

YI-CHIN TSENG

Curriculum Vitae

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Objective National Geographic Earlier Career Grant Application

EDUCATION

- **Master of Science, University of British Columbia** **Vancouver, Canada**
Forest Resources Management *Sep.2017 – present*
Supervisor: Bianca N.I. Eskelson
Committee members: Kathy Martin, Nicholas C. Coops, and Vicente J. Monleon

Course taken: Advanced Biometrics (A+), Technical Communication Skills (A+), Multiple Regression Methods (A+), Ornithology (A), Advanced Remote Sensing (A+)
- **Bachelor of Science, National Taiwan University** **Taipei, Taiwan**
Forestry and Resource Conservation, Department of Physics *Sep.2012 – July.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)

RESEARCH PUBLICATION

JOURNAL ARTICLE.....

- (In Preparation) Tseng, Y.-C., Eskelson, B.N.I., LeMay V., and Martin, K. (2019) Automatic Bird Sound Detection: Logistic Regression Based Acoustic Occupancy Model. *Avian Conservation and Ecology*.
- 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. (doi: [10.1186/s13007-017-0194-2](https://doi.org/10.1186/s13007-017-0194-2))

FIELD RECORDING.....

- **Xeno-Canto: World Wide Bird Sound Recordings Sharing Platform** **Xeno Canto**
Yi-Chin Tseng *Dec.2017*
Total 77 recordings from 26 species from north east Siberia were published in Xeno-Canto. A recording of Siberian Crane was selected as spotlight feature of the website ([profile](#)).

CONFERENCE TALK.....

- **Canadian Wildlife Service Methods Seminar** **Vancouver, Canada**
Yi-Chin Tseng, Bianca N.I. Eskelson, and Kathy Martin *Oct.2018*
"Automatic Bird Sound Detection"
- **Ecology & Evolution Retreat** **Squamish, Canada**
Yi-Chin Tseng, Bianca N.I. Eskelson, and Kathy Martin *Oct.2018*
"Automatic Bird Sound Detection: ARU data analysis"

- International Ornithological Congress**

○ Yi-Chin Tseng, Bianca N.I. Eskelson, and Kathy Martin

"Automatic Bird Sound Detection: Logistic Regression Based Acoustic Occupancy Model"

Vancouver, Canada

Aug.2018
- International Forestry Students' Symposium**

○ Yi-Chin Tseng, Shi-Wei Chu

"Chlorophyll Fluorescence- A Powerful Tool for Photobiology Research"

Manila, Philippines

Aug.2015

CONFERENCE POSTER

- Annual Meeting of Soundscape Association**

○ Yi-Chin Tseng, Bianca Eskelson

"Automatic Bird Sound Detection: Logistic Regression Based Acoustic Occupancy Model"

Taipei, Taiwan

Jun.2018
- Focus On Microscopy**

○ Yi-Chin Tseng, Shi-Wei Chu

"High Spatio-Temporal-Resolution Detection of Chlorophyll Fluorescence from a Single Chloroplast with Confocal Imaging Fluorometer"

Bordeaux, France

Apr.2017

ACADEMIC EXPERIENCE

- Automatic Bird Sound Detection by Logistic Regression**

○ **Master Thesis (Funded by SAT)**

Instructor: Valerie LeMay, Bianca Eskelson, Kathy Martin

UBC

Jan.2018 – present
- Comparison of Fire Severity Assessments Using Remote Sensing Data**

○ **Master Thesis (Funded by NSERC)**

Instructor: Bianca Eskelson, Nicholas Coops, Kathy Martin, and Vicente Monleon

UBC

Sep.2017 – present
- Seasonal Variation of Bird Sound in Sakha Republic**

○ **Arctic Research Cooperation (Funded by TEEDF)**

Instructor: Dr. Sergei Sleptsov

Skills: Field work in tundra, birdsong recording with parabolic microphone, audio signal processing, arranging field work for a group, governmental documents application

Russian Academy of Science

Apr.2017 – Aug.2017
- Correlation Analysis of Tree Ring Characteristics**

○ **Undergraduate Research Project (Funded by MOST)**

Instructor: Dr. Biing T. Guan

Skills: Techniques of dendrochronology (COFECHA, Arstein, time series analysis), Ensemble Empirical Mode Decomposition (EEMD), laboratory techniques for ITRAX wood scanner

NTU

Sep.2015 – Feb.2017
- Detection of Chlorophyll Fluorescence Dynamics from a Single Chloroplast**

○ **Undergraduate Research Project (Funded by MOST)**

Instructor: Dr. Shi-Wei Chu

Skills: Confocal microscopy (HeNe laser manipulate, fluorescence observation, etc.), manuscript writing and submitting

NTU

Mar.2015 – Nov.2016
- Bayesian Statistic Modeling**

○ **Short-Term Research Program**

Instructor: Dr. Stavros Veresoglou

Skills: Bayesian Statistic, Markov chain Monte Carlo, parameters posterior distribution estimation

Freie Universität Berlin

Jul.2016 – Aug.2016
- Der Mogel – Bird Song Identification System**

○ **Bachelor Thesis**

Instructor: Dr. Tzeng-Yih Lam

Skills: Programming with R, GUI construction, pattern matching with Gaussian Mixture Model

Results: Results to be announced as a web application ([link](#))

NTU

Feb.2016 – Jun.2016

- * UBC: University of British Columbia/ * NTU: National Taiwan University
- * NSERC: Natural Sciences and Engineering Research Council/ * SAT: Soundscape Association of Taiwan
- * TEEDF: Taiwan Ecological Engineering Development Foundation
- * MOST: Ministry Of Science and Technology/ * RCEC: Research Center for Environmental Changes

AWARDS and SCHOLARSHIPS

3 Minute Thesis Award	UBC
○ <i>The first place of 3MT competition in Faculty of Forestry</i>	<i>Feb.2019</i>
VanDusen Graduate Fellowship in Forestry	UBC
○	<i>Feb.2019</i>
Early Career Grant	National Geographic
○ <i>Offer young research to design and lead an independent field research project</i>	<i>Nov.2018</i>
Hugh Robert Duncan Chisholm Scholarship in Forestry	UBC
○	<i>Nov.2018</i>
Werner and Hildegard HESSE Fellowship in Ornithology	UBC
○	<i>Oct.2018</i>
Pei-Huang Tung and Tan-Wen Tung Graduate Fellowship	UBC
○	<i>Oct.2018</i>
Mary and David Macaree Fellowship	UBC
○	<i>Sep.2018</i>
BA Blackwell & Associates Scholarship in Fire Science	BA Blackwell & Associates
○	<i>Aug.2018</i>
Soundscape and Sound Research Scholarship	SAT
○ <i>Scholarship for soundscape or sound associated research</i>	<i>Feb.2018</i>
Faculty of Forestry Strategic Recruitment Fellowships	UBC
○ <i>Top 20% ranked student in each of the last two years of full time study</i>	<i>Sep.2017</i>
International Tuition Award	UBC
○ <i>International graduate student registered full-time in research-oriented master's programs</i>	<i>Sep.2017</i>
College Student Research Creativity Award	MOST
○ <i>Top 5% ranked research report.</i>	<i>Aug.2017</i>
Arctic Research Cooperation Scholarship	TEEDF
○ <i>Selected researcher for Arctic research project</i>	<i>Apr.2017</i>
College Student Research Scholarship	MOST
○ <i>Excellent research proposal.</i>	<i>Jun.2016</i>
Outstanding Poster and Presentation Award	NTU
○ <i>Ranked 1 (out of 14 groups) in physics department poster competition</i>	<i>Apr.2016</i>
President Award	NTU
○ <i>Top 5% ranked student in the semester</i>	<i>Jan.2016</i>
Alumnus scholarship in NTU Physics	NTU
○ <i>3 awardees per year for outstanding academic achievement.</i>	<i>Dec.2015</i>

TEACHING EXPERIENCE

- **Teaching Assistant** **UBC**
Regression II *Feb.2019 – Apr.2019*
Conducted guest lecture, attend labs including generalized linear models, mixture models, mixed effect models.
Instructor: Vincenzo Coia
- **Teaching Assistant** **UBC**
Feature and Model Selection *Jan.2019 – Feb.2019*
Mark weekly labs on github platform, attend labs for supervised/unsupervised machine learning.
Instructor: Mark Schmidt, Varada Kolhatkar
- **Teaching Assistant** **UBC**
Descriptive Statistics and Probability for Data Science *Sep.2018 – Oct.2018*
Hold review sessions before exams, attend labs for probability theory.
Instructor: Mike Gelbart
- **Teaching Assistant** **UBC**
Advanced Biometrics *Sep.2018 – Dec.2018*
Mark weekly assignments, attend labs
Instructor: Bianca Eskelson
- **Tutor** **UBC**
GEM540 Review Sessions *Feb.2018*
Hold extra review sessions for MGEM students covering fundamental statistic topics: descriptive statistics, probability distribution, sampling distribution, hypothesis test, and simple/multiple linear regression

OTHER EXPERIENCE

- **Bander** **Vancouver, Canada**
Iona Island Bird Observatory *Sep.2018 – Nov.2018*
Volunteer activity for migration monitoring
- **Leader** **Williams Lake, Canada**
Post-fire Vegetation Measurement *Jun.2018 – Aug.2018*
Principal Investigator: Bianca Eskelson
- **Leader** **Siberia, Russia**
Siberian Tundra Research Team *Jul.2017 – Aug.2017*
Principal Investigator: Sergei Sleptsov

- **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*
- **Member of Walter Gage Toastmasters** **UBC**
Join weekly toastmaster meeting for training public speaking skills. *Sep.2017 – Apr.2018*

- **Wilderness First Aid Certificate** Canadian Red Cross
- **Open Water Diving Certificate** PADI
- **CPR Certificate** The Red Cross Society of Taiwan
- **Lifeguard License** Chinese Taipei Water Life Saving Association