

# YI-CHIN TSENG (SUNNY)

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## EDUCATION

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- **Ph.D., University of Northern British Columbia** **Prince George, Canada**  
***Natural Resources & Environmental Studies*** *Jan.2021 – present*  
Supervisor: Ken Otter  
Committee: Heather Bryan, Joseph Shea, and Dexter Hodder
- **Master of Science, University of British Columbia** **Vancouver, Canada**  
***Department of Forest Resources Management*** *Sep.2017 – Nov.2019*  
Supervisor: Bianca N.I. Eskelson  
Committee: Kathy Martin and Nicholas C. Coops  
Thesis: Innovative and conventional modelling for avian acoustic and fire severity analyses ([link](#))  
UBC GPA: 4.33
- **Bachelor of Science, National Taiwan University** **Taipei, Taiwan**  
***School of Forestry and Resource Conservation & Department of Physics*** *Sep.2012 – Jun.2017*  
Double Major Student  
Supervisor: Biing T. Guan, Tzeng-Yih Lam, and Shi-Wei Chu  
Forestry GPA: 3.96/4.0; Physics GPA: 3.40/4.0; Cumulative GPA: 3.65/4.0

## PUBLICATION

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### JOURNAL ARTICLES.....

- Tseng, Y.-C., Ko, J.C.-J, Cheng, A.-Y., and Chen, W.-J. **2023** Modelling avian altitudinal migration using citizen science data. *Ornithological Application*. (In Preparation)
- Pelletier, F., Eskelson, B.N.I., Monleon, V.J., and Tseng, Y.-C. **2021** Using Landsat imagery to assess burn severity of National Forest Inventory plots. *Remote Sensing*, 12:10. ([link](#))
- Tseng, Y.-C., Eskelson, B.N.I., Martin, K., and LeMay, V. **2021**. Automatic bird sound detection: Logistic model based acoustic occupancy model. *Bioacoustics*, 30(3):324-340. ([link](#))
- Tseng, Y.-C., and Chu, S.-W. **2017**. High spatio-temporal-resolution detection of chlorophyll fluorescence dynamics from a single chloroplast with confocal imaging fluorometer. *Plant Methods*, 13:43. ([link](#))

### NON-PEER REVIEWED ARTICLES.....

- Tseng, Y.-C. **2023**. Nest boxes for barn owl conservation. *Nature Conservation Quarterly*, 122. ([link](#))
- Tseng, Y.-C. **2023**. When beaver dam collapses. *Nature Conservation Quarterly*, 121. ([link](#))
- Tseng, Y.-C. **2023**. Listening to the whispers of the wings. *Discovery*, 50(1):85-90. ([link](#))
- Tseng, Y.-C. **2022**. Hey, there are wild black bears in my backyard. *Nature Conservation Quarterly*, 117. ([link](#))
- Tseng, Y.-C. and Hong, G.-C. **2021**. Avian field recordings (II). *Feathers*, 301:22-27. ([link](#))
- Tseng, Y.-C. and Hong, G.-C. **2021**. Avian field recordings (I). *Feathers*, 300:38-41. ([link](#))
- Tseng, Y.-C. **2019**. Apply statistics on bird "listening". *Discovery*, 47(1):21-22. ([link](#))

- Tseng, Y.-C. **2018**. Can statistics help ornithologists "hear" birds? *BranchLines*, 29(3):11. ([link](#))

## CONFERENCE TALK.....

- **BC/Canada TWS Joint Conference** **Victoria, Canada**  
*Passive acoustic as a tool to monitor individual Barred Owls* Mar.2023
- **UNBC Research Week** **Prince George, Canada**  
*Passive acoustic as a tool to monitor individual Barred Owls* Feb.2023
- **International Ornithological Congress** **Virtual**  
*Modelling avian altitudinal migration using citizen science data* Aug.2022
- **AOS-SCO Joint Conference** **Virtual**  
*seewave and tuneR: sound analysis in ornithology* Aug.2021
- **Congress of Animal Behavior and Ecology** **Tainan, Taiwan**  
*Modelling avian annual cycle distribution in Taiwan using citizen science data* Feb.2021
- **Congress of Animal Behavior and Ecology** **Penghu, Taiwan**  
*Automatic bird sound detection: ARU data analysis* Jan.2020
- **Ecology & Evolution Retreat** **Squamish, Canada**  
*Automatic Bird Sound Detection: ARU data analysis* Oct.2018
- **International Ornithological Congress** **Vancouver, Canada**  
*Automatic bird sound detection: Logistic regression based acoustic occupancy model* Aug.2018
- **International Forestry Students' Symposium** **Manila, Philippines**  
*Chlorophyll fluorescence: A powerful tool for photobiology research* Aug.2015

## CONFERENCE POSTER.....

- **AOS-SCO Joint Conference** **London, Canada**  
*Large scale biodiversity assessment with bird sound* Aug.2023
- **Annual meeting of Ecological Society of America** **Louisville, USA**  
*Relationships between successive forest fires: A case study in central interior BC, Canada* Aug.2019
- **Annual Meeting of Soundscape Association** **Taipei, Taiwan**  
*Automatic bird sound detection: Logistic regression based acoustic occupancy model* Jun.2018
- **Focus On Microscopy** **Bordeaux, France**  
*High spatio-temporal-resolution detection of chlorophyll fluorescence* Apr.2017

## SCIENCE OUTREACH & INTERVIEW.....

- **Recordist for Xeno-Canto ([profile](#))** **Xeno-Canto**  
*One of my recordings of [Siberian Crane](#) was featured on the homepage.* Jul.2017 – present
- **A Person Who Collects Sounds ([interview](#))** **Fuyu Life**  
*Field recordist - a beautiful way to study Nature.* Jan. 2022
- **Each Sound Recording Represents a Profound Story ([interview](#))** **Canopy Life**  
*Interview of a field recordist.* Jun. 2021
- **The Siberian Crane: From Taiwan to Tundra ([interview](#))** **Bird Note**  
*A bird gets blown off course and inspires a young researcher to spread her own wings — in Siberia.* May. 2021
- **Sharing the Sounds of Nature ([interview](#))** **National Education Radio**  
*Interview with a scholar in bioacoustics.* Aug. 2020

## RECOGNITIONS

### SCHOLARSHIPS and RESEARCH GRANT

<ul style="list-style-type: none"> <li>○ <b>Canada Graduate Scholarship - Doctorial (CGS-D)</b> <i>Rewarding and retaining high-calibre doctoral students at Canadian institutions.</i> 105,000 CAD</li> </ul>	<b>NSERC</b> <i>Apr.2023</i>
<ul style="list-style-type: none"> <li>○ <b>Susan Stevenson Memorial Award</b> <i>Excellence academic performance</i> 1,500 CAD</li> </ul>	<b>UNBC</b> <i>Nov.2022</i>
<ul style="list-style-type: none"> <li>○ <b>CUPE Local 3799 Annual Bursary</b> <i>Excellence academic performance</i> 1,000 CAD</li> </ul>	<b>UNBC</b> <i>Sep.2022</i>
<ul style="list-style-type: none"> <li>○ <b>Mitacs Accelerate Fellowship</b> <i>A long-term funding and internship option for PhD students in Canada</i> 90,000 CAD</li> </ul>	<b>MITACS</b> <i>Jun.2022</i>
<ul style="list-style-type: none"> <li>○ <b>Graduate Entrance Research Scholarship</b> <i>High academic performance for new graduate student</i> 25,000 CAD</li> </ul>	<b>UNBC</b> <i>Jan.2021</i>
<ul style="list-style-type: none"> <li>○ <b>Early Career Grant (Upcoming research project)</b> <i>Leading a fieldwork in Siberia Arctic tundra for avian sound recordings</i> 5,700 CAD</li> </ul>	<b>National Geographic</b> <i>Jun.2020</i>
<ul style="list-style-type: none"> <li>○ <b>Mary and David Macaree Fellowship</b> <i>Conducting research in Forestry</i> check</li> </ul>	<b>UBC</b> <i>Sep.2019</i>
<ul style="list-style-type: none"> <li>○ <b>VanDusen Graduate Fellowship in Forestry</b> <i>Faculty of Forestry student in forest resource ecosystems</i> check</li> </ul>	<b>UBC</b> <i>Feb.2019</i>
<ul style="list-style-type: none"> <li>○ <b>Hugh Robert Duncan Chisholm Scholarship in Forestry</b> <i>Conducting research in Forestry</i> 230 CAD</li> </ul>	<b>UBC</b> <i>Nov.2018</i>
<ul style="list-style-type: none"> <li>○ <b>Werner and Hildegard HESSE Fellowship in Ornithology</b> <i>Conducting research in Ornithology</i> 13,500 CAD</li> </ul>	<b>UBC</b> <i>Oct.2018</i>
<ul style="list-style-type: none"> <li>○ <b>Pei-Huang Tung and Tan-Wen Tung Graduate Fellowship</b> <i>Taiwanese students pursuing higher education in Canada</i> 2,500 CAD</li> </ul>	<b>UBC</b> <i>Oct.2018</i>
<ul style="list-style-type: none"> <li>○ <b>Mary and David Macaree Fellowship</b> <i>Students in Faculty of Forestry studying forest resource ecosystems</i> 2,700 CAD</li> </ul>	<b>UBC</b> <i>Sep.2018</i>
<ul style="list-style-type: none"> <li>○ <b>BA Blackwell &amp; Associates Scholarship in Fire Science</b> <i>Conducting research about forest fire ecology</i> 1,000 CAD</li> </ul>	<b>BA Blackwell &amp; Associates</b> <i>Aug.2018</i>
<ul style="list-style-type: none"> <li>○ <b>Soundscape and Sound Research Scholarship</b> <i>Soundscape or sound associated research</i> 10,000 TWD</li> </ul>	<b>SAT</b> <i>Feb.2018</i>
<ul style="list-style-type: none"> <li>○ <b>Faculty of Forestry Strategic Recruitment Fellowships</b> <i>Top 20% ranked student</i> 12,000 CAD</li> </ul>	<b>UBC</b> <i>Sep.2017</i>
<ul style="list-style-type: none"> <li>○ <b>Arctic Research Cooperation Scholarship</b> <i>Selected researcher for Arctic research project</i> 100,000 TWD</li> </ul>	<b>TEEDF</b> <i>Apr.2017</i>

- **College Student Research Scholarship** **MOST**  
*Excellent research proposal* Jun.2016  
20,000 TWD
- **Alumnus scholarship in NTU Physics** **NTU**  
*3 awardees per year for outstanding academic achievement* Dec.2015  
1,000 TWD
- **Outstanding College Student Scholarship** **The international Women's Educational Foundation**  
*Scholarship for outstanding female students* Sep.2012  
80,000 TWD

## AWARDS.....

- **Best Student Presentation Award** **BC & CAN TWS**  
*Best student oral presentation in The Wildlife Society conference* Mar.2023
- **3 Minute Thesis Award** **UNBC**  
*1st place & people's choice of UNBC 3MT competition* Feb.2023
- **Teaching Excellence Award** **UNBC**  
*Outstanding teaching performance as a teaching assistant* Sep.2022
- **Outstanding Oral Presentation Award** **CABE**  
*Outstanding oral presentations in Congress of Animal Behavior and Ecology* Feb.2021
- **Master of Data Science TA Award** **UBC**  
*Best TAs in Master of Data Science program of the academic year* Jun.2019
- **3 Minute Thesis Award** **UBC**  
*First place of 3MT competition in UBC Faculty of Forestry* Feb.2019
- **College Student Research Creativity Award** **MOST**  
*Top 5% ranked research report* Aug.2017
- **Outstanding Poster and Presentation Award** **NTU**  
*Ranked 1, out of 14 groups, in physics department poster competition* Apr.2016
- **President Award** **NTU**  
*Top 5% ranked student in the semester* Jan.2016

## WORK EXPERIENCE

### DATA ANALYST.....

- **Endemic Species Research Institute** **Nantou, Taiwan**  
*Supervisor: Wan-Jyun Chen, Jerome Ko* Apr.2020 – Jul.2021
- **Birds Canada** **Langley, Canada**  
*Supervisor: David Bradley* Feb.2020 – Mar.2020

### COURSE INSTRUCTOR.....

- **Advanced Statistical Analyses for Natural Resource Sciences** **UNBC**  
*Co-instructor: Lisa Koetke* Sep.2023 - Dec.2023

### TEACHING ASSISTANT.....

- **Applied Analysis Hub** **UNBC**  
*Instructor: Eduardo Martins, Heather Bryan* Sep.2021 – present
- **Data Wrangling** **UBC**  
*Instructor: Tiffany Timbers, Tomas Beuzen* 2019 fall

- **Descriptive Statistics and Probability for Data Science** **UBC**  
*Instructor: Mike Gelbart (2018), Vincenzo Coia (2019)* 2018 fall, 2019 fall
- **Regression I, Regression II** **UBC**  
*Instructor: Gabriela Cohen Freue (I), Vincenzo Coia (II)* 2019 spring, 2019 fall
- **Feature and Model Selection** **UBC**  
*Instructor: Mark Schmidt, Varada Kolhatkar* 2019 spring
- **Advanced Biometrics** **UBC**  
*Instructor: Bianca Eskelson* 2018 fall

## WORKSHOP and TUTOR.....

- **Listen to the Whispers of Wings** **Mossom Creek**  
*Host: Mossom Creek BioBlitz* Jun.2023
- **Qualitative Analysis using R** **Virtual**  
*Host: Jennifer Wigglesworth* Mar.2023
- **Introduction to Git and Github** **Virtual**  
*Host: Applied Analysis Hub* Nov.2022
- **Data Wrangling with R** **UNBC**  
*Host: Applied Analysis Hub* Mar.2022
- **Data Wrangling with R (4 sessions)** **Endemic Species Research Institute**  
*Host: Jerome Ko* May.2021 – Jul.2021
- **Recording Techniques for Breeding Birds Survey (6 sessions)** **Endemic Species Research Institute**  
*Host: Luna Fan* Dec.2020 – Mar.2021
- **Automatic bird sound detection: ARU data analysis** **Canadian Wildlife Service**  
*Host: Kathy Martin* Oct.2018
- **Statistical Analysis in Ecology (5 sessions)** **UBC**  
*Host: Trevor Gareth Jones* Jan.2018 – Apr.2018

## ACADEMIC EXPERIENCE

- **Avian Biodiversity Assessment with Passive Acoustic Monitoring** **UNBC**  
**PhD thesis** Aug.2021 – present  
*Supervisor: Ken Otter*
- **Predicting Avian Population Trends Using Citizen Science Data** **Endemic Species Research Institute**  
**Research Project** Mar.2020 – Jul.2021  
*Principal Investigator: Wan-Jyun Chen, Jerome Ko*
- **Automatic Bird Sound Detection by Logistic Regression** **UBC**  
**Master Thesis (Funded by SAT)** Jan.2018 – Nov.2019  
*Supervisor: Valerie LeMay, Bianca N.I. Eskelson, Kathy Martin*
- **Relationships Between Successive Forest Fires** **UBC**  
**Master Thesis (Funded by NSERC)** Sep.2017 – Nov.2019  
*Supervisor: Bianca N.I. Eskelson, Nicholas Coops, Kathy Martin*
- **Seasonal Variation of Bird Sound in Sakha Republic** **Russian Academy of Science**  
**Arctic Research Cooperation (Funded by TEEDF)** Apr.2017 – Aug.2017  
*Instructor: Sergei Sleptsov*

- **Correlation Analysis of Tree Ring Characteristics**  
**Undergraduate Research Project (Funded by MOST)**  
*Instructor: Biing T. Guan*
  - **Detection of Chlorophyll Fluorescence Dynamics from a Single Chloroplast**  
**Undergraduate Research Project (Funded by MOST)**  
*Instructor: Shi-Wei Chu*
  - **Bayesian Statistic Modeling**  
**Short-Term Research Program**  
*Instructor: Stavros Veresoglou*
  - **Der Mogel – Bird Song Identification System ([link](#))**  
**Bachelor Thesis**  
*Instructor: Tzeng-Yih Lam*

**NTU**  
Sep.2015 – Feb.2017

**NTU**  
Mar.2015 – Nov.2016

**Freie Universität Berlin**  
Jul.2016 – Aug.2016

**NTU**  
Feb.2016 – Jun.2016
- \* NSERC: Natural Sciences and Engineering Research Council
  - \* MOST: Ministry Of Science and Technology
  - \* TEEDF: Taiwan Ecological Engineering Development Foundation

- \* UBC: University of British Columbia
  - \* NTU: National Taiwan University
  - \* SAT: Soundscape Association of Taiwan

## OTHER EXPERIENCE

### FIELD EXPERIENCE

- **Bander in Iona Island Bird Observatory** **Richmond, Canada**  
*Volunteer activity for migration monitoring* *Sep.2018 – present*
- **Leader in post-fire vegetation measurement** **Williams Lake, Canada**  
*PI: Bianca N.I. Eskelson. Measure post-fire vegetation for permanent plots* *Jun.2018 – Aug.2018*
- **Recordist in Siberian tundra research team** **Siberia, Russia**  
*PI: Sergei Sleptsov. Record bird songs and calls in Siberia Arctic tundra* *Jul.2017 – Aug.2017*

### VOLUNTEERS and MEMBERSHIPS

- **Volunteer in UBC Beaty Biodiversity Museum** **UBC**  
*Specimen preparation for museum demonstration and research purpose* *Sep.2018 – present*
- **Member of UBC Birding Club** **UBC**  
*Participate events for birding* *Dec.2017 – Nov.2019*
- **Member of Christmas Bird Counting** **National Audubon Society**  
*Collect avian population data for use in conservation biology* *Dec.2017 – Dec.2019*
- **Volunteer for Modules in Ecology and Evolution Development** **UBC**  
*Deliver lectures for grade 3 students about scientific research topics* *Mar.2019 – May.2019*
- **Volunteer in NTU Herbarium** **NTU**  
*Introduce herbarium to public on weekends* *Mar.2015 – Mar.2016*

### CREDENTIALS

- **Advanced Open Water Diving Certificate** PADI
- **Lifeguard License** Chinese Taipei Water Life Saving Association
- **Wilderness First Aid Certificate** Canadian Red Cross
- **Standard First Aid CPR-C/AED Certificate** Canadian Red Cross