



LOUISIANA STATE UNIVERSITY

School of the Coast & Environment
Department of Oceanography &
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Dr. Connie Woodhouse
Chair of the Search Committee
School of Geography and Development
412 Harvill Building, Box #2
University of Arizona
Tucson, Arizona 85721-0076

Dear Connie,

It is my pleasure to have the opportunity to write a letter of reference for Dr. Franco Biondi, who is being considered as a possible candidate for your advertised faculty position at the Tree-Ring Laboratory at the University of Arizona. Let me disclose confidentially upfront that I have followed Dr. Biondi's career development for nearly a decade, as I was an external referee for his P&T review in 2004 and again for his recent promotion review. However, I have interacted directly with him only at some professional meetings.

In your letter you asked me to comment on Dr. Biondi's academic ability, level of preparation, potential for growth, and quality of research as measured by his publication productivity and funding record. I would rate him as *excellent* in all of these aspects. He is certainly at or very near to the top echelon of dendroclimatic researchers in the nation, especially among those who are holding tenured or tenure-track appointments in Geography departments and thus balancing both research and teaching portfolios.

Dr. Biondi has published more than 50 refereed journal articles and book chapters. This is a very solid record of productivity by any standard, but it is even more impressive in view of several additional considerations pertaining to the quality of his work. The majority of his publications appear in prestigious, premier journals of the field, including, for example, *Quaternary Research*, *Ecology*, *Journal of Biogeography*, *Journal of Climate*, *global Change Biology*, and *Geophysical Research Letters*—just to name a few. It is also remarkable that he is the first author in most of his publications—in fact in *all* of them before 2005. He started publishing several papers as a non-first author in recent years, which is a common trend among senior scientists whose research enterprise has expanded to involve post-docs, students, and a growing network of collaborators—an explanation that seems to be applicable to Dr. Biondi's current status. More important, there is no sign of him slowing down. During the past four or five years he has published 17 refereed journal articles and book chapters, at a rate of about 3 to 4 per year. This leads me to conclude that he still has much potential for growth, as his research career doesn't seem to have peaked yet.

Dr. Biondi's portfolio of publications represents a solid and impressive body of work that contributes significantly to the fields of dendroclimatology, biogeography, and the science of environmental change in general. Among his various publications the single most important piece of work is his 2001 paper on the Pacific Decadal Oscillation (PDO) published in the *Journal of Climate*. In this paper, he presented a tree-ring-based reconstruction of the PDO that reveals the decadal-scale variability in Pacific climate since AD 1661. This paper, which has already been cited over 160 times in nine years, has become a classic in the global climate change literature. It also helps to firmly establish him as a leading researcher

in the community of dendroclimatologists. Among his more recent works, I see the greatest scientific promise in his dendroclimatological and dendrochronological studies conducted at the tropical treeline site on Nevado de Colima in Mexico. His 2001 paper in *Ambio* represents a pioneer study in the field of tropical dendroclimatology. This paper breaks new ground by presenting a 400-year tree-ring chronology from Mexican mountain pine (*Pinus hartwegii*), thus demonstrating that extracting an extensive tree-ring-based paleoclimatic record from tropical treeline in North America is possible. In a subsequent paper (Biondi et al., 2003) he followed up his pioneer work by documenting the sensitivity of tropical tree-ring growth response to the explosive eruption of a nearby volcano in 1913. His recent paper based on this investigation (Hartsough et al., 2008, in *Arctic, Antarctic, and Alpine Research*) examines the stable isotopic signals recorded in the tree rings of this species in response to the ecohydrologic cycle at this tropical treeline site. In my opinion, this group of papers, as well as results expected to be coming out from this ongoing investigation, will make a fundamental contribution to understanding the long-term climate variability in the North American tropics, from which very few paleoclimatic data are available.

In addition to his publications, another clear indication of his standing as a scholar is his outstanding grants record. His success in acquiring nationally competitive and prestigious research grants is astounding. In addition to his earlier CAREER award, he has been successful in recent years in obtaining competitive research funding from three different NSF programs—Paleoclimate (ATM), Paleoperspectives in Climate Change (P2C2), and Geography & Regional Science (GRS)—all as sole PI or collaborative PI. He has played a key role as a co-PI in some very large collaborative projects funded by other federal or state agencies. It is also remarkable that he has been invited to serve on the proposal review panel of various NSF programs—another good indicator of his reputation as a leading scholar in his fields. He is also a frequent invited speaker at professional meetings and academic institutions, not only nationally but also internationally.

I don't have any first-hand information to comment on Dr. Biondi's skills as a teacher and graduate student mentor. But in terms of research quality and productivity, the evidence is clear that he has a very strong track record and he enjoys an excellent reputation among his peers. I would see him as an ideal candidate who could have much to contribute to your new Environmental Initiative. He deserves your most serious consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'K Liu', written over a horizontal line.

Kam-biu Liu, Ph.D.

George William Barineau III Professor of Oceanography & Coastal Sciences
LSU School of the Coast and Environment