

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, 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

JOURNAL ARTICLES.....

- Tseng, S., Hodder, D., and Otter, K. **2024** Using Autonomous Recording Units for Vocal Individuality: Insights from Barred Owl Identification. *Avian Conservation and Ecology*. (In Review)
- 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.....

- **2024**. Why do we band birds at all? *Nature Conservation Quarterly*, 124. ([link](#))
- **2023**. Nest boxes for barn owl conservation. *Nature Conservation Quarterly*, 122. ([link](#))
- **2023**. When beaver dam collapses. *Nature Conservation Quarterly*, 121. ([link](#))
- **2023**. Listening to the whispers of the wings. *Discovery*, 50(1):85-90. ([link](#))
- **2022**. Hey, there are wild black bears in my backyard. *Nature Conservation Quarterly*, 117. ([link](#))
- **2021**. Avian field recordings (II). *Feathers*, 301:22-27. ([link](#))
- **2021**. Avian field recordings (I). *Feathers*, 300:38-41. ([link](#))

- **2019.** Apply statistics on bird "listening". *Discovery*, 47(1):21-22. ([link](#))
- **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

WORK EXPERIENCE

INFOGRAPHIC DESIGNER.....

FIELD RECORDIST.....

- Recordist for Xeno-Canto ([profile](#)) **Xeno-Canto**
 - Include around 300 species of birds around the world. Jul.2017 – present

DATA ANALYST.....

- Birds Canada **Langley, Canada**
 - Supervisor: David Bradley Jan.2024 – Mar.2024
- 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 and TEACHING ASSISTANT.....

- Advanced Statistical Analyses for Natural Resource Sciences **UNBC**
 - Instructor, Co-instructor: Lisa Koetke Sep.2023 - Dec.2023
- Applied Analysis Hub **UNBC**
 - TA, Instructor: Eduardo Martins, Heather Bryan Sep.2021 – present
- Data Wrangling **UBC**
 - TA, Instructor: Tiffany Timbers, Tomas Beuzen 2019 fall
- Descriptive Statistics and Probability for Data Science **UBC**
 - TA, Instructor: Mike Gelbart (2018), Vincenzo Coia (2019) 2018 fall, 2019 fall
- Regression I, Regression II **UBC**
 - TA, Instructor: Gabriela Cohen Freue (I), Vincenzo Coia (II) 2019 spring, 2019 fall
- Feature and Model Selection **UBC**
 - TA, Instructor: Mark Schmidt, Varada Kolhatkar 2019 spring
- Advanced Biometrics **UBC**
 - TA, Instructor: Bianca Eskelson 2018 fall

WORKSHOPS, TALKS and INTERVIEWS.....

- Machine Learning Advances in Ornithology Research **Nature Vancouver**
 - Host: Nature Vancouver Nov.2023
- From Taiwan to Arctic Tundra - the bird as a bridge ([storytelling](#)) **AOS annual meeting**
 - Host: American Ornithology Society annual meeting storytelling event Aug.2023
- 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
- A Person Who Collects Sounds ([interview](#)) **Fuyu Life**
 - Field recordist - a beautiful way to study Nature. Jan.2022

<ul style="list-style-type: none"> Each Sound Recording Represents a Profound Story (interview) 	Canopy Life
<ul style="list-style-type: none"> Interview of a field recordist. 	Jun.2021
<ul style="list-style-type: none"> The Siberian Crane: From Taiwan to Tundra (interview) 	Bird Note
<ul style="list-style-type: none"> A bird gets blown off course and inspires a young researcher to spread her own wings — in Siberia. 	May.2021
<ul style="list-style-type: none"> Data Wrangling with R (4 sessions) 	Endemic Species Research Institute
<ul style="list-style-type: none"> Host: Jerome Ko 	May.2021 – Jul.2021
<ul style="list-style-type: none"> Recording Techniques for Breeding Birds Survey (6 sessions) 	Endemic Species Research Institute
<ul style="list-style-type: none"> Host: Luna Fan 	Dec.2020 – Mar.2021
<ul style="list-style-type: none"> Sharing the Sounds of Nature (interview) 	National Education Radio
<ul style="list-style-type: none"> Interview with a scholar in bioacoustics. 	Aug. 2020
<ul style="list-style-type: none"> Automatic bird sound detection: ARU data analysis 	Canadian Wildlife Service
<ul style="list-style-type: none"> Host: Kathy Martin 	Oct.2018
<ul style="list-style-type: none"> Statistical Analysis in Ecology (5 sessions) 	UBC
<ul style="list-style-type: none"> Host: Trevor Gareth Jones 	Jan.2018 – Apr.2018

RECOGNITIONS

SCHOLARSHIPS and RESEARCH GRANT.....

<ul style="list-style-type: none"> rOpenSci Championship Program 	rOpenSci
<ul style="list-style-type: none"> Outstanding proposal for R package development. 	Jan.2024
1,000 CAD	
<ul style="list-style-type: none"> Canada Graduate Scholarship - Doctorial (CGS-D) 	NSERC
<ul style="list-style-type: none"> Rewarding and retaining high-calibre doctoral students at Canadian institutions. 	Apr.2023
105,000 CAD	
<ul style="list-style-type: none"> Susan Stevenson Memorial Award 	UNBC
<ul style="list-style-type: none"> Excellence academic performance 	Nov.2022
1,500 CAD	
<ul style="list-style-type: none"> CUPE Local 3799 Annual Bursary 	UNBC
<ul style="list-style-type: none"> Excellence academic performance 	Sep.2022
1,000 CAD	
<ul style="list-style-type: none"> Mitacs Accelerate Fellowship 	MITACS
<ul style="list-style-type: none"> A long-term funding and internship option for PhD students in Canada 	Jun.2022
90,000 CAD	
<ul style="list-style-type: none"> Graduate Entrance Research Scholarship 	UNBC
<ul style="list-style-type: none"> High academic performance for new graduate student 	Jan.2021
25,000 CAD	
<ul style="list-style-type: none"> Early Career Grant (Upcoming research project) 	National Geographic
<ul style="list-style-type: none"> Leading a fieldwork in Siberia Arctic tundra for avian sound recordings 	Jun.2020
5,700 CAD	
<ul style="list-style-type: none"> Mary and David Macaree Fellowship 	UBC
<ul style="list-style-type: none"> Conducting research in Forestry 	Sep.2019
check	
<ul style="list-style-type: none"> VanDusen Graduate Fellowship in Forestry 	UBC
<ul style="list-style-type: none"> Faculty of Forestry student in forest resource ecosystems 	Feb.2019
check	
<ul style="list-style-type: none"> Hugh Robert Duncan Chisholm Scholarship in Forestry 	UBC
<ul style="list-style-type: none"> Conducting research in Forestry 	Nov.2018
230 CAD	

<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.....

<ul style="list-style-type: none"> ○ Best Student Presentation Award <i>Best student oral presentation in The Wildlife Society conference</i> 	BC & CAN TWS <i>Mar.2023</i>
<ul style="list-style-type: none"> ○ Student Travel Award <i>Outstanding proposal in The Wildlife Society conference</i> 	BC & CAN TWS <i>Mar.2023</i>
<ul style="list-style-type: none"> ○ 3 Minute Thesis Award <i>1st place & people's choice of UNBC 3MT competition</i> 	UNBC <i>Feb.2023</i>
<ul style="list-style-type: none"> ○ Teaching Excellence Award <i>Outstanding teaching performance as a teaching assistant</i> 	UNBC <i>Sep.2022</i>
<ul style="list-style-type: none"> ○ Outstanding Oral Presentation Award <i>Outstanding oral presentations in Congress of Animal Behavior and Ecology</i> 	CABE <i>Feb.2021</i>
<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 <i>Jun.2019</i>
<ul style="list-style-type: none"> ○ 3 Minute Thesis Award <i>First place of 3MT competition in UBC Faculty of Forestry</i> 	UBC <i>Feb.2019</i>
<ul style="list-style-type: none"> ○ College Student Research Creativity Award <i>Top 5% ranked research report</i> 	MOST <i>Aug.2017</i>

- Outstanding Poster and Presentation Award**
Ranked 1, out of 14 groups, in physics department poster competition

NTU
Apr.2016
- President Award**
Top 5% ranked student in the semester

NTU
Jan.2016

ACADEMIC EXPERIENCE

- Avian Biodiversity Assessment with Passive Acoustic Monitoring**
PhD thesis
Supervisor: Ken Otter

UNBC
Aug.2021 – present
- Predicting Avian Population Trends Using Citizen Science Data**
Research Project
Principal Investigator: Wan-Jyun Chen, Jerome Ko

Endemic Species Research Institute
Mar.2020 – Jul.2021
- Automatic Bird Sound Detection by Logistic Regression**
Master Thesis (Funded by SAT)
Supervisor: Valerie LeMay, Bianca N.I. Eskelson, Kathy Martin

UBC
Jan.2018 – Nov.2019
- Relationships Between Successive Forest Fires**
Master Thesis (Funded by NSERC)
Supervisor: Bianca N.I. Eskelson, Nicholas Coops, Kathy Martin

UBC
Sep.2017 – Nov.2019
- Seasonal Variation of Bird Sound in Sakha Republic**
Arctic Research Cooperation (Funded by TEEDF)
Instructor: Sergei Sleptsov

Russian Academy of Science
Apr.2017 – Aug.2017
- Correlation Analysis of Tree Ring Characteristics**
Undergraduate Research Project (Funded by MOST)
Instructor: Biing T. Guan

NTU
Sep.2015 – Feb.2017
- Detection of Chlorophyll Fluorescence Dynamics from a Single Chloroplast**
Undergraduate Research Project (Funded by MOST)
Instructor: Shi-Wei Chu

NTU
Mar.2015 – Nov.2016
- Bayesian Statistic Modeling**
Short-Term Research Program
Instructor: Stavros Veresoglou

Freie Universität Berlin
Jul.2016 – Aug.2016
- 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

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