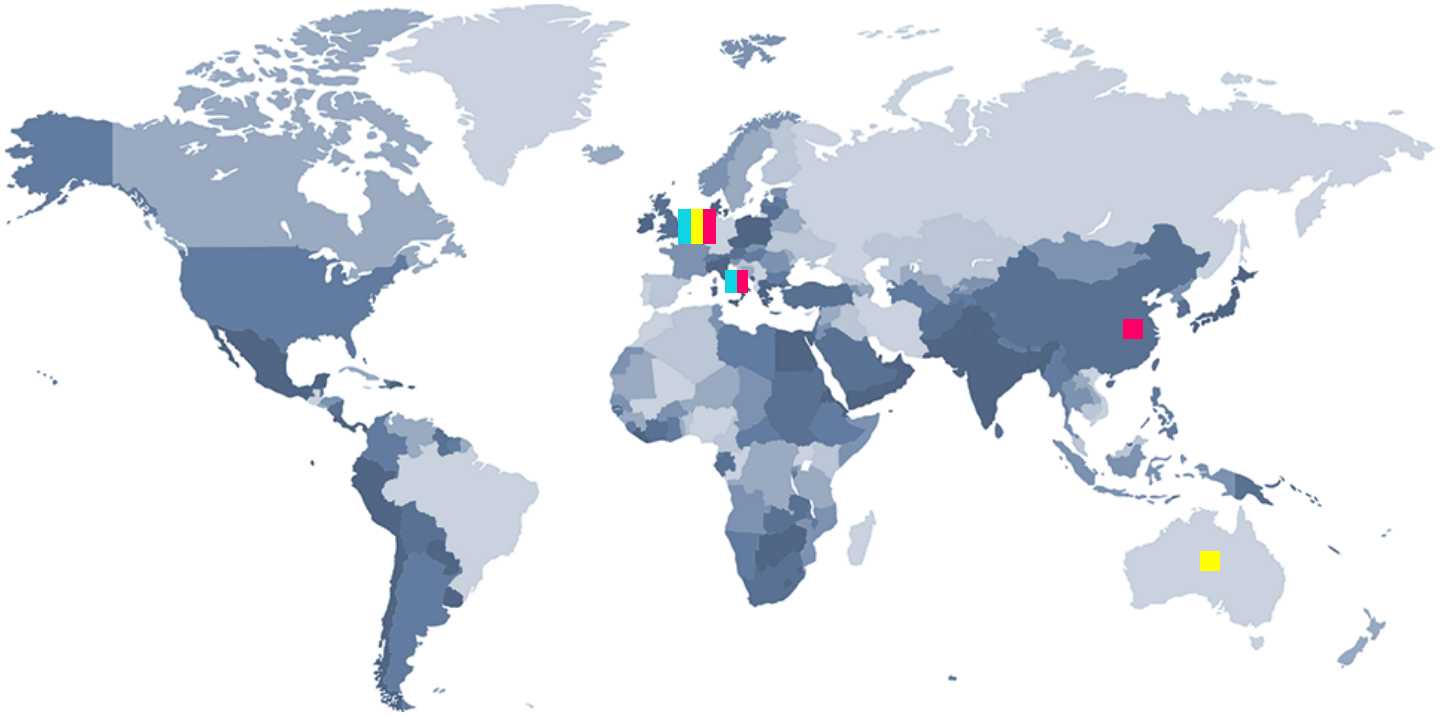
How did you end up in your field? I graduated with a Geoscience degree at Vancouver Island University in my hometown of Nanaimo, British Columbia. After completing my first undergraduate research project analyzing temperature and precipitation trends on Vancouver Island, I knew I wanted to continue my scientific research in environmental monitoring using GIS/remote sensing. I attended Queen’s University working with Dr. Paul Treitz in the Laboratory for Remote Sensing of Earth and Environmental Systems focusing on assessing vegetation change in the Canadian Arctic using remote sensing. After completing

my masters, I moved back to Nanaimo to start the job hunt. I ended up securing a position with a geomatics surveying company. It was a great experience but I was still searching for a job directly related to environmental monitoring or conservation. Only a couple months later, I got the opportunity to work for Ducks Unlimited Canada as a Remote sensing analyst working to create a wetland classification of the Akaitcho Traditional Territory in the Northwest Territories (NWT).

Have you ever doubted your path? I have never doubted staying in my field. My position as a remote sensing analyst with DUC allows me to work directly on mapping projects related to conservation, as well as, travel to some of the most beautiful locations in Canada to conduct fieldwork (NWT, Yukon, and Northern Alberta).

What kept you going? I find it very inspiring to work directly with the Akaitcho community to collaborate on our wetland-mapping product. During our 2017 field season in the Akaitcho, we were able to work directly with indigenous technicians collecting vegetation data. From the helicopter, the technicians would point out caribou trails, herds of muskox and snowmobile trails used for trapping. We also conducted multiple community meetings around NWT, and held wetland remote sensing workshops in Edmonton for the technicians. It is rewarding to know that our wetland mapping products will help influence land-use planning decisions

What does it mean to you to be a Lady of Landsat? I feel very honoured to be recognized as an influential woman in the field of remote sensing. It can be challenging for women to define their paths in the scientific community. I believe the Ladies of Landsat are a powerful platform that encourages women to pioneer their own paths, share their research, and support others. The Ladies of Landsat are building a one-of-a-kind support system for woman in our community and I am happy to be a part of the movement.



PhD fellowships and scholarships

- Six PhD scholarships in Environmental and Infrastructure Engineering at Politecnico di Milano, Italy
Deadline: Not Specified
<http://www.dica.polimi.it/en/dottorato/dot-amb/>
- PhD position in remote sensing at Forschungszentrum Jülich Institute of Bio- and Geosciences (IBG) Jülich, Germany
Deadline: 31st May 2019
<http://www.fz-juelich.de/SharedDocs/Stellenangebote/common/dna/2019D-125-EN-IBG-3.html?nn=718260>
- PhD position in simulation sciences at Forschungszentrum Jülich Institute of Bio- and Geosciences (IBG) Jülich, Germany
Deadline: 30th April 2019
<http://www.fz-juelich.de/SharedDocs/Stellenangebote/common/dna/2019D-121-EN-IBG-3.html?nn=718260>
- PhD positions in the Earth@lternatives project on sustainable land and water use for food and energy at University of Twente, The Netherlands
Deadline: Until filled (Start date 1st September 2019)
<https://www.utwente.nl/en/organization/careers!/915549/phd-positions-in-the-earthlternatives-project-on-sustainable-land-and-water-use-for-food-and-energy>

- PhD in Earth System-Modelling at the Helmholtz Centre Potsdam – GFZ German Research Centre for Geosciences, Germany
Deadline: 13th May 2019
https://gfz-potsdam.concludis.de/prj/shw/b6cda17abb967ed28ec9610137a445f7_0/2338/PhD_position.htm?lang=en_GB
- PhD candidate UAV/drones to support first responders, using advanced computer vision and machine learning at University of Twente, The Netherlands
Deadline: 1st May 2019
<https://www.utwente.nl/en/organization/careers!/903245/phd-candidate-uavdrones-to-support-first-responders-using-advanced-computer-vision-and-machine-learning>

MSc scholarships and fellowships

- Masters in Integrated Water Management at the International Water Center in Australia
Deadline: 30th September 2019
<https://watercentre.org/master-of-integrated-water-management/>
- Scholarships for master programmes (ICP) in Belgium

Deadline: Depends on program
<https://www.vliuos.be/en/scholarships/scholarships-in-flanders/scholarships-for-master-programmes-icp/114>

Postdoc fellowships

- Postdoc or research scientist in atmospheric chemistry observation and modelling at Nanjing University of Information Science & Technology, Nanjing, China
Deadline: Until filled
<https://www.egu.eu/jobs/2356/postdoc-or-research-scientist-atmospheric-chemistry-observation-and-modeling/>
- Postdoc in “Remote sensing of ecophysiological traits from Unmanned Aerial Systems” at Technical University of Denmark
Deadline: 20th May 2019
<https://www.egu.eu/jobs/2347/postdoc-in-remote-sensing-of-ecophysiological-traits-from-unmanned-aerial-systems/>
- Postdoctoral Position in Seismology at Department of Mathematics and Geosciences - University of Trieste, Italy
- **Deadline:** 2nd May 2019
<http://web.units.it/node/36606/assegno/pub>

UPCOMING EVENTS 2019

- 17-18 Apr 2019
ISPRS WG V/8 & V/1 Workshop on Open Source and Multi-level Education for Geospatial Technology 2019
 Site: Taipei, Taiwan
 Contact: Chao-Hung Lin, Anjana Vyas
 linhung@mail.ncku.edu.tw; anjanavyas@yahoo.com
 Website: <http://os2018.geomatics.ncku.edu.tw/>

- 17-19 Apr 2019
ISRS 2019 international Symposium on Remote Sensing
 Site: Taipei, Taiwan
 Contact: isrs2019@csrsr.ncu.edu.tw
 Website: <https://isrs.csrsr.ncu.edu.tw/>

- 25-27 Apr 2019
TUFUAB 2019-Aksaray Turkish National Society for Photogrammetry and Remote Sensing X.
 Site: Aksaray, Turkey
 Contact: tufuab2019@gmail.com
 Website: <http://tufuab2019.aksaray.edu.tr/>

- 30 Apr 2019
Journée du bicentenaire Aimé Laussedat (1819-1907)
 Site: Paris, FRANCE
 Contact: Laurent Polidori +33 6 7818 8698
 laurent.polidori@cesbio.cnes.fr
 Website: <http://www.sfpt.fr/>

- 02 May 2019
ISPRS TC II, WG II/9 Underwater 3D Recording and Modeling
 Site: Limassol, CYPRUS
 Contact: Dimitrios, Skarlatos
 Website: <http://3d-underwater.cut.ac.cy/>

- 03-05 May 2019
GISTAM 2019 5th International Conference on Geographical Information Systems Theory, Application and Management
 Site: Heraklion, Crete, GREECE
 Contact: gistam.secretariat@insticc.org
 Website: <http://www.gistam.org/>

- 06-08 May 2019
ISPRS WG I/7, WG I/2, WG I/6, WG II/3 11TH International Symposium on Mobile Mapping Technology and Summer School on Mobile Mapping
 Site: Schenzhen, CHINA
 Contact: Naser El-Sheimy +44(0)1453 836363
 elsheimy@ucalgary.ca
 Website: <http://www.mmt2019.com/>

APRIL 2019

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- 08-10 May 2019
ISPRS WG II/8, WG III/5, WG V/1 GeoRes2019 2nd International Conference
 Site: Milan, ITALY
 Contact: Raffaella Brumana + 39 3403940893
 raffaella.brumana@polimi.it
 Website: <http://www.geores19.polimi.it/>

- 13-15 May 2019
ISPRS WG II/10 & WG II/5 International Workshop on "Photogrammetric and Computer Vision techniques for video surveillance, biometrics and biomedicine"
 Site: Moscow, RUSSIA
 Contact: Vladimir A. Knyaz +7 499 157 3127
 +7 499 943 8605knyaz@gosniias.ru
 Website: <http://technicalvision.ru/ISPRS/PSBB19/>

- 15-17 May 2019
ISPRS WG III/5 JISDM 4th Joint International Symposium on Deformation Monitoring and Analysis
 Site: Athens, GREECE
 Contact: Vassilis Gikas+30 210772 3566
 + 30 210772 2728 vgikas@central.ntua.gr
 Website: <http://www.jisd2019.survey.ntua.gr/>

05 MAY 2019

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06 JUNE 2019

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21-22 May 2019

GEO Business

Site: London, UK
 Contact: +44(0)1453 836363
 info@GeoBusinessShow.com
 Website: <http://www.geobusinessshow.com/>

22-24 May 2019

ISPRS JURSE 2019

Site: Vannes, France
 Contact: Thomas Corpetti +33 2 99 14 18 77
 Sébastien Lefèvre +33 2 99 01 72 66 contact@jurse2019.org
 Website: <http://jurse2019.org/>

28-31 May 2019

ISPRS WG II/1 & WG II/2 PhotoGA 2019 and CRV Workshop

Site: Kingston, CANADA
 Contact: Mozhddeh Shahbazi +1-403-210-7710
mozhddeh.shahbazi@ucalgary.ca
 Website: <http://www2.isprs.org/commissions/comm2/wg1/PhotoGA19.html>

UPCOMING EVENTS 2019

22-24 May 2019

EURASIAN RISK 2019

Site: Baku, AZERBAIJAN
 Contact: Vugar Aliyev secretary@eurasianrisk2019.az
 Website: <http://os2018.geomatics.ncku.edu.tw/>

04-06 Jun 2019

ISPRS WG IV/7 & WG IV/1 Workshop on Modeling and Managing Geospatial Data

Site: Fredericton, NB, CANADA
 Contact: Emmanuel Stefanakis +1 506 4535137
 +1 506 4534943 estef@unb.ca
 Website: <http://www.sfpt.fr/>

10-14 Jun 2019

ISPRS Geospatial Week 2019

Site: Enschede, THE NETHERLANDS
 Contact: George Vosselman +31 53 4874 358
gsw2019@utwente.nl
 Website: <https://www.gsw2019.org/>

16-17 Jun 2019

ISPRS WG II/1 & WG II/6 EARTHVISION 2019 IEEE/ISPRS Workshop. Large Scale Computer Vision for Remote Sensing Imagery

Site: Long Beach, CA, USA
 Contact: Ronny Hänsch r.haensch@tu-berlin.de
 Website: <https://www.grss-ieee.org/earthvision2019/>

ISPRS TC II PCV 19

Photogrammetric Computer Vision 2019

Site: Long Beach, CA, USA
 Contact: Andrea Fusiello andrea.fusiello@uniud.it
 Website: <https://sites.google.com/view/pcv19/home>

ISPRS WG II/10, WG III/10 & WG III/5
Innsbruck Summer School of Alpine Research 2019

Site: Obergurgl, AUSTRIA
 Contact: Martin Rutzinger +43-512-507-49480
 +43-512-507-49499 martin.rutzinger@oeaw.ac.at
 Website: <https://www.uibk.ac.at/geographie/summerschool/2019/>

24-26 Jun 2019

ICUI 2019 2nd International Conference on Urban Informatics

Site: Hong Kong, HONG KONG
 Contact: Raffaella Brumana + 39 3403940893
raffaella.brumana@polimi.it
 Website: <http://www.geores19.polimi.it/>

ISPRS WG I/2

EOEC-GIT4NDM 2019

Site: Chengdu, CHINA
 Contact: Jonathan Li junli@uwaterloo.ca
 Website: <http://eoc2019.csp.escience.cn/dct/page/1>

ACKNOWLEDGEMENT

We would like to extend our sincerest gratitude to all the beautiful and brilliant women who gave us their time for preparing the interviews and answering the interviews - for bravely sharing with us their valuable experiences so they can empower more women in our profession.

We are also thanking all the women out there, not only in remote sensing and geospatial information. For every woman representing an advocacy, breaking barriers and becoming vulnerable, we thank you for your courage and exceptional capabilities!

Cheers to empowerment and diversity!



Please visit our SC web page sc.isprsr.org where you will find more information about Student Consortium, our previous Newsletter issues, SC activities, photo galleries from previous Summer Schools, interesting links etc.

