

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. **2023** 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. **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](#))

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. Aug. 2020

CONFERENCE TALK.....

- **International Ornithological Congress** **Virtual**
"Modelling avian altitudinal migration using citizen science data" Aug.2022
- **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

RECOGNITIONS

SCHOLARSHIPS and RESEARCH GRANT.....

- **Susan Stevenson Memorial Award** **UNBC**
Excellence academic performance Nov.2022
1,500 CAD
- **CUPE Local 3799 Annual Bursary** **UNBC**
Excellence academic performance Sep.2022
1,000 CAD

<ul style="list-style-type: none"> ○ Mitacs Accelerate Fellowship <i>A long-term funding and internship option for PhD students in Canada</i> 30,000 CAD 	MITACS <i>Jun.2022</i>
<ul style="list-style-type: none"> ○ Graduate Entrance Research Scholarship <i>High academic performance for new graduate student</i> 15,000 CAD 	UNBC <i>Jan.2021</i>
<ul style="list-style-type: none"> ○ Early Career Grant (Upcoming research project) <i>Leading a fieldwork in Siberia Arctic tundra for avian sound recordings</i> 5,700 CAD 	National Geographic <i>Jun.2020</i>
<ul style="list-style-type: none"> ○ Mary and David Macaree Fellowship <i>Conducting research in Forestry</i> check 	UBC <i>Sep.2019</i>
<ul style="list-style-type: none"> ○ VanDusen Graduate Fellowship in Forestry <i>Faculty of Forestry student in forest resource ecosystems</i> check 	UBC <i>Feb.2019</i>
<ul style="list-style-type: none"> ○ Hugh Robert Duncan Chisholm Scholarship in Forestry <i>Conducting research in Forestry</i> 230 CAD 	UBC <i>Nov.2018</i>
<ul style="list-style-type: none"> ○ Werner and Hildegard HESSE Fellowship in Ornithology <i>Conducting research in Ornithology</i> 13,500 CAD 	UBC <i>Oct.2018</i>
<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 <i>Oct.2018</i>
<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 <i>Sep.2018</i>
<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 <i>Aug.2018</i>
<ul style="list-style-type: none"> ○ Soundscape and Sound Research Scholarship <i>Soundscape or sound associated research</i> 10,000 TWD 	SAT <i>Feb.2018</i>
<ul style="list-style-type: none"> ○ Faculty of Forestry Strategic Recruitment Fellowships <i>Top 20% ranked student</i> 12,000 CAD 	UBC <i>Sep.2017</i>
<ul style="list-style-type: none"> ○ Arctic Research Cooperation Scholarship <i>Selected researcher for Arctic research project</i> 100,000 TWD 	TEEDF <i>Apr.2017</i>
<ul style="list-style-type: none"> ○ College Student Research Scholarship <i>Excellent research proposal</i> 20,000 TWD 	MOST <i>Jun.2016</i>
<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 <i>Dec.2015</i>
<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 <i>Sep.2012</i>

AWARDS

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

ACADEMIC EXPERIENCE

- **Avian Biodiversity Assessment with Passive Acoustic Monitoring** **UNBC**
Aug.2021 – present
PhD thesis
Supervisor: Ken Otter
- **Predicting Avian Population Trends Using Citizen Science Data** **Endemic Species Research Institute**
Mar.2020 – Jul.2021
Research Project
Principal Investigator: Wan-Jyun Chen, Jerome Ko
- **Automatic Bird Sound Detection by Logistic Regression** **UBC**
Jan.2018 – Nov.2019
Master Thesis (Funded by SAT)
Supervisor: Valerie LeMay, Bianca N.I. Eskelson, Kathy Martin
- **Relationships Between Successive Forest Fires** **UBC**
Sep.2017 – Nov.2019
Master Thesis (Funded by NSERC)
Supervisor: Bianca N.I. Eskelson, Nicholas Coops, Kathy Martin
- **Seasonal Variation of Bird Sound in Sakha Republic** **Russian Academy of Science**
Apr.2017 – Aug.2017
Arctic Research Cooperation (Funded by TEEDF)
Instructor: Sergei Sleptsov
- **Correlation Analysis of Tree Ring Characteristics** **NTU**
Sep.2015 – Feb.2017
Undergraduate Research Project (Funded by MOST)
Instructor: Biing T. Guan
- **Detection of Chlorophyll Fluorescence Dynamics from a Single Chloroplast** **NTU**
Mar.2015 – Nov.2016
Undergraduate Research Project (Funded by MOST)
Instructor: Shi-Wei Chu
- **Bayesian Statistic Modeling** **Freie Universität Berlin**
Jul.2016 – Aug.2016
Short-Term Research Program
Instructor: Stavros Veresoglou

○ **Der Mogel – Bird Song Identification System ([link](#))**
Bachelor Thesis

Instructor: Tzeng-Yih Lam

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

WORK EXPERIENCE

WORKSHOP and TUTOR.....

- **Data Wrangling with R (1 lecture semester)** **UNBC**
Host: Applied Analysis Hub *Mar.2022 – present*
- **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.....

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|---|---------------------------------|
| <ul style="list-style-type: none">○ Volunteer in UBC Beaty Biodiversity Museum | UBC |
| <ul style="list-style-type: none"><i>Specimen preparation for museum demonstration and research purpose</i> | <i>Sep.2018 – Apr.2019</i> |
| <ul style="list-style-type: none">○ Member of UBC Birding Club | UBC |
| <ul style="list-style-type: none"><i>Participate events for birding</i> | <i>Dec.2017 – Nov.2019</i> |
| <ul style="list-style-type: none">○ Member of Christmas Bird Counting | National Audubon Society |
| <ul style="list-style-type: none"><i>Collect avian population data for use in conservation biology</i> | <i>Dec.2017 – Dec.2019</i> |
| <ul style="list-style-type: none">○ Volunteer for Modules in Ecology and Evolution Development | UBC |
| <ul style="list-style-type: none"><i>Deliver lectures for grade 3 students about scientific research topics</i> | <i>Mar.2019 – May.2019</i> |
| <ul style="list-style-type: none">○ Volunteer in NTU Herbarium | NTU |
| <ul style="list-style-type: none"><i>Introduce herbarium to public on weekends</i> | <i>Mar.2015 – Mar.2016</i> |

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