

YI-CHIN TSENG (SUNNY)

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EDUCATION

- **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, 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

JOURNAL ARTICLES.....

- Tseng, Y.-C., Ko, J.C.-J, Cheng, A.-Y., and Chen, W.-J. **2022** Modelling avian altitudinal migration using citizen science data. *Avian Conservation and Ecology*. (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. **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.....

- **Joint conference of the Society of Canadian Ornithologists and American Ornithological Society 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.....

- **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.....

- **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. *May. 2020*

RECOGNITIONS

SCHOLARSHIPS and RESEARCH GRANT.....

- **Graduate Entrance Research Scholarship** **UNBC**
High academic performance for new graduate student *Jan.2021*
15,000 CAD
- **Early Career Grant (Upcoming research project)** **National Geographic**
Leading a fieldwork in Siberia Arctic tundra for avian sound recordings *Jun.2020*
5,700 CAD
- **Mary and David Macaree Fellowship** **UBC**
Conducting research in Forestry *Sep.2019*
check
- **VanDusen Graduate Fellowship in Forestry** **UBC**
Faculty of Forestry student in forest resource ecosystems *Feb.2019*
check

<ul style="list-style-type: none"> ○ Hugh Robert Duncan Chisholm Scholarship in Forestry <i>Conducting research in Forestry</i> 230 CAD 	UBC Nov.2018
<ul style="list-style-type: none"> ○ Werner and Hildegard HESSE Fellowship in Ornithology <i>Conducting research in Ornithology</i> 13,500 CAD 	UBC Oct.2018
<ul style="list-style-type: none"> ○ Pei-Huang Tung and Tan-Wen Tung Graduate Fellowship <i>Taiwanese students pursuing higher education in Canada</i> 2,500 CAD 	UBC Oct.2018
<ul style="list-style-type: none"> ○ Mary and David Macaree Fellowship <i>Students in Faculty of Forestry studying forest resource ecosystems</i> 2,700 CAD 	UBC Sep.2018
<ul style="list-style-type: none"> ○ BA Blackwell & Associates Scholarship in Fire Science <i>Conducting research about forest fire ecology</i> 1,000 CAD 	BA Blackwell & Associates Aug.2018
<ul style="list-style-type: none"> ○ Soundscape and Sound Research Scholarship <i>Soundscape or sound associated research</i> 10,000 TWD 	SAT Feb.2018
<ul style="list-style-type: none"> ○ Faculty of Forestry Strategic Recruitment Fellowships <i>Top 20% ranked student</i> 12,000 CAD 	UBC Sep.2017
<ul style="list-style-type: none"> ○ Arctic Research Cooperation Scholarship <i>Selected researcher for Arctic research project</i> 100,000 TWD 	TEEDF Apr.2017
<ul style="list-style-type: none"> ○ College Student Research Scholarship <i>Excellent research proposal</i> 20,000 TWD 	MOST Jun.2016
<ul style="list-style-type: none"> ○ Alumnus scholarship in NTU Physics <i>3 awardees per year for outstanding academic achievement</i> 1,000 TWD 	NTU Dec.2015
<ul style="list-style-type: none"> ○ Outstanding College Student Scholarship <i>Scholarship for outstanding female students</i> 80,000 TWD 	The international Women's Educational Foundation Sep.2012

AWARDS.....	
<ul style="list-style-type: none"> ○ Outstanding Oral Presentation Award <i>Outstanding oral presentations in Congress of Animal Behavior and Ecology</i> 	CABE Feb.2021
<ul style="list-style-type: none"> ○ Master of Data Science TA Award <i>Best TAs in Master of Data Science program of the academic year</i> 	UBC Jun.2019
<ul style="list-style-type: none"> ○ 3 Minute Thesis Award <i>First place of 3MT competition in UBC Faculty of Forestry</i> 	UBC Feb.2019
<ul style="list-style-type: none"> ○ College Student Research Creativity Award <i>Top 5% ranked research report</i> 	MOST Aug.2017
<ul style="list-style-type: none"> ○ Outstanding Poster and Presentation Award <i>Ranked 1, out of 14 groups, in physics department poster competition</i> 	NTU Apr.2016
<ul style="list-style-type: none"> ○ President Award <i>Top 5% ranked student in the semester</i> 	NTU Jan.2016

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** **NTU**
Undergraduate Research Project (Funded by MOST) *Sep.2015 – Feb.2017*
Instructor: Biing T. Guan

- **Detection of Chlorophyll Fluorescence Dynamics from a Single Chloroplast** **NTU**
Undergraduate Research Project (Funded by MOST) *Mar.2015 – Nov.2016*
Instructor: Shi-Wei Chu

- **Bayesian Statistic Modeling** **Freie Universität Berlin**
Short-Term Research Program *Jul.2016 – Aug.2016*
Instructor: Stavros Veresoglou

- **Der Mogel – Bird Song Identification System ([link](#))** **NTU**
Bachelor Thesis *Feb.2016 – Jun.2016*
Instructor: Tzeng-Yih Lam

* 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

WORK EXPERIENCE

WORKSHOP and TUTOR.....

- **Data Wrangling with R: introduction of tidyverse** **UNBC**
Host: Applied Analysis Hub *Mar.2022*
- **Data Wrangling with R (4 lectures)** **Endemic Species Research Institute**
Host: Jerome Ko *May.2021 – Jul.2021*
- **Recording Techniques for Breeding Birds Survey (6 lectures)** **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*

DATA ANALYST.....

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

TEACHING ASSISTANT.....

- **TA for Applied Analysis Hub** **UNBC**
Supervisor: Eduardo Martins, Heather Bryan *Sep.2021 – present*
- **TA for Data Wrangling** **UBC**
Instructor: Tiffany Timbers, Tomas Beuzen *2019 fall*
- **TA for Descriptive Statistics and Probability for Data Science** **UBC**
Instructor: Mike Gelbart (2018), Vincenzo Coia (2019) *2018 fall, 2019 fall*
Hold review sessions, attend labs, office hours
- **TA for Regression I, Regression II** **UBC**
Instructor: Gabriela Cohen Freue (I), Vincenzo Coia (II) *2019 spring, 2019 fall*
Deliver guest lectures, attend labs with topics covering generalized linear models, mixed effect models
- **TA for Feature and Model Selection** **UBC**
Instructor: Mark Schmidt, Varada Kolhatkar *2019 spring*
Attend labs for supervised/unsupervised machine learning, office hours
- **TA for Advanced Biometrics** **UBC**
Instructor: Bianca Eskelson *2018 fall*
Attend labs, office hours

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 – Apr.2019*
- **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