

YI-CHIN TSENG (SUNNY)

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EDUCATION

- **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

Courses taken: Advanced Biometrics (A+), Technical Communication Skills (A+), Multiple Regression Methods (A+), Ornithology (A), Advanced Remote Sensing (A+)

Online courses: Deep Learning in Python, Convolutional Neural Networks for Image Processing, Probability Theory and Mathematical Statistics
- **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

ARTICLES.....

- Tseng, Y.-C., and Eskelson, B.N.I. **2020** Previous fire severity enhances reburn severity: a case study in interior British Columbia, Canada. *Journal of Ecosystem and Management*. (In Preparation)
- Tseng, Y.-C., Eskelson, B.N.I., Martin, K., and LeMay, V. **2020**. Automatic bird sound detection: Logistic model based acoustic occupancy model. *Bioacoustics*. (In Press)
- 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**. Innovative and conventional modelling for avian acoustic and fire severity analyses. *UBC Theses and Dissertations*. ([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](#))

XENO-CANTO.....

- **Recordist for Xeno-Canto ([profile](#))** **Xeno-Canto**
○ *One of my recordings for Siberian Crane was selected as [spotlight](#).* *Jul.2017 – present*

CONFERENCE TALK.....

- **Congress of Animal Behavior and Ecology** **Penghu, Taiwan**
○ *"Automatic bird sound detection: ARU data analysis"* *Jan.2020*

- **International Ornithological Congress** **Vancouver, Canada**
Aug.2018
"Automatic bird sound detection: Logistic regression based acoustic occupancy model"
- **International Forestry Students' Symposium** **Manila, Philippines**
Aug.2015
"Chlorophyll fluorescence: A powerful tool for photobiology research"

CONFERENCE POSTER.....

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

ACADEMIC EXPERIENCE

- **Automatic Bird Sound Detection by Logistic Regression** **UBC**
Jan.2018 – Nov.2019
Master Thesis (Funded by SAT)
Instructor: Valerie LeMay, Bianca N.I. Eskelson, Kathy Martin
- **Relationships between successive forest fires** **UBC**
Sep.2017 – Nov.2019
Master Thesis (Funded by NSERC)
Instructor: 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](#))** **NTU**
Feb.2016 – Jun.2016
Bachelor Thesis
Instructor: Tzeng-Yih Lam

- * SAT: Soundscape Association of Taiwan
- * MOST: Ministry Of Science and Technology
- * NSERC: Natural Sciences and Engineering Research Council
- * TEEDF: Taiwan Ecological Engineering Development Foundation

- * UBC: University of British Columbia
- * NTU: National Taiwan University

RECOGNITIONS

SCHOLARSHIPS and RESEARCH GRANT

<ul style="list-style-type: none"> Early Career Grant (Upcoming research project) 	National Geographic
<ul style="list-style-type: none"> A grant for leading a fieldwork in Siberia Arctic tundra for avian sound recordings 	Jun.2020
<ul style="list-style-type: none"> Mary and David Macaree Fellowship 	UBC
<ul style="list-style-type: none"> Fellowship for conducting research in Forestry 	Sep.2019
<ul style="list-style-type: none"> VanDusen Graduate Fellowship in Forestry 	UBC
<ul style="list-style-type: none"> Fellowship for students in Faculty of Forestry studying forest resource ecosystems 	Feb.2019
<ul style="list-style-type: none"> Hugh Robert Duncan Chisholm Scholarship in Forestry 	UBC
<ul style="list-style-type: none"> Scholarship for conducting research in Forestry 	Nov.2018
<ul style="list-style-type: none"> Werner and Hildegard HESSE Fellowship in Ornithology 	UBC
<ul style="list-style-type: none"> Fellowship for conducting research in Ornithology 	Oct.2018
<ul style="list-style-type: none"> Pei-Huang Tung and Tan-Wen Tung Graduate Fellowship 	UBC
<ul style="list-style-type: none"> Fellowship for Taiwanese students pursuing higher education in Canada 	Oct.2018
<ul style="list-style-type: none"> Mary and David Macaree Fellowship 	UBC
<ul style="list-style-type: none"> Fellowship for students in Faculty of Forestry studying forest resource ecosystems 	Sep.2018
<ul style="list-style-type: none"> BA Blackwell & Associates Scholarship in Fire Science 	BA Blackwell & Associates
<ul style="list-style-type: none"> Scholarship for students conducting research about forest fire ecology 	Aug.2018
<ul style="list-style-type: none"> Soundscape and Sound Research Scholarship 	SAT
<ul style="list-style-type: none"> Scholarship for soundscape or sound associated research 	Feb.2018
<ul style="list-style-type: none"> Faculty of Forestry Strategic Recruitment Fellowships 	UBC
<ul style="list-style-type: none"> Top 20% ranked student in each of the last two years of full time study 	Sep.2017
<ul style="list-style-type: none"> Arctic Research Cooperation Scholarship 	TEEDF
<ul style="list-style-type: none"> Selected researcher for Arctic research project 	Apr.2017
<ul style="list-style-type: none"> College Student Research Scholarship 	MOST
<ul style="list-style-type: none"> Excellent research proposal 	Jun.2016
<ul style="list-style-type: none"> Alumnus scholarship in NTU Physics 	NTU
<ul style="list-style-type: none"> 3 awardees per year for outstanding academic achievement 	Dec.2015

AWARDS

<ul style="list-style-type: none"> Master of Data Science TA Award 	UBC
<ul style="list-style-type: none"> Best TAs in Master of Data Science program of the academic year 	Jun.2019
<ul style="list-style-type: none"> 3 Minute Thesis Award 	UBC
<ul style="list-style-type: none"> First place of 3MT competition in UBC Faculty of Forestry 	Feb.2019
<ul style="list-style-type: none"> International Tuition Award 	UBC
<ul style="list-style-type: none"> International graduate student registered full-time in research-oriented master's programs 	Sep.2017
<ul style="list-style-type: none"> College Student Research Creativity Award 	MOST
<ul style="list-style-type: none"> Top 5% ranked research report 	Aug.2017
<ul style="list-style-type: none"> Outstanding Poster and Presentation Award 	NTU
<ul style="list-style-type: none"> Ranked 1, out of 14 groups, in physics department poster competition 	Apr.2016
<ul style="list-style-type: none"> President Award 	NTU
<ul style="list-style-type: none"> Top 5% ranked student in the semester 	Jan.2016

TEACHING ASSISTANT

- **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
- **Regression II** **UBC**
Instructor: Vincenzo Coia *2019 spring*
Deliver guest lectures, attend labs with topics covering generalized linear models, mixed effect models
- **Feature and Model Selection** **UBC**
Instructor: Mark Schmidt, Varada Kolhatkar *2019 spring*
Attend labs for supervised/unsupervised machine learning, office hours
- **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*
- **Volunteer in ELIV Social Enterprise** **Cambodia**
Help Cambodia local residents build houses, restrooms and provide health education. *Aug. 2013*

CREDENTIALS.....

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