## **NEW YORK STATE** OFFICE OF THE ATTORNEY GENERAL

PUBLIC INTEGRITY UNIT 120 Broadway, 22<sup>nd</sup> Floor New York, NY 10271

#### **COMPLAINT FORM**

- PLEASE TYPE OF PRINT CLEARLY IN DARK INK.
   COMPLETE THE ENTIRE FORM AND SIGN.
   RETURN/SEND FORM TO THE PUBLIC INTEGRITY UNIT.

COMPLAINANT				
Your Name: Douglas J. Keenan			Home Tel: 212 xxx xxxx	
Street Address: XXXXXXX				ness Tel:
City/Town: NYC	State:	NY	Zip: 10128	County:
COMPLAINT				
Public Agency/Individual	you are complaining abou	t: SUN	Y-Albany ar	nd Prof. WC. Wang
	):			
				County:
			. —·r· <u> </u>	
	mitted to another agency?			
If so, which agency:				
Is there any legal action p	pending?	[ ]Yes	[X No	
If so, where:				
PLEASE BRIEFLY DESCRIBE YOUR COMPLAINT BELOW (use back of form or attach additional documentation if necessary)				
Attached are the following.				
<ul> <li>* Summary of the complaint (1 page)</li> <li>* Allegation submitted to the University at Albany (4 pages)</li> <li>* Report by the university's preliminary inquiry into the allegation (2 pages)</li> <li>* E-mail to the university, outlining irregularities in the investigation (2 pages)</li> </ul>				
<b>READ THE FOLLOWING BEFORE SIGNING BELOW:</b> I understand that any false statements made in this complaint are punishable as a Class A Misdemeanor under Section 175.30 and/or Section 210.45 of the Penal Law.				
and/or occition 2 to 45 or the	2			
Signature:	renar		Date	11 July 2008
PUBLIC 120 Bro	ORK STATE OFFICE OF C INTEGRITY UNIT coadway, 22 <sup>nd</sup> Floor ork, NY 10271	THE ATT	ORNEY GENER	RAL
============	===========			

Date: \_\_\_\_

Received by: \_\_\_

Wei-Chyung Wang is a professor at the University at Albany, State University of New York. He has been doing research for over 30 years. For this research, Wang has received at least \$7 million. The funds have come primarily from the Department of Energy, with additional funding from other federal agencies (DOD, FAA, NSF). I have formally alleged that Wang committed fraud in important parts of his research. My allegation was submitted to the University at Albany; a copy is enclosed.

The university conducted a preliminary inquiry; a copy of the report from the inquiry is enclosed (redacted, by the university). Briefly, Wang claimed that there were some documents that could exonerate him. The inquiry concluded that there should be a full investigation, which should be "charged with obtaining and reviewing any such additional evidence ... so that a final resolution may be made regarding the allegation against Dr. Wang".

Wang had been claiming the existence of such exonerating documents for nearly a year, but he has not been able to produce them. Additionally, there was a report published in 1991 (with a second version in 1997) explicitly stating that no such documents exist. Moreover, the report was published as part of the Department of Energy Carbon Dioxide Research Program, and Wang was the Chief Scientist of that program.

The university conducted an investigation. The investigation concluded that Wang is innocent. I believe that the case against Wang is strong and clear, and that the university is trying to cover up the fraud so as to protect its reputation. Wang is one of the university's star professors.

The conduct of the investigation violated several of the university's own stated policies: details are given in an attached e-mail (dated 06 June 2008). The e-mail was sent to Lynn Videka, Vice President for Research at the university: Videka was in charge of overseeing the investigation. Note, in particular, that the documents that Wang was relying on were never produced.

I have only examined a little of Wang's research; so I do not know the full extent of the fraud. It is difficult to examine more in part because Wang has not willingly made his data available: when asked for the data from the research that I later reported as fraudulent, Wang refused. For that research, though, Wang had a co-worker in Britain. In Britain, the Freedom of Information Act requires that data from publicly-funded research be made available. I was able to get the data by requiring Wang's co-worker to release it, under British law. It was only then that I was able to confirm that Wang had committed fraud. Details are given in my report to the university (page 4, last paragraph). I would be willing to help examine other research that Wang has done, if more data were made available.

There was another case of research fraud with a professor at the University of Vermont, in 2005. There, Prof. Eric Poehlman was convicted of making false statements on federal grant applications; he was sentenced to a year and a day in prison. Wang has done the same as Poehlman. The fraudulent work described in my report dates from 1990; Wang has been relying on that work in some of his grant applications since then. As I understand things, each of those applications is a violation of statute. (Additionally, Wang has been using the grants to go on frequent trips to China.)

Wang's office telephone number is 518 437 8708. Separately, from my telephone discussion with OAG Attorney Hannah Long, I understand that it is possible Videka also violated the law; Videka's office telephone number is 518 956 8170.

# Wei-Chyung Wang fabricated some scientific claims

Douglas J. Keenan, The Limehouse Cut, London E14 6N, UK; doug.keenan@informath.org 03 August 2007

#### Introduction

This report concerns two research papers co-authored by Wei-Chyung Wang, a professor at the University at Albany, State University of New York. The two papers are as follows.

Jones P.D., Groisman P.Y., Coughlan M., Plummer N., Wang W.-C., Karl T.R. (1990), "Assessment of urbanization effects in time series of surface air temperature over land", *Nature*, 347: 169–172.

Wang W.-C., Zeng Z., Karl T.R. (1990), "Urban heat islands in China", *Geophysical Research Letters*, 17: 2377–2380.

Each paper compares temperature data from some meteorological stations in China, over the years 1954–1983. (The first paper also considers data from stations in the USSR and Australia; Wang was only involved in Chinese data, and so the other stations are irrelevant here.) The first paper is quite important: it is cited for resolving a major issue in the most recent assessment report of the Intergovernmental Panel on Climate Change [IPCC, 2007].

## Background

Meteorological stations sometimes move, and this can affect the temperature measurements of the stations. For example, one of the stations relied upon by the above two papers was originally located on the upwind side of a city and later moved, 25 km, to be on the downwind side of the city. Such a move would be expected to increase the measured temperatures, because a city generates heat. Another station relied upon by the papers was originally located in the center of a city and then moved, 15 km, to be by the shore of a sea. Such a move would be expected to decrease the measured temperatures.

It is clear that when a station moves, the temperature data from before the move is not, in general, directly comparable to the data from after the move. This problem can occur even if the move is over a small distance. For example, if a station moves from being in the middle of a field to being by an asphalt area, then the measured temperatures would be expected to increase, even though the distance moved might be only 100 m. (A related issue is that the land use around a station can change over time, and this can affect measurements.)

In global warming studies, an important issue concerns the integrity of temperature measurements from meteorological stations. The latest assessment report from the IPCC indicates that the global average temperature rose by roughly 0.3 °C over the period 1954–1983. Thus, if errors in temperature measurements were of similar size to, or larger than, 0.3 °C, there could be a serious problem for global warming studies. The papers of Jones et al. and Wang et al. both consider this issue. The paper of Jones et al. is one of the main

works cited by the IPCC to support its contention that measurement errors arising from urbanization are tiny, and therefore are not a serious problem.

#### **Fabrications**

Regarding station movements over time, the papers of Jones et al. and Wang et al. make the following statements.

The stations were selected on the basis of station history: we chose those with few, if any, changes in instrumentation, location or observation times. [Jones et al.] They were chosen based on station histories: selected stations have relatively few, if any, changes in instrumentation, location, or observation times.... [Wang et al.]

Those statements are essential for the papers.

Each paper gives the same reference for its statement: a report resulting from a project done jointly by the U.S. Department of Energy (DOE) and the Chinese Academy of Sciences (CAS). The DOE/CAS report (available via <a href="http://cdiac.esd.ornl.gov/ndps/ndp039.html">http://cdiac.esd.ornl.gov/ndps/ndp039.html</a>) resulted from concern over "possible CO<sub>2</sub>-induced climate changes". Its purpose was to present "the most comprehensive, long-term instrumental Chinese climate data presently available". It contains, in particular, histories of some Chinese meteorological stations, including the different locations of those stations and the dates on which they moved, if any.

The DOE/CAS report was formally published in full in 1991—Wang et al. and Jones et al. used a pre-publication version of the report. A revised version of the report was published in 1997, but the station histories are the same in the two versions.

Jones et al. and Wang et al. consider the same 84 meteorological stations in China. Regarding 49 of those stations, the DOE/CAS report says, "station histories are not currently available" and "details regarding instrumentation, collection methods, changes in station location or observing times ... are not known" (sect. 5). For those 49 stations, then, the above-quoted statements from the two papers are impossible.

Regarding the remaining 35 stations that were analyzed by the two papers, I have prepared a summary of the relevant information from the DOE/CAS report. The summary is available at <a href="http://www.informath.org/apprise/a5620/b17.htm">http://www.informath.org/apprise/a5620/b17.htm</a>. As an example from the summary, one station had five different locations during 1954–1983, with the locations as much as 41 km apart. Two other stations each had four different locations. At least half the stations had substantial moves (two other examples, of 25 km and 15 km, were given above). Moreover, several stations have histories that are inconsistent, making reliable analysis unattainable.

(The station that moved five times during the study period, #54511, is discussed by Yan et al. [Advances in Atmospheric Sciences, 18: 309 (2001)]; the authors conclude that some of the moves affected temperature measurements by 0.4 °C. The authors also discuss another station, #58367, which had a single move of 4 km; the authors conclude that the move affected temperature measurements by 0.3 °C. The authors' statistical analysis, though, is invalid—e.g. it does not consider significance—so the conclusions are unproven.)

Additionally, the following statement from the DOE/CAS report seems apposite: "Few station records included in the PRC data sets can be considered truly homogeneous [i.e. have no

significant changes in location, instrumentation, etc.]. Even the best stations were subject to minor relocations or changes in observing times, and many have undoubtedly experienced large increases in urbanization."

The essential point here is that the quoted statements from Jones et al. and Wang et al. cannot be true and could not be in error by accident. The statements are fabricated.

### Responsibility

Who is responsible for the fabrication? Phil Jones is the lead author of one paper; so I asked him about the roles the different authors had. He replied as follows (17 May 2007).

In late 1989 or early 1990 I contacted the co-authors on the paper from 1990 to ask them about rural station data in their (three regions). The purpose of the study was to extend the work undertaken with Tom Karl a year or two early on the contiguous US.

Each of the three: Groisman (Russia), Plummer/Coughlan (Australia)

Each of the three: Groisman (Russia), Plummer/Coughlan (Australia) and Wang (China) selected the rural stations in their region, based on their knowledge of the networks in those countries. Each had worked extensively on their respective networks. For China there was the additional network of urban stations.

I did all the analyses with the data they provided. I wrote the first draft of the paper and they provided comments on subsequent drafts before it was submitted.

To further clarify things, I asked Jones the following: "Your message says "For China there was the additional network of urban stations". Who was responsible for selecting the stations in that network? (Wang?)". Jones replied, "Yes" (18 May 2007).

There is good evidence to support the version of events described by Jones. First, Jones is not a co-author of the paper of Wang et al., nor is he listed in the Acknowledgements section of the paper; so it seems very unlikely that he was responsible for the quoted statement in the paper. Second, the papers of Jones et al. and Wang et al. analyze the same data, but come to very different conclusions about that data (Wang et al. say, "The reasons for this are not clear"); the only explanation for the difference that I can think of is that Wang supplied the data to Jones—thereby meriting co-authorship—but had little role in the analysis of that data, just as Jones says. Third, Wang was sent a draft of this report (on 11 June 2007), and he did not deny the version of events presented by Jones.

Given the above, and that Wang is the lead author of one paper, it seemed clear that Wang is the person responsible for the fabricated statements. So, on 11 April 2007, I e-mailed Wang, asking him "how did you ensure the quality of the data?". Two days later, I telephoned Wang, but he declined to discuss things, saying "I'm in a meeting; can I get back to you?".

On 20 April 2007, with still no response from Wang, I sent another e-mail. The e-mail asked Wang to, among other things, retract the paper of Wang et al. and also the claims made by Jones et al. for which he was responsible. Wang replied two days later, explaining that he was then in China, and that he would respond further when he returned. His reply also claimed "My understanding was that you are going to call me again, but you never did".

On 30 April 2007, Wang e-mailed me the following.

The discussion with Ms. Zeng last week in Beijing have re-affirmed that she used the hard copies of station histories to make sure that the selected stations for the study of urban warming in China have relatively few, if any, changes in instrumentation, location, or observation times over the study period (1954-1983).

The "hard copies" to which Wang refers could not have been found by the authors of the DOE/CAS report, who endeavored to be comprehensive. Additionally, that report clearly shows that many of the stations used for the studies did have substantial changes in location.

Moreover, Zeng is one of the four authors of the DOE/CASE report; so what Wang now claims Zeng says is in contradiction to what Zeng wrote in 1991 and 1997. On the other hand, Zeng is a co-author of the paper of Wang et al. Why is Zeng a co-author of a paper that contradicts the DOE/CAS report? Perhaps she just went along with what the lead author, Wang, wanted—similar to how Wang is a co-author of Jones et al. even though Wang explicitly disagreed with the analysis of Jones. In any case, none of this would seem to remove the culpability of Wang. (Note: Zeng is not a co-author of the paper of Jones et al., nor is she mentioned in the Acknowledgements section of the paper.)

Finally, it should be noted that the DOE/CAS report was published as part of the Carbon Dioxide Research Program. The Chief Scientist of that program was Wang.

#### Additional considerations

The problem with Jones et al. and Wang et al. was first raised on the ClimateAudit blog of Stephen McIntyre (who exposed the "hockey stick" graph of temperatures over the past millennium). McIntyre noted that the stated claims about Chinese data seemed "absurd". Indeed, for anyone familiar with Mao's Great Leap Forward and the Cultural Revolution, the claim to have obtained substantial reliable data for 1954–1983 makes little sense.

During the Great Leap Forward, tens of millions of people are believed to have died, but it is not known *how many* tens of millions. And official records of grain harvests were often substantially exaggerated: this was not generally considered fraud, but instead making the records conform with "socialist reality". During the Cultural Revolution, schools and universities were shut down and many intellectuals were beaten, internally exiled, or killed for being too bourgeois, and there was sometimes near-anarchy, especially in urban areas. Even as late as 1980, censuses were so poor that China's population was only known to within about 100 million [Lavely W.R., *Australian Journal of Chinese Affairs*, 18: 167 (1987)].

In other words, the claim to have gotten large numbers of highly-reliable, homogeneous records from the study period is a priori extremely difficult to believe.

Jones is a professor at a public university in the United Kingdom (the University of East Anglia); so any data held by him is requestable under the UK Freedom of Information Act. McIntyre and I each made formal requests under the Act, and by this means, obtained the list of meteorological stations that were used in the papers of Jones et al. and Wang et al. (see <a href="http://www.cru.uea.ac.uk/cru/data/jonesetal1990/">http://www.cru.uea.ac.uk/cru/data/jonesetal1990/</a>). The Act was essential for this report.

# **Redacted Report of the Inquiry Committee**

Inquiry Committee to Review allegations of research misconduct by Wei Chyung Wang, Ph.D as covered by the University at Albany Policy and Procedures on Misconduct in Research and Scholarship.

### University Receives Complaint, Inquiry Initiated

The Division for Research received an allegation against Wei-Chyung Wang, for fabrication and misrepresentation of research results as covered by the *University at Albany Policy and Procedures on Misconduct in Research and Scholarship*.

It is alleged that Dr. Wang fabricated and misrepresented research results in two research papers he coauthored:

- ➤ Jones P.D., Groisman P.Y., Coughlan M., Plummer N., Wang W.-C., Karl T.R. (1990), "Assessment of urbanization effects in time series of surface air temperature over land", *Nature*, 347: 169–172
- Wang W.-C., Zeng Z., Karl T.R. (1990), "Urban heat islands in China", *Geophysical Research Letters*, 17: 2377–2380

In light of the seriousness of the implications of this allegation, the Chair of the Committee on Ethics in Research and Scholarship (CERS) and the Vice President for Research decided that an Inquiry Committee should be appointed to review the facts of the case. A formal inquiry was initiated in accordance with the *University at Albany Policy and Procedures on Misconduct in Research and Scholarship*. The Vice President for Research (VPR) is the institutional official responsible for the case.

# **Inquiry Committee Appointed**

In consultation with the Council on Ethics in Research and Scholarship Chair, the VPR appointed an Inquiry Committee, qualified persons, from inside and outside the University who did not have real or apparent conflicts of interest in the case, were unbiased, and had the necessary expertise to evaluate the evidence and issues related to the allegation.

The committee members named for this Inquiry Committee were:

Helmut Hirsch, Distinguished Teaching Professor, Department of Biology; Marvin Geller, Professor, Department of Marine Sciences, Stony Brook University; and Eric Lifshin, Professor, College of Nanoscale Science and Engineering; and member of CERS

Ex-Officio Members –

Adrienne D. Bonilla, J.D., Research Compliance Officer, Office of the Vice President for Research, staff assistance to the Inquiry Committee

John Reilly, J.D., University Counsel's Office representative

#### **Notice to the Respondent**

The VP for Research sent a letter of notice to the Respondent, on August 16th, 2007. The letter provided information on the allegation, and notice of the names of the proposed Inquiry Committee members. The letter informed the Respondent of his right to object to any of the Committee members within five (5) calendar days. The University's Misconduct Policy, which outlines the Inquiry and Investigation process, was also attached to this letter. The Respondent did not object to any of the proposed members.

## Three (3) Meetings of the Inquiry Committee

The time between initiation of the Inquiry and the date of the first meeting was due to difficulties associated with scheduling. Scheduling was challenging as it this was taking place during the summer months. Additionally, participants (Respondent and a Committee member) travel for work on a fairly frequent basis.

- > October 5, 2007: (Redacted)
- > October 18, 2007: (Redacted)
- December 7, 2007: The Committee interviewed the Complainant via telephone and immediately (Redacted) thereafter, the Committee interviewed the Respondent in person. The Complainant highlighted points that the Committee had taken notice of, namely that there were a sizable number of stations for which there was no data that could be used in defending the statement that these stations had remained relatively "constant". (Redacted)

## Recommendation (unanimous) (Redacted) of the Inquiry Committee:

After careful and thorough review of the evidence, the Committee has concluded that without the written input from the Respondent's colleague, we cannot determine the accuracy of the Respondent's explanation for the station selection. While the Respondent maintains that there may be additional evidence available that could allow for a clear and final decision to be rendered, for this Inquiry Committee to examine this case further or in more depth would be beyond its charge. Consequently, in the absence of any such available additional evidence regarding the paper station logs, there is simply no way for us as an Inquiry Committee to conclude that there is not sufficient evidence to warrant further investigation.

Therefore, on the record before us, we are compelled by the Policy to recommend that an Investigation Committee be formed and charged with obtaining and reviewing any such additional evidence regarding the paper station logs so that a final resolution may be made regarding the allegation against Dr. Wang.

Submitted and Approved by Inquiry Committee Members:

Helmut Hirsch, Distinguished Teaching Professor, Department of Biology; Marvin Geller, Professor, Department of Marine Sciences, Stony Brook University; and Eric Lifshin, Professor, College of Nanoscale Science and Engineering; and member of CERS

#### D.J. Keenan

From: "D.J. Keenan" <doug.keenan@informath.org>

To: "Lynn Videka" <lvideka@uamail.albany.edu>; "Terri Casey" <TCasey@uamail.albany.edu>

Cc: "Adrienne D Bonilla" <ABonilla@uamail.albany.edu>

**Sent:** Friday, 06 June 2008 21:48 **Subject:** Misconduct Investigation

Dear Vice President Videka,

I am confused about the purpose of your letter of May 23rd. Your letter says that the Investigation Committee has completed its work and asks me for comments. Yet I am not allowed to see the report on the investigation, nor learn anything about the investigation's deliberations, until after my comments have been submitted. I believe that this can be fairly described as Kafkaesque. Nonetheless, I will submit some comments.

First, that an investigation had been conducted came as a surprise to me, because the university's Policy and Procedures on Misconduct in Research and Scholarship states the following.

The President will make the final determination whether the findings of the inquiry provide sufficient evidence of possible misconduct to justify the initiation of an investigation....

The Vice President for Research shall notify the respondent, the complainant, all persons involved in the inquiry (i.e., anyone who has been interviewed or otherwise informed of the allegations) and the chair of CERS of the President's decision.

Yet I was not notified of the President's decision to initiate an investigation, until your letter of May 23rd.

The Misconduct Policy also contains other stipulations that have not been adhered to. In particular, the policy states that the "Vice President for Research will also notify the complainant in writing of the initiation of the investigation ...". Again, I received no notification.

As well, the Misconduct Policy stipulates the following, in the section "Initiation of the Investigation" (prior to the section "Formation of the Investigation Committee").

When an investigation involves a sponsored program through the Research Foundation, the Vice President for Research will notify the Research Foundation of SUNY (Office of the General Counsel and Secretary). The University will also notify relevant federal or other

external granting agencies and partnering institutions, in accordance with applicable regulatory requirements.

Prof. Wang has directly received about \$7 million in research grants from the Department of Energy and the National Science Foundation, and perhaps others. I ask you to send me a copy of the letters that you sent to the DOE and the NSF. You are not obligated to do this by the Misconduct Policy, but the letters do fall under the purview of the Freedom of Information Act.

The Misconduct Policy further stipulates that the "investigation process will include ... interviews with all individuals involved ... in making the allegation ...". Indeed, that would appear to be in accordance with natural justice--but it did not happen.

An interview would seem to be particularly important given that the Inquiry Committee made a "careful and thorough review of the evidence" and then found that "documentation and input from [Prof. Wang's co-worker] would be necessary to allow for any clear determination". Because the investigation has now made a clear determination, such documentation and input would be expected to be provided: obviously then, such should have been discussed with me. If documentation was not provided, then the investigation would contradict the unanimous "necessary" finding of the Inquiry Committee.

All this would seem to give the appearance of a cover-up, and breach federal regulations. I ask you to considering conducting an investigation that meets requirements.

I have been involved with other allegations of scientific fraud. In one case at Gothenburg University, the university administration also stood by the accused professor. The university president, Gunnar Svedberg, was criminally convicted of malfeasance (for his role in refusing to make documents available), and afterwards resigned from the university.

Your actions would also seem to be illegal. I contacted the Office of the Attorney General of New York State about this, and reviewed the case with an attorney there, Hannah Long. Ms. Long has now passed the case to another OAG attorney, but there is a backlog, and it will be a few weeks before further work on this is undertaken.

Sincerely, Douglas J. Keenan