

# Yaquan Chang

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## EDUCATION

- 2018-Present **MSc.**, University of Copenhagen, Center for Macroecology, Evolution and Climate, University of Copenhagen. Thesis: *Impacts of forest harvesting intensity on forest functional diversity in Europe*. Advisor: Dr. Naia Morueta-Holme
- 2014-2018 **BSc.**, Nanjing Forestry University, College of Biology and the Environment, Ecology. Thesis: *Comparing Balsam Fir Potential Species Distribution in two Distinct Areas of New Brunswick, Canada*. Advisor: Dr. Charles P.-A. Bourque

## RESEARCH EXPERIENCE

- 2019.07-2019.08 Project out of course scope, Project: *LiDAR-derived variables as a proxy for functional diversity of woody plant and response to forest management intensity*
- computing LiDAR-derived metrics
  - Plant identification and forest structure measurement in the field
  - image recognition to measure canopy closure
  - Constructing multivariate linear models to checking how LiDAR-derived and field-derived models explain functional diversity in R
  - Evaluating models based on akaike information criteria weight (AIC)
- 2019.04-2019.06 Group member, Project: *A Statistical and GIS based approach to plan and manage the Giant Hogweed in Vordingborg municipality*
- Checking the colinearity of explanatory variables
  - Constructing species distribution models of Giant Hogweed with General Linear Model (GLM), General Additive Model (GAM), Classification and Regression Trees (CART), and Random Forest (RF) in R
  - Evaluating models based on area under the curve (AUC)
  - Setting field validation points of the model
- 2018.08-2019.04 Research Assistant, Project: *Relating Modelled Habitat Suitability for Abies Balsamea to On the Ground Species Structural Characteristics in Naturally Growing Forests of New Brunswick, Canada*
- Constructing species distribution models with General Linear Model (GLM), General Additive Model (GAM), Classification and Regression Trees (CART), and Random Forest (RF) in R
  - Evaluating models based on area under the curve (AUC)
  - Calculating aboveground biomass and site index in Matlab
  - Relating model results to site characteristics

- 2017.09-2018.05 Visiting Student, University of New Brunswick, completed BSc thesis
- Running Potential Species Distribution (PSD model) in Fortran
  - Calculating radial growth rate & aboveground biomass of balsam fir in Matlab
  - Comparing site characteristics in two areas of New Brunswick
- 2015.05-2017.05 Project Leader, Nanjing Forest University, Project: *Dynamic Evolution of Vegetation in Yangtze River Basin and its Hydrological and Ecological Benefits*
- Running the LPJ-model in Fortran
  - Calculating water use efficiency (WUE) based on net primary production (NPP) & evapotranspiration (ET)
  - Analysing the spatial distribution of WUE in ArcGIS
  - Analysing sensitivity by changing model inputs in Matlab

## PUBLICATIONS and PROFESSIONAL PRESENTATIONS

**Yaquan Chang**, Alfred Figueras Anton, Oriol García Antúnez, Andreas Davidsen, Jens Lindgaard. 2019. How to upgrade current management plans for the invasive species Giant Hogweed in Denmark – a case study from Vordingborg municipality, Zealand. *The Euroleague for Life Sciences (ELLS) Scientific Student Conference*. Uppsala, Sweden (Poster presentation)

**Yaquan Chang**, Charles P.-A. Bourque. Relating modelled habitat suitability for *Abies Balsamea* to on the ground species structural characteristics in naturally growing forests of New Brunswick, Canada, 2019 (In revision)

Haozhou Wang, **Yaquan Chang**, Chuan Li, Qiurong Liu, Min Zhong, Qinxuan Chen. 2017. Analysis of Image Capacity in Resources Survey between Two UAV Photogrammetry Softwares: PIX 4D Mapper and Photoscan. *Gansu Science and Technology*. 33(22): 46-51 (In Chinese)

Haozhou Wang, **Yaquan Chang**, Zenxin Zhang. 04.2016. Yaira Measurement Data Multidimensional Visualization Software. (Software Copywrite. Patent No.: 2016SR178462.; in Chinese)

## TEACHING EXPERIENCE

- Fall 2018 Teaching Assistant, Environmental Education Online Course, Cornell University
- Co-leading a TA project related to Urban Green Spaces
- Fall 2016 Undergraduate Mentor, Nanjing Forestry University

## FELLOWSHIPS, AWARDS, AND HONORS

|         |  |
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| 2019    | Herboms Bog-legat (book grant), University of Copenhagen (1607 DKK)                                  |
| 2018    | 7 <sup>th</sup> Liangxi Merit Award, Chinese Society of Forestry (2000 RMB)                          |
| 2018    | 3+1+1 Scholarship, University of New Brunswick (2000 CAD)  |
| 2017-18 | International Differential Award, University of New Brunswick (7500 CAD)                             |
| 2017    | Special Award of 14th International Junior Forest Contest, Russian Federal Forest Agency             |
| 2016    | Star of Innovation and Creation, College of Biology and the Environment, Nanjing Forestry University |
| 2015-18 | Merit Student, Nanjing Forestry University (3000 RMB in total)                                       |

## PROFESSIONAL CERTIFICATIONS

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| 2016.06 | Urban Environmental Education Certificate, Cornell University |
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## WORKSHOPS AND COURSES

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| 2018.06 | <i>Principles and Applications of Species Distribution Model Summer Course</i> , Peking University <ul style="list-style-type: none"><li>• Modelling, testing, ensemble, and CC projections for SDMs in R</li><li>• Introduction to BIOMOD2 in R</li></ul> |
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## VOLUNTEER SERVICE AND APPOINTMENTS

|                 |  |
|-----------------|--|
| 2019.09-Present | Volunteer editor, Wiley Ecology China Wechat Official account  |
| 2019.01         | Conference Assistant, 13 <sup>th</sup> Annual Danish Water Forum   |
| 2018.06-2018.08 | Volunteer, Inner Mongolia Project, The Nature Conservancy <ul style="list-style-type: none"><li>• Making reviews regarding conservation tillage and soil degradation</li></ul> |
| 2015.02-2016.05 | Volunteer, Yingming Reading Club, Nanjing, Jiangsu <ul style="list-style-type: none"><li>• Providing assistance in organizing workshops</li></ul>                              |

## REFERENCES

|  |  |  |
|--|--|--|
| Naia Morueta-Holme   | Charles P.-A. Bourque, Professor                     | Jiang Jiang, Professor   |
| University of Copenhagen   | University of New Brunswick                          | Nanjing Forestry University  |
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