

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

Course 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 (4.16/4.3 unconverted)
Physics GPA: 3.40/4.0 (3.48/4.3 unconverted)
Cumulative GPA: 3.65/4.0 (3.76/4.3 unconverted)

PUBLICATION

ARTICLES.....

- Tseng, Y.-C., Eskelson, B.N.I., Martin, K., and LeMay, V. **2020**. Automatic bird sound detection: Logistic model based acoustic occupancy model. *Bioacoustics*. (Submitted)
- 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.....

- **(Upcoming) Congress of Animal Behavior and Ecology** **Penghu, Taiwan**
Yi-Chin Tseng, Bianca N.I. Eskelson, Kathy Martin, and Valerie LeMay *Jan.2020*
"Automatic bird sound detection: Logistic regression based acoustic occupancy model"
- **Canadian Wildlife Service Methods Seminar** **Vancouver, Canada**
Yi-Chin Tseng, Bianca N.I. Eskelson, and Kathy Martin *Oct.2018*
"Automatic bird sound detection: ARU data analysis"
- **International Ornithological Congress** **Vancouver, Canada**
Yi-Chin Tseng, Bianca N.I. Eskelson, and Kathy Martin *Aug.2018*

"Automatic bird sound detection: Logistic regression based acoustic occupancy model"

International Forestry Students' Symposium

Manila, Philippines

Aug.2015

○ *Yi-Chin Tseng, Shi-Wei Chu*

"Chlorophyll fluorescence: A powerful tool for photobiology research"

CONFERENCE POSTER

Annual meeting of Ecological Society of America

Louisville, USA

Aug.2019

○ *Yi-Chin Tseng, Bianca Eskelson*

"Relationships between successive forest fires: A case study in central interior BC, Canada"

Annual Meeting of Soundscape Association

Taipei, Taiwan

Jun.2018

○ *Yi-Chin Tseng, Bianca Eskelson*

"Automatic bird sound detection: Logistic regression based acoustic occupancy model"

Focus On Microscopy

Bordeaux, France

Apr.2017

○ *Yi-Chin Tseng, Shi-Wei Chu*

"High spatio-temporal-resolution detection of chlorophyll fluorescence from a single chloroplast with confocal imaging fluorometer"

ACADEMIC EXPERIENCE

Automatic Bird Sound Detection by Logistic Regression

UBC

Jan.2018 – present

○ **Master Thesis (Funded by SAT)**

Instructor: Valerie LeMay, Bianca N.I. Eskelson, Kathy Martin

Relationships between successive forest fires

UBC

Sep.2017 – present

○ **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"> 5,000 USD, A grant for leading sound recording fieldwork in Siberia Arctic tundra 	Jun.2020
<ul style="list-style-type: none"> Mary and David Macaree Fellowship 	UBC
<ul style="list-style-type: none"> 3,500 CAD, 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"> 500 CAD, 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"> 230 CAD, 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"> 13,500 CAD, 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"> 2,500 CAD, 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"> 2,700 CAD, 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"> 1,000 CAD, 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"> 500 CAD, 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"> 12,000 CAD, 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"> 6,500 CAD, 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"> 1,000 CAD, Excellent research proposal. 	Jun.2016
<ul style="list-style-type: none"> Alumnus scholarship in NTU Physics 	NTU
<ul style="list-style-type: none"> 3,000 CAD, 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"> 100 CAD, 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"> 250 CAD, 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"> 8,530 CAD, 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"> 1,000 CAD, 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"> 100 CAD, 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"> 100 CAD, 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.....

- **Recordist for Xeno-Canto** **Xeno-Canto**
One of my recordings for Siberian Crane was selected as homepage ([profile](#)). Jul.2017 – present
- **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 – present
- **Member of Christmas Bird Counting** **National Audubon Society**
Collect avian population data for use in conservation biology Dec.2017 – present
- **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