

CONTACT
INFORMATION

Litton Reaves Hall
175 West Campus Drive
Virginia Tech
Blacksburg, Virginia 24061 USA

E-mail: yebi@vt.edu
WWW: yebigithub.github.io

RESEARCH
INTERESTS

I am a Ph.D. student in animal science at Virginia Tech. My research interests focus on incorporating statistics, machine learning, and bioinformatics into the study of animal and plant genetics in the omics era. I am also interested in the application of computer vision systems for high-throughput phenotyping in precision agriculture.

CURRENT
RESEARCH
PROJECTS**Quantitative Genetics**

- Complex trait prediction using metabolomics and hyperspectral image data in rice
- Rice phenotypic plasticity analysis using a random regression model

Precision Livestock Farming

- Estimate dairy cow body weight and body condition score via automated computer vision systems

EDUCATION

Virginia Polytechnic Institute and State University, Blacksburg, Virginia USA

Ph.D., Animal Sciences, August 2021 - present

- Advisor: Dr. Gota Morota

University of California Davis, Davis, California USA

M.S., Animal Biology, September 2021

- Thesis: “Longitudinal Analysis of CD4 and CD8 T Cell Receptor Repertoires Associated with Newcastle Disease Virus Infection in Layer Birds.”
- Advisor: Dr. Huaijun Zhou
- Committee: Drs. Rodrigo A Gallardo and Charles L. Bevins
- Available at [UC davis Libraries](#).

Chinese Academy of Agricultural Sciences, Beijing, Beijing China

M.S., Animal Nutrition and Feed Science, July 2017

- Thesis: “Effects of Dietary Threonine Level on Traits of Peking Ducks from Hatch to 21 Days.”
- Advisor: Dr. Benhai Xiong
- Committees: Drs. Shuisheng Hou, Jilan Chen, Taozhen Jiang and Yu Chen

Shandong Agricultural University, Taian, Shandong China

B.S., Animal Science, July 2014

- Thesis: “Effect of Rumen Fluid Osmotic Pressure on Absorption of VFAs in Rumen Epithelium of Sheep.”
- Advisor: Dr. Yunliang Jiang

HONOR AND AWARDS

- 2022
 - 27th Summer Institute in Statistical Genetics (SISG) Scholarship, University of Washington, Seattle, WA, July 18-27.
- 2020
 - UC Davis Henry A. Jastro Graduate Research Awards
 - UC Davis Animal Biology Graduate Program Fellowship
- 2016
 - Academic Scholarship of Chinese Academy of Agricultural Sciences
- 2015
 - Academic Scholarship of Chinese Academy of Agricultural Sciences
 - Course Excellence Award of Chinese Academy of Agricultural Sciences
- 2014
 - Academic Scholarship of Chinese Academy of Agricultural Sciences
 - Outstanding Graduate of Shandong Agricultural University
- 2013
 - Excellent Student Scholarship of Shandong Agricultural University
 - Science and Technology Innovation Scholarship of Shandong Agricultural University
- 2012
 - Excellent Student Scholarship of Shandong Agricultural University
- 2011
 - Excellent Student Scholarship of Shandong Agricultural University

PEER REVIEWED RESEARCH JOURNAL ARTICLES

- 2017
 - 5. **Ye Bi**, Xuemei Nan, Shanshan Zheng, Linshu Jiang, Benhai Xiong. Effects of dietary threonine and immune stress on growth performance, carcass trait, serum immune parameters, and intestinal muc2 and NF-kb gene expression in Pekin ducks from hatch to 21 days. *Poultry Science*, 2017, 97(1): 177-187. doi: [10.3382/ps/pex283](https://doi.org/10.3382/ps/pex283)
 - 4. **Ye Bi**, Hairui Xin, Xiaohua Pan, Benhai Xiong. Effects of dietary threonine level on growth performance, carcass traits, immune function and serum hormone of Peking ducklings. *Chinese Journal of Animal Nutrition*, 2017, 29(6): 1913-1920. doi: [link](#)
 - 3. **Ye Bi**, Xiaohua Pan, Hairui Xin, Benhai Xiong. Research progress of the influence of threonine on poultry nutrition[J]. *China Animal Husbandry and Veterinary Medicine*, 2017, 44(8): 2326-2332. doi: [link](#)
- 2016
 - 2. Hairui Xin, Xiaohua Pan, Liang Yang, **Ye Bi**, Benhai Xiong. Effects of Light Intensity on Performance, Carcass Performance and Meat Quality of Peking Ducks. *Chinese Journal of Animal Nutrition*, 2016, 28(4): 1076-1083. doi: [link](#)
 - 1. Hairui Xin, Xiaohua Pan, **Ye Bi**, Benhai Xiong, Linshu Jiang. Effects of Lighting Regimes on Production Performance, Carcass Performance and Anti-Oxidant Capacity of the Blood in Peking Ducks. *Journal of Integrative Agriculture*, 2016, 49(23): 4638-4645. doi: [link](#)

INTRAMURAL SEMINARS

- 2022
1. **Ye Bi.** Evaluating Dairy Cow Body Condition Scores Using Automated Computer Vision Systems. Department of Animal and Poultry Sciences. Virginia Polytechnic Institute and State University, Blacksburg, VA. May 19.

INVITED PRESENTATIONS

- 2022
1. **Ye Bi.** Evaluating Dairy Cow Body Condition Scores Using Automated Computer Vision Systems. Department of Animal Science. Shandong Agricultural University. Online. July 22.

POSTER

- 2022
2. **Ye Bi.** Development of Automated Computer Vision Systems for Evaluating Dairy Cow Body Weight and Body Condition Scores. ASAS-CSAS 2022 annual meeting, Oklahoma City, Oklahoma. Poster Presentation. June 26-30.
 1. **Ye Bi.** Evaluating Dairy Cow Body Condition Scores Using Automated Computer Vision Systems. Virginia Tech Center for Advanced Innovation in Agriculture (CAIA) Big Event. Poster Presentation. March 28.

PEER REVIEWED CONFERENCE PROCEEDINGS

- 2016
2. **Ye Bi**, Hairui Xin, Benhai Xiong. Effects of dietary threonine level on traits of Peking ducks from hatch to 21 days. *The 12th National Conference about Animal Nutrition of Animal Nutrition Branch of Chinese Association of Animal Science and Veterinary Medicine*. doi: [link](#)
 1. Hairui Xin, **Ye Bi**, Benhai Xiong. Effects of Lighting Regimes on Blood Calcium Phosphate Level and Anti-Oxidant Capacity of the Blood in Peking Ducks. *The 12th National Conference about Animal Nutrition of Animal Nutrition Branch of Chinese Association of Animal Science and Veterinary Medicine*. doi: [link](#)

EDITORIAL ACTIVITIES

Ad Hoc Reviewer

- Number of manuscripts reviewed per journal: Journal of Animal Science (2).

TEACHING

Virginia Polytechnic Institute and State University, Blacksburg, Virginia, USA
Teaching Assistant

- ALS 3104 Animal Breeding and Genetics **Spring/2022**

University of California Davis, Davis, California, USA

Teaching Assistant

- ANS150 Animal Health and Disease **Spring/2020**
- ABI102 Animal Biochemistry and Metabolism **Fall/2019**

ACTIVITY

- Virginia Tech Center for Advanced Innovation in Agriculture(CAIA) Graduate Student Affiliate Group Member **October/2021 - present**
- The 10th National Congress of Animal Nutrition Branch of Chinese Association of Animal Science and Veterinary Medicine (CAAV) and the 12th Animal Nutrition Symposium member **October/2016 - September/2017**
- The XXV World's Poultry Congress member **September/2016 - August/2017**
- The Branch of Animal Information, Chinese Association of Animal Science and Veterinary Medicine the 10th Symposium member **July/2015 - June/2016**

ADDITIONAL TRAINING

- 2022
- Modern Programming in Genome to Phenome, University of California, Davis, CA, August 1-5.
 - 27th Summer Institute in Statistical Genetics (SISG), University of Washington, Seattle, WA, July 18-27.
 - UIUC Spring Workshop: Applied Quantitative Genetics for Plant Breeders, University of Illinois Urbana-Champaign, Urbana, IL, June 1-3.

COMPUTER SKILLS

- Statistics/Numerical computational tools: R, SAS
- Computer vision and image processing: Python, MATLAB
- Content-description languages: \LaTeX
- Operating system: Linux and Mac OS X
- Computer clusters: Slurm workload manager

REFERENCES

Dr. Gota Morota

Associate Professor, School of Animal Sciences

Virginia Polytechnic Institute and State University, Blacksburg, Virginia USA

E-mail: morota@vt.edu

Dr. Huaijun Zhou

Professor, Department of Animal Science

University of California Davis, Davis, California USA

E-mail: hzhou@ucdavis.edu

Dr. Benhai Xiong

Professor, Institute of Animal Science

Chinese Academy of Agricultural Sciences, Beijing, Beijing China

E-mail: xiongbenhai@caas.cn