

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, Faculty of Forestry *Sep.2017 – present*
Supervisor: Dr. Bianca Eskelson
Course taken: FRST430 Advanced Biometrics (94%), FRST544 Technical Communication Skills (91%), FRST530 Multiple Regression Methods (93%)
- **Bachelor of Science, National Taiwan University** **Taipei, Taiwan**
Forestry and Resource Conservation, Physics *Sep.2012 – July.2017*
Double Major Student
Supervisor: Biing T. Guan, Tzeng-Yih Lam, 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.....

- Tseng, Y.-C., Eskelson, B.N.I., LeMay V., and Martin, K. (2018) Automatic Bird Sound Detection: Logistic Regression Based Acoustic Occupancy Model. *Avian Conservation and Ecology, In Preparation.*
- 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.....

- **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**
Yi-Chin Tseng, Shi-Wei Chu *Aug.2015*
"Chlorophyll Fluorescence- A Powerful Tool for Photobiology Research"
- **Fran Physical Festival** **Canton, China**
Yi-Chin Tseng, Jen-Yu Liu *Nov.2012*
"Human Physiological Reactions to Temperature"

CONFERENCE POSTER

- **Focus On Microscopy** **Bordeaux, France**
Yi-Chin Tseng, Shi-Wei Chu *Apr.2017*
"High Spatio-Temporal-Resolution Detection of Chlorophyll Fluorescence from a Single Chloroplast with Confocal Imaging Fluorometer"
- **International Workshop on Holography & Biomedical Molecular Imaging** **Yilan, Taiwan**
Yi-Chin Tseng, Shi-Wei Chu *Nov.2016*
"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**
○ **Course Project (Funded by SAT)** *Jan.2018 – present*
Instructor: Dr. Valerie LeMay
- **Comparison of Fire Severity Assessments Using Remote Sensing Data** **UBC**
○ **Master Thesis (Funded by NSERC)** *Sep.2017 – present*
Supervisor: Dr. Bianca Eskelson
- **Seasonal Variation of Bird Sound in Sakha Republic** **Russian Academy of Science**
○ **Arctic Research Cooperation (Funded by TEEDF)** *Apr.2017 – Aug.2017*
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
- **Correlation Analysis of Tree Ring Characteristics** **NTU**
○ **Undergraduate Research Project (Funded by MOST)** *Sep.2015 – Feb.2017*
Supervisor: Dr. Biing T. Guan
Skills: Techniques of dendrochronology (COFECHA, Arstein, time series analysis), Ensemble Empirical Mode Decomposition (EEMD), laboratory techniques for ITRAX wood scanner
- **Detect Chlorophyll Fluorescence from a Single Chloroplast** **NTU**
○ **Undergraduate Research Project (Funded by MOST)** *Mar.2015 – Nov.2016*
Supervisor: Dr. Shi-Wei Chu
Skills: Confocal microscopy (HeNe laser manipulate, fluorescence observation, etc.), manuscript writing and submitting
- **Bayesian Statistic Modeling** **Freie Universität Berlin**
○ **Short-Term Research Program** *Jul.2016 – Aug.2016*
Instructor: Dr. Stavros Veresoglou
Skills: Bayesian Statistic, Markov chain Monte Carlo, parameters posterior distribution estimation
- **Der Mogel – Bird Song Identification System** **NTU**
○ **Course Project** *Feb.2016 – Jun.2016*
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](#))

* 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

<ul style="list-style-type: none"> ○ Soundscape and Sound Research Scholarship <i>Scholarship for soundscape or sound associated research</i> 	SAT <i>Feb.2018</i>
<ul style="list-style-type: none"> ○ Faculty of Forestry Strategic Recruitment Fellowships <i>Top 20% ranked student in each of the last two years of full time study</i> 	UBC <i>Sep.2017</i>
<ul style="list-style-type: none"> ○ International Tuition Award <i>International graduate student registered full-time in research-oriented master's programs</i> 	UBC <i>Sep.2017</i>
<ul style="list-style-type: none"> ○ College Student Research Creativity Award <i>Top 5% ranked research report.</i> 	MOST <i>Aug.2017</i>
<ul style="list-style-type: none"> ○ Arctic Research Cooperation Scholarship <i>Selected researcher for Arctic research project</i> 	TEEDF <i>Apr.2017</i>
<ul style="list-style-type: none"> ○ College Student Research Scholarship <i>Excellent research proposal.</i> 	MOST <i>Jun.2016</i>
<ul style="list-style-type: none"> ○ Outstanding Poster and Presentation Award <i>Ranked 1 (out of 14 groups) in physics department poster competition</i> 	NTU <i>Apr.2016</i>
<ul style="list-style-type: none"> ○ President Award <i>Top 5% ranked student in the semester</i> 	NTU <i>Jan.2016</i>
<ul style="list-style-type: none"> ○ Alumnus scholarship in NTU Physics <i>3 awardees per year for outstanding academic achievement.</i> 	NTU <i>Dec.2015</i>

TEACHING EXPERIENCE

ACADEMIC TEACHING.....

<ul style="list-style-type: none"> ○ Tutor of GEM540 Review Sessions Hold extra review sessions for MGEM students covering fundamental statistic topics: descriptive statistics, probability distribution, sampling distribution, hypothesis test, and simple/multiple linear regression 	UBC <i>Feb.2018</i>
<ul style="list-style-type: none"> ○ Teaching Assistant of Electronics Help maintaining teaching website and dealing with copyright issues of handouts on Open Course Website (OCW) 	NTU <i>Sep.2016 – Feb.2017</i>
<ul style="list-style-type: none"> ○ Teaching Assistant of Forest Environment Practice Lead junior students to measure stream bed profile in Sitou, Taiwan 	NTU <i>Jun.2015</i>

COACH.....

<ul style="list-style-type: none"> ○ Coach of Lifeguard Team Help the organization and teaching of a twenty days lifeguard training 	NTU <i>Sep.2016 – Oct.2016</i>
<ul style="list-style-type: none"> ○ Assistant Coach of Table Tennis Team Teach fundamental skills of table tennis for new members in table tennis team 	NTU <i>Jul.2014 – Jun.2015</i>

SKILLS.....

- **Programing:** R, Python, \LaTeX , MATLAB, Java, Excel (VBA), QGIS
- **Math:** Calculus, Linear Algebra, ODE, Mixture Model, Bayesian Statistics, Generalized Linear Models

OTHER EXPERIENCE

FIELD EXPERIENCE

- **Leader** **Sitou, Taiwan**
○ **Siberian Tundra Research Team** *Jul.2017 – Aug.2017*
Principal Investigator: Dr. Sergei Sleptsov
- **Organizer** **Sitou, Taiwan**
○ **Soil Erosion Research Team** *Sep.2015 – Jul.2017*
Principal Investigator: Dr. Ming-Chieh Chen
Organize fieldwork and lead group members for climate data collection monthly
- **Member** **Wu-Feng & Puli, Taiwan**
○ **Forest Research Group for Setting Quadrats** *Mar. & Jun.2015*
Principal Investigator: Dr. Chyi-Rong Chiou
Set permanent/temporal quadrats and carry out forest census in remote mountain

AFFILIATIONS

- **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 – present*
- **Emcee of International Workshop on Holography & Biomedical Molecular Imaging** **NTU**
Organize 3-days conferences for international participants. *Nov.2016*
- **Lifeguard in Aquatic Service Team** **NTU**
Serve weekly in NTU outdoor swimming pool. *Dec.2015 – Jun.2016*
- **Commentator of NTU Herbarium** **NTU**
Volunteer for introducing herbarium on weekends. *Mar.2015 – Mar.2016*
- **Vice President of Student Association** **NTU Phys**
Organize activities and work on student affairs with team members in physic department. *Jul.2014 – Jul.2015*
- **Team Leader of Department Table Tennis Team** **NTU Phys**
Led the team to win victory in interscholastic Physics Cup and NTU Sciences Cup. *Jul.2014 – Jun.2015*
- **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
- **Open Water Diving Certificate** PADI
- **CPR Certificate** The Red Cross Society of Taiwan
- **Lifeguard License** Chinese Taipei Water Life Saving Association