



Faculty Employment Application

Human Resources
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Tucson, Arizona * 85721-0158

(520) 621-3662 Telephone
(520) 621-8299 TDD (8-5 M-F)

Job Number: 44727	Job Title: Assistant or Associate Professor	Date: Mar 10 2010 10:49AM
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Personal Information

Last Name: Pan	First Name: Yude	Middle Name:	Email Address:			
Address: USDA Forest Service, 11 Campus Blvd	City: Newtown Square	State: PA	Zip Code: 19073	International Postal Code:	Country: USA	
Home Phone:	Cell / Other Phone: 610 283 8285	Contact Number: 610 557 4205				

References

Name:	Institution/Organization	Address	Title:	Phone:	Email Address:
Richard Birdsey	USDA Forest Service	11 Campus Blvd, Newtown Square, PA 19073	Project Leader and Program Manager	(610) 557-4091	rbirdsey@fs.fed.us
Frederick Scatena	University of Pennsylvania	Department of Earth and Environmental Science Hayden Hall, 240 South 33rd Street Philadelphia, PA 19104	Profssor and Chairman	(215) 898-6907	fns@sas.upenn.edu
Jing M. Chen	University of Toronto	Department of Geography and Program in Planning Toronto, Ontario, Canada M5S 1A1	Professor and Fellow of Royal Society of Canada	(416) 978-7085	chenj@geog.utoronto.ca

Other Information

Are you legally authorized to work in the U.S.? Yes
What is your current employment status with the University of Arizona? Not a University of Arizona employee
If you are a current employee enter your Employee Identification Number (EID) in the space to the right. If you never worked for the University, worked as a student, or terminated your employment prior to July of 2001 enter N/A. Note: Please do not

enter hyphens in the EID field. Your 9-digit EID number (Ex: 120001234) may be found by logging into the Employee Link website. Your EID number is located in the "Current Employment" tab. You may also find your EID number on your pay stub. Note: Your Employee ID number is NOT your Social Security Number.

N/A

Supplemental Questions

Where did you first learn about this position?

Other (Enter name below)

Enter the specific name of any referral source, or the code printed on the business card you received from The University of Arizona career fair booth:

the information was forwarded by a colleague

Have you ever been convicted of or plea bargained to a misdemeanor offense?

No

If yes, you must provide criminal conviction information and dates: (*You are responsible for knowing if traffic violations or other citations received were classified as a misdemeanor*).

Have you ever been convicted of or plea bargained to a felony offense?

No

If yes, you must provide criminal conviction information and dates: (*You are responsible for knowing if traffic violations or other citations received were classified as a felony*).

By indicating 'Yes' below, I affirm that my responses above are true, complete and accurate. I understand that if I accept a job offer, I will be asked to give my written consent for the University of Arizona to conduct a check of my criminal conviction history, motor vehicle record, educational credentials and work history.

I further understand that a 'yes' response will not automatically disqualify me from consideration. However, falsifying, misrepresenting, or omitting criminal conviction information on any application document will likely result in a withdrawal of any job offer and termination of any subsequent employment with the University.

Yes, I affirm that my responses above are true, accurate and complete to the best of my knowledge.

Can you perform the essential functions (job duties) of this position with or without accommodation?

Yes

What is your current employment status with The University of Arizona?

Not a University of Arizona employee

If you have never worked for the University or terminated your employment prior to July 2001, please enter N/A in the space to the right. If you are a current, former, or retired UA employee and were issued an EmplID please enter your number in the space to the right. Your EmplID can be found by logging in to UAccess Employee and viewing your paycheck. Please do not enter hyphens in the EmplID field. Note: Your EmplID is not your Social Security Number.

N/A

Agreement

I certify the statements made by me in this application are true and complete to the best of my knowledge and belief and are made in good faith. I understand that any false statement made herein will void this application and any actions based upon it, and I agree to revise this application should any of the information change. I understand that this application and all attachments are the property of The University of Arizona. I authorize The University of Arizona or any of its agents to make reference checks relating to my employment and I also authorize all prior employers to provide full details concerning my past employment. I authorize the University of Arizona to request and obtain records to determine the accuracy of my responses. I understand that employment in certain positions may be conditional upon a background verification including but not limited to criminal records. I certify that I am or will be legally authorized to work in the United States at the time of hire.

BY SIGNING BELOW, I certify that I have read and agree with these statements.

Yude Pan

Applicant's Name

Applicant's Signature

Date

[Close Window](#)

Dr. Connie Woodhouse
Chair of Search Committee
Institute of the Environment
The University of Arizona
March 9, 2010

Dear Search Committee:

I am writing to express my great interest in the position for Forests in the Earth System at the

University of Arizona. I am currently a Research Ecologist with the Northern Global Change

Program of the USDA Forest Service. However, I have been looking for opportunities to direct

my career to a university because I enjoy teaching and working with students in addition to my

beloved research. This aspiration is particularly strengthened after spending two years at

Princeton University as a visiting research scholar for developing the collaborative projects

between the USFS Northern Global Change Program and Princeton Environmental Institute.

With my strong quantitative and modeling background, my research experiences in climate

change, forest growth (including dendrochronology) and carbon dynamics, I hope you will find I

am an appropriate candidate for the position.

I received my B.S. degree in Mathematics at the Oceanography University of China, one of the

key universities in China. After graduation, I passed a national competitive examination for

post-graduate studies and obtained my M.S. degree specializing in Quantitative Plant Ecology at

the Graduate School of the Chinese Academy of Sciences. I came to the United States as a

Visiting Research Fellow hosted by the Resource Policy Center of Dartmouth College and

worked with Professor Dennis Meadows to develop Systems Ecology models of natural resource conservation and management. I went to Syracuse for my PhD study in Plant Ecology

and developed a few forest growth models based on tree-ring studies for addressing impacts of

changing climate on forest ecosystems. After that, I spent 6 months in the Lamont Tree-ring

Lab, Columbia University as a research assistant.

I pursued my post-doctoral research at the Ecosystem Center of the Marine Biological Laboratory in Woods Hole, MA, working with Dr. Jerry Melillo and his team of accomplished

scientists. I was a key participant in a highly profiled study known as the Vegetation/
Ecosystem
Analysis and Modeling Project (VEMAP), and worked with the Terrestrial Ecosystem
Model
(TEM) to simulate carbon, nitrogen and water cycles of terrestrial ecosystems across
the
continental US. I was also the primary developer of TEM-LPJ, one of the first Dynamic
Global
Vegetation Models (DGVMs), which coupled ecosystem biogeochemistry with
vegetation
dynamics to enable simulating the dynamics and interactions of ecosystem function and
structure simultaneously. The application of DGVMs for representing global land surface
components in the Earth System Models is currently a very challenging subject for
climate
change research.

As one of the leading scientists studying forest ecosystems in the U.S. Global Change
Research
Program of the USDA Forest Service, I am involved in a series of projects and spatial
modeling
studies for understanding and quantifying the impacts of environmental changes on
forest
ecosystems and carbon dynamics in the Northeastern and Mid-Atlantic regions, and for
North
America. My research is highly interdisciplinary in nature, which has integrated intensive
field
studies with modeling approaches, and is very powerful for understanding how
ecosystems
function across multiple scales of organization. Besides publishing my research in many
top
peer-review journals, I'm also a contributor to various policy-oriented assessment
publications
such as the Climate Change Science Synthesis Reports to Congress.

Aside from my research, I am an Associate Faculty and a guest lecturer in the
Department of
Earth and Environmental Science, University of Pennsylvania. I have served as a
committee
member, supervisor and advisor for Ph.D. students and post-doc researchers from that
department, on projects of developing landscape-level forest soil carbon models, and
for
studying the impacts of riparian forests on aquatic ecosystems. I am also supervising a
post-doc
researcher hired through Princeton University working on my recently funded NASA
project on
the US forest carbon cycle, and developing decision-making tools (models) for
analyzing forest

carbon mitigation opportunities. I was appointed an adjunct professor in the Department of Earth, Ecological and Environmental Sciences, University of Toledo, working as an advisor for graduate students to develop landscape models for addressing impacts of disturbances and management on forest ecosystem processes. Through these activities and also working with recent graduates hired by the Forest Service, I have become skilled in providing guidance and mentoring of young scientists in forest ecosystem and modeling studies. The new Environmental Initiative at the University of Arizona provides great opportunities for research and teaching of this important science for our global sustainable future, which presents great challenges for our science, technology, and global humanity. In the past years, I have established broad connections with many top scientists and research groups in the world and gained my reputation in the international community of global change research. I hope my strong quantitative skills and broad expertise in climate change/forest studies make me perfectly fit for the position and enable me to work with other colleagues at UA on various subjects of earth system research and education. With my solid academic achievements, vigorous research projects, and passion for working with students, I look forward to the opportunity making measurable contributions to your programs at the University of Arizona!

Thank you very much for your consideration.

Yude Pan

Northern Global Change Program &
Climate, Fire and Carbon Cycle Sciences

US Forest Service

11 Campus Blvd

Newtown Square, PA 19073

REFERENCES

Dr. Richard A. Birdsey

Program Manager

Northern Global Change Program

USDA Forest Service

Newtown Square, PA 19073

Tel: (610) 557-4091

Fax: (610) 557-4095

Email: rbirdsey@fs.fed.us

Dr. Frederick N. Scatena

Professor and Chairman

Department of Earth and Environmental Science
University of Pennsylvania
Tel: (215) 898-6907
Fax: (215) 898-0964
Email: fns@sas.upenn.edu
Dr. Jing M. Chen
Professor and Fellow of Royal Society of Canada
Department of Geography and Program in Planning
University of Toronto
Tel: (416)-978-7085
Fax: (416)-946-3886
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RESEARCH INTERESTS

Yude Pan

My research interests primarily include, but are not limited to, (1) biological responses of terrestrial ecosystems to multiple environmental stresses with emphasis on understanding

complex interactions among biotic and abiotic processes and between ecosystem structural

and functional dynamics; ((2) forest ecosystems under the U.S. North American Carbon Program, with particular interests in carbon source and sink dynamics, and factoring out the

effects of disturbances (natural and anthropogenic), forest succession, climatic variability

and atmospheric chemistry; and (3) current effects and future projections of nitrogen deposition on forest ecosystems and watersheds in terms of changing productivity and function of nitrogen retention, nitrogen saturation and losses, and critical loads for nitrogen

deposition on forest ecosystems.

My work is closely associated with the development of process-based ecosystem models

which link to geographic information systems for spatial applications across scales. My research is highly interdisciplinary, combining modeling with field measurements and monitoring data such as from forest inventories, eddy flux towers and remote sensing; and

employing methods and knowledge from plant physiology, ecology, soil science, terrestrial

biogeochemistry, computer models, mathematics, and GIS. I have been involved in a series

of collaborative projects for understanding and quantifying the impacts of global environmental changes on forest ecosystems and watershed health in the Northeastern and

the Mid-Atlantic regions, and for North America. I am also conducting international studies

of forest carbon with colleagues in Canada and China. Recently, I am leading a global forest

carbon analysis and working with a group of scientists from all over the world. If I am successful with this new position, I would like to carry on my current projects and continue my collaborations with Forest Service, Princeton University, University of Pennsylvania, University of Toronto, Peking University and NASA/Goddard Space Flight Center. These ongoing collaborative projects will help initialize my research program at UA

and provide opportunities for students to become engaged in cutting-edge research. However, I have great interests to develop new collaborative projects with colleagues of UA,

and contribute my special skills and knowledge to the interdisciplinary environmental programs on the campus. Although I have successfully received several competitive NASA

grants and the grants of FS Climate Change Research Initiative, the university position will

allow the opportunities to apply research grants from the other funding agencies such as

NSF, EPA and DOE to facilitate new research interests and collaborations at UA.

Here, I briefly describe a few of my current projects for your information:

1. Sustaining U.S. Forests under a Changing Climate: A Management Strategy Integrating

Impacts of Disturbances and Climate on Carbon and Biofuels (NASA grant on Decision

Support through Earth Science Research. PI, award: \$106,852, 2009-2011).

The study combines the statistical data from FIA and other observational data from experimental forests with ecosystem process models to extrapolate carbon trends to the near future under projected climate and disturbance scenarios, and develops a management model simulating actions to increase carbon sequestration and biofuels.

2. Sustain US Forest and Managing Carbon Under a Changing Climate: Decision-support

for Managers and Policy Makers to Maximize Carbon Sequestration and other Forest

Products (Forest Service/Princeton University Climate Change Partnership: Initial Research Project) (USFS National Climate Change Research Initiative. PI, award: \$214,000. 2009-2011).

This project will improve the land-atmosphere-ocean model system of the Geophysical Fluid Dynamics Laboratory (GFDL – a NOAA facility at Princeton) to support development

of climate change policy. The data-model system will track the magnitude and causes of carbon sinks on the land, estimate baseline conditions and additional carbon sequestration associated with implementing greenhouse gas management plans.

3. Advance Modeling and Forecasting Complex Effects of Land Use, Climate and Air

Pollution on Watersheds. (Collaborative project with Penn) (USFS Northern Research Station Climate Change Research Competitive Grant PI, award: \$120,000, 2009-2011).

The project aims to advance ecosystem modeling and forecasting for forested watersheds in the Delaware River Basin by (a) quantifying effects of climate variability

and trends, altered atmospheric composition, natural disturbances and land use change on structure and function of forest ecosystems; (b) quantifying the effects of forests in a watershed on the micro-scale stream environments and aquatic lives, carbon and nitrogen losses to the surface waters and the movement and fates in stream systems.

4. Integrating Landscape-scale Forest Measurements with Remote Sensing and Ecosystem

Models to Improve Carbon Management Decisions (NASA Carbon Cycle Science under

the North American Carbon Program. Co-PI, award: \$909,971, 2008-2011).

This initiative is part of the interagency North American Carbon Program (NACP), and builds on existing capability at the Forest Service network of experimental forests.

Anticipated products include key input data for predictive models and scenario analysis, comprehensive and timely analyses and reports that support an increasing interest in forest carbon management, improved monitoring and estimation methods, and customized studies of opportunities to protect and enhance America's forest productivity.

5. Forest Carbon Budget of the North America in Response to Impacts of Disturbances,

Succession, and Changes in Climate and Atmospheric Chemistry (Collaborative project

with University of Toronto) (Northern Global Change Program Research Funding. PI, award: 50,000/yr, 2008-2010)

This study integrates remote sensing and land inventory data with a disturbance-driven ecosystem process model to produce a high resolution spatial carbon budget for the forests of North America; and attribute the relative effects of land disturbances, forest succession, climatic variability and atmospheric chemistry on carbon source and sink dynamics.

6. The Role of Forests in the Global Carbon Cycle (A series of workshops sponsored by the

U.S. Forest Service and Peking University) (the Organizers and Lead Authors: Yude Pan,

Richard Birdsey and Jingyun Fang)

To make a significant contribution to understanding of the role of forests in the global carbon cycle by providing (i) global consistent estimates of carbon stocks and fluxes based on forest inventory and remote sensing data to capture effects of land use, management, growth, mortality, and natural disturbance; (ii) possible mechanisms by combining modeling studies and experiments with atmospheric observations to analyze other plausible factors that regulate terrestrial uptake of C including climate variability, increasing CO₂ concentration, N deposition, and tropospheric ozone.

7. Forest 3-D: Explicit determination of carbon stocks and carbon accumulation in U.S.

forests (NASA ESSP Venture-class Science Investigations: Earth Venture-1. Co-PI, pending, \$30,000,000, 2010-2015)

We propose to develop a uniform methodology that will answer 2 fundamental earth science carbon cycle research questions for U.S. forests that are directly coupled to atmospheric greenhouse gas concentrations: (I) what are the carbon stocks of forests;

and (II) How are forest carbon stocks changing in a spatially explicit way. We will use four unique data sources, instruments, and models: (1) the U.S. Forest Service's seven intensive landscape research and monitoring sites and 150,000 Forest Inventory and Assessment (FIA) biomass plots will serve as key test areas and provide the basis for carbon stock extrapolations from these sites to much larger U.S. forest areas; (2) multitemporal Landsat forest disturbance and age data from 1975 to 2012; (3) NASA/Goddard's unique Laser Vegetation Imaging Sensor (LVIS) will be employed to collect >300,000 km² (exact area TBD) of forest full waveform lidar data over the five years of the proposed effort ; and (4) we will employ the Ecosystem Demography (ED) model to refine our biomass/carbon stock estimates and project them into the future for carbon management. Our goal is to produce a uniform technique for measuring US forest carbon stocks with an improved accuracy over current methods.

TEACING INTERESTS

Yude Pan

Teaching Interests

I have great interest in teaching at both undergraduate and graduate levels. A good balance between research and teaching would be desirable. All of potential courses in ecology are of interest to me. Possible courses I would like to teach include:

1. Principles of Terrestrial Ecosystem Ecology
2. Global Biogeochemistry
3. Forest Ecology and Management
4. Landscape Ecology and Geospatial Analysis

Or theme-oriented courses:

5. Soil, Ecosystems, and Atmospheric Processes
6. Integrative Modeling of Natural and Social Systems

I'm also interested in developing several other courses and seminars based on various material sources such as:

7. Ecological Modeling in Theory and Practice

I am interested in developing and teaching a course (together with other faculty) on Global Change Biology, which will cover broad biological issues in the context of environmental changes.

Teaching Goals

Through these courses, I hope to achieve four goals:

- (1) Build a strong and broad foundation of scientific knowledge for students in several important areas of Ecology, Biogeochemistry, and Environmental Sciences by using the best textbooks in the field.
- (2) Help students develop a strong technical background in quantitative methods, data analysis and interpretation, modeling, and ability to use these problem-solving methods in exploring complex ecological and environmental issues, which will advance them for future career and academic achievements.
- (3) Introduce students to broader ecology concepts that relate to the most critical environmental issues and topics such as climate change, biodiversity, natural resources and biological conservation, ecosystem services, sustainable development, etc. These topics will help them develop their environmental awareness and skills for careers in the

21 century.

(4) Through teaching courses, stretch students' potentials and encourage them to try their "hands on" real science by conducting suitable research projects, collecting and analyzing data, doing literature reviews, writing senior papers, and presenting scientific results.

Teaching experience

My positive experiences as a guest lecturer for Biogeochemistry course in the Department of Earth and Environmental Science, University of Pennsylvania demonstrate my capability for teaching. I have been frequently advising studies for Ph.D. students and post-docs at University of Pennsylvania, Princeton University and University of Toledo and have made very constructive relationships with students. I have had extensive experiences for delivering presentations in scientific meetings and lectures in classrooms, and serving as a moderator for workshops and seminars. Quite a

few times, I was told that I was able to engage audience in the room and should use this ability to teach in university. I hope all these experiences can be counted and provide me a good starting point to be more involved in my future teaching and interaction with students. I am confident in my capability for completing my teaching assignments and becoming a good mentor for students.

Teaching Philosophy

Passion and genuine interests in subject matter are vital to bring course material to life in the minds of students. Such expression of excitement towards the curriculum coupled with demonstrations of its applicability can inspire a profound desire and capacity for learn. I would like to inspire students by linking their current learning with their future responsibility for environmental protection, biological conservation, and global sustainability. My primary goals are to inspire students with scientific curiosity, independent thinking and problem-solving skills. Fostering these hallmarks will create an encouraging and constructive education atmosphere that lends itself to the positive development of independent thinkers and learners. After all, through education, to develop students' true interest and passion for learning and desire to reach their higher intellectual potential, I believe, will benefit their whole lives as individual human beings.

CURRICULUM VITAE

Yude Pan

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Webpage: [http:// www.nrs.fs.fed.us/people/ypan](http://www.nrs.fs.fed.us/people/ypan)

EDUCATION

Ph.D. SUNY-ESF and Syracuse University, Syracuse, NY. Plant Ecology. 1993. Dissertation: "Growth responses of conifers in Adirondack plantations to changing environment: the model approaches based on stem-analysis", 272 pp. Supervisor: Dudley Raynal, Dean, Instruction and Graduate Studies, Distinguished Teaching Professor of Plant Ecology.

MSc. Graduate School of Chinese Academy of Sciences, Beijing, China. Quantitative Plant Ecology. 1984. Master Thesis: "Successional patterns and modeling of the mixed Korean pine forests in the Changbaishan Biosphere Reserve, China", 156 pp. Supervisor: Prof. Hanxi Yang, Member of Chinese Academy of Sciences, the former Vice Chair of the Man and the Biosphere Program of the UNESCO

B.S. Oceanography University of China, Qingdao, China. Applied Mathematics. 1982

Certification International Training Course (UNDP) on the Remote Sensing Technique Applied to Vegetation Studies, South-East Asian Regional Center for Tropical Biology, Bogor, Indonesia, 1985

PROFESSIONAL EXPERIENCE

1997 - **Research Scientist** (GS-14), USDA Forest Service, Northern Global Change Program and Unit of Climate, Fire and Carbon Cycle Sciences, Newtown Square, PA, USA

2007- 2009 **Visiting Research Scholar**, Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ, USA

2005- **Associate Faculty**, University of Pennsylvania, Department of Earth Environmental Science, Philadelphia, PA, USA

2001- 2007 **Adjunct Professor**, University of Toledo, Department of Earth, Ecological and Environmental Sciences, Toledo, OH, USA

2001-2003 **Asian Pacific American Program Manager**, USDA Forest Service, Northeastern Area State & Private Forestry and Northeastern Research Station

1996-1997 **Research Associate**, the Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA, USA

1994-1996 **Postdoctoral Research Associate**, the Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA, USA

1993-1994 **Research Assistant**, Tree-ring Lab, Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY, USA

1987-1993 **Graduate Research Assistant**, State University of New York at Syracuse, Department of Environmental and Forest Biology, Syracuse, New York, USA.

1986-1987 **Visiting Research Fellow**, Dartmouth College, Resource Policy Center, Hanover, New Hampshire, USA

1985-1986 **Research Associate**, Chinese Academy of Sciences, Institute of Geographical Science and Natural Resources, Beijing, China

TEACHING EXPERIENCES

1991-92 Teaching assistant of General Botany, Department of Environmental and Forest Biology, State University of New York at Syracuse

2001-07 Committees of graduate students, Department of Earth, Ecological and Environmental Sciences, University of Toledo

2003- Guest lecturer of Global Biogeochemistry, Department of Earth and Environmental Sciences, University of Pennsylvania

2005- Committee and advisor of Ph.D. students, Department of Earth and Environmental Sciences, University of Pennsylvania

2006- Advisor of post-doctoral researchers, Department of Earth and Environmental Sciences, University of Pennsylvania

2009- Advisor of post-doctoral researcher, Department of Ecology and Evolutionary Biology, Princeton University

RESEARCH INTERESTS

Global change biology, forest ecology and management, global biogeochemistry, forest carbon dynamics, ecosystem modeling, tree growth modeling, climate-vegetation feedbacks, land-water interactions, biodiversity, greenhouse gases and environmental pollutants

TECHNICAL SKILLS and EXPERIENCES

Computer: PC, Macintosh, Unix

Programming: C++, FORTRAN, Visual BASIC;

GIS: ARC/INFO, ARCVIEW;

Statistics: Multivariate analysis, ANOVA, meta-analysis, likelihood analysis, geostatistics, and softwares (SAS, SigmaSat, SPSS)

Modeling: Terrestrial biogeochemical models (TEM, Century, BGC, PnET-CN), Dynamic Global Vegetation Models (TEM-LPJ, LPJ), gap model, population dynamic model, system dynamic model, statistic and stochastic process models (e.g. Markov Chain Monte Carlo).

HONORS and AWARDS

2009 **Award of Merit for** Excellent Research Performance. USDA Forest Service

2008 **Award of Merit for** Developing international collaborative research programs. USDA Forest Service

2006 **Award of Merit for** Developing collaborative research programs with university partners and providing outstanding support to students and graduates in their early careers. USDA Forest Service

2004 **Award of Merit for** Outstanding Research on the effects of multiple stressors on eastern forests. USDA Forest Service

2003 **Award of Merit for** APA Program management, USDA Forest Service

2002 **International Forestry Award of Merit**, USDA Forest Service

2001 **Award of Merit for** Excellent Research on forest carbon research in China. USDA Forest Service

1992 **Travel Award for Graduate Students**, the Ecological Society of America

1990 **Natural Science Award**, Chinese Academy of Sciences

1989-1991 **McIntire-Stennis Scholarship**, SUNY

1988-1989 **Research Foundation Scholarship**, State University of New York at Syracuse

1986-1987 **Jessie Smith Noyes Foundation Research Fellowship**, Dartmouth College

SERVICE and ACTIVITIES

2010- **Executive committee**, the IUFRO Forest Landscape Ecology Working Group, **Coordinator** of North America

2008- **Chair**, Asian Ecology Section, Ecological Society of America.

2009- **Associate Editor-in-Chief**, *Acta Ecologica Sinica* (International Journal), Elsevier

2008 **Guest Editor**; Managing Landscapes at Multiple Scales for Sustainability of Ecosystem Functions. Special Issue of *Forest Ecology and Management*

2008 **Symposium organizer**: Carbon Science and Landscape Ecology: Estimation of Ecosystem Carbon Dynamics across Multiple Spatial and Temporal Scales. International Conference of IUFRO-8.01.02 Landscape Ecology. September 16-22, Chengdu, China

2008 **Scientific Committee**: International Conference of IUFRO-8.01.02 Landscape Ecology. September 16-22, Chengdu, China

2008 **Team Member** of the U.S. Forest Service delegation to China, April 12-22, Beijing

2007- **Editorial Board Member**, Open Forest Science Journal, Bentham Science Publishers

2007 **Organization Committee:** North American Carbon Program All Scientists Meeting, January 22-24, Colorado Springs, CO

2006 **Session Chair:** Modeling and Data Assimilation, International Conference on Regional Carbon Budget, August 16-18, 2006, Beijing, China

2006 **Session Convener:** Impacts of Climate, Atmospheric Chemistry and Humans on Terrestrial Carbon Cycle, European Geoscience Union General Assembly 2006, April 2-7, Vienna, Austria

2004 **Scientific Committee,** IGBP Global Carbon Project workshop, November 15-18, Beijing, China

2004 **Session Chair,** 3rd International N Conference, October 12-16, Nanjing

2000-2002 **President,** Sino-Ecologist Club Overseas

2000-2002 **Board member,** Ecological Society of China

1999-2001 **Board member,** International Relations Committee, Ecological Society of America

1994-1996 **Secretary,** Asian Ecology Section, Ecological Society of America

2002- **Editorial Board,** Acta Ecologica Sinica

1997 **Symposium Organizer,** 82nd Annual Meeting of the Ecological Society of America, August 10-13, 1997, Albuquerque, New Mexico

1989- **Member,** Ecological Society of America

2000- **Member,** American Geophysical Union

Reviewers for refereed journals, books and proposals: *Global Change Biology, Global Biogeochemical Cycles, Ecology, Ecological Applications, Ecosystems, Forest Science, Forest Ecology and Management, Global Ecology and Biogeography, Environmental Management, Climate Research, Soil Science Society of America Journal, Journal of American Water Resources Association, Freshwater Biology, Chemosphere, Forestry, Journal of Arid Environments, Environmental Modeling and Software, Ecological Modeling, Acta Phytoecologia Sinica, Acta Ecologica Sinica, Global Ecology (book); Modern Ecology(book), National Science Foundation(NSF), National Aeronautics and Space Administration (NASA), Canadian Foundation for Climate and Atmospheric Sciences (FCSCA), Asian-Pacific Network for Global Change Research (APN), IPCC WGII Technical Reports, US -CCSP Reports.*

Panelists DOE National Institute for Climatic Change Research, Eastern Center

PROPOSALS and GRANTS

2009-2011 **PI** (with Princeton University). NASA grant on Decision Support through Earth Science Research: *Sustaining U.S. Forests under a Changing Climate: A Management Strategy Integrating Impacts of Disturbances and Climate on Carbon and Biofuels.* \$106,852

2010-2015 **Co-I** (with Compton Tucker III et al.). NASA ESSP Venture-class Science Investigations: Earth Venture-1: *Forest 3-D: Explicit determination of carbon stocks and carbon accumulation in U.S. forests.* \$30,000,000, pending

2009-2011 **PI** (with University of Pennsylvania). US Forest Service Northern Research Station Competitive Research Grant: Advance Modeling and Forecasting Complex Effects of Land Use, Climate and Air Pollution on Watersheds. \$120,000.

2009-2011 **PI** (with Richard Birdsey) USFS National Climate Change Research Initiative: *Sustain US Forest and Managing Carbon Under a Changing Climate: Decision-support for Managers and Policy Makers to Maximize Carbon Sequestration and other Forest Products.* \$214,000 (Forest Service/Princeton University Climate Change Partnership: Initial Research Project)

2009-2010 **PI** (with Peking University) US Forest Service Northern Global Change Program: *Global Forest Carbon Research.* \$20,000

2008-2011 **Co-PI** (with Birdsey et al.). NASA grant under North American Carbon Program. *Integrating Landscape-scale Forest Measurements with Remote Sensing and Ecosystem Models to Improve Carbon Management Decisions.* \$909,971

2008-2010 **PI** (with university of Toronto). USDA Forest Service Northern Global Change Program.

Forest Carbon Budget of the United States and Canada in Response to Impacts of Disturbances, Succession, and Changes in Climate and Atmospheric Chemistry.

\$50,000/yr

2005-2007 **Co-PI** (with Birdsey et al.). NASA grant under North American Carbon Program. *Linking Landscape-scale Carbon Monitoring with Forest Management.* \$1,300,000

2001-2004 **Co-PI** (with Birdsey et al). NASA Carbon Research Program. *Large-scale Validation of Carbon Stock and Flux Estimates from Remote Sensing.* \$ 750,000

2001-2006 **PI.** USDA Forest Service Northern Global Change Program. *Studying forest ecosystems and watersheds in the Mid-Atlantic U.S.: Regional assessments for global change impacts.* \$ 200,000

2000-2004 **PI.** USDA Forest Service Forest Health Monitoring Program. *Model Integration: Applying Process-based Ecosystem Models for the Delaware River Basin Assessment.* \$ 200,000

2003-2004 **PI.** USDA International Forestry. *Forest Soil Carbon in China.* \$10,000

2002-2003 **PI.** USDA International Forestry. *Forest Carbon in China.* \$10,000

PUBLICATIONS

Pan Y, Chen JM, Birdsey R, McCullough K, He L, Deng F. 2010. Age structure and disturbance legacy of North American forests. *Biogeoscience Discussions* 7:979-1020.

Pan Y, Birdsey R, Hom J, McCullough K. 2009. Separating Effects of Changes in Atmospheric Composition, Climate and Land-use on Carbon Sequestration of U.S. Mid-Atlantic Temperate Forests. *Forest Ecology and Management* 259(5): 151-164.

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