U.S. Department of Homeland Security
U.S. Citizenship and Immigration Services
Office of Administrative Appeals MS 2090
Washington, DC 20529-2090

**U.S. Citizenship
and Immigration
Services**

PUBLIC COPY

FILE: Office: TEXAS SERVICE CENTER   Date: JUL 0 1 2009
SRC 07 278 55861

IN RE: Petitioner:
             Beneficiary:

PETITION: Immigrant Petition for Alien Worker as a Member of the Professions Holding an Advanced
             Degree or an Alien of Exceptional Ability Pursuant to Section 203(b)(2) of the Immigration
             and Nationality Act, 8 U.S.C. § 1153(b)(2)

ON BEHALF OF PETITIONER:

SELF-REPRESENTED

INSTRUCTIONS:

This is the decision of the Administrative Appeals Office in your case. All documents have been returned to
the office that originally decided your case. Any further inquiry must be made to that office.

If you believe the law was inappropriately applied or you have additional information that you wish to have
considered, you may file a motion to reconsider or a motion to reopen. Please refer to 8 C.F.R. § 103.5 for
the specific requirements. All motions must be submitted to the office that originally decided your case by
filing a Form I-290B, Notice of Appeal or Motion, with a fee of $585. Any motion must be filed within 30
days of the decision that the motion seeks to reconsider or reopen, as required by 8 C.F.R. § 103.5(a)(1)(i).

John F. Grissom
Acting Chief, Administrative Appeals Office

DISCUSSION: The Director, Texas Service Center, denied the employment-based immigrant visa petition. The matter is now before the Administrative Appeals Office (AAO) on appeal. The AAO will dismiss the appeal.

The petitioner seeks classification pursuant to section 203(b)(2) of the Immigration and Nationality Act (the Act), 8 U.S.C. § 1153(b)(2), as a member of the professions holding an advanced degree. At the time he filed the petition, the petitioner was a model implementation credit risk analyst with UBS Investment Bank, Stamford, Connecticut.[1] The petitioner asserts that an exemption from the requirement of a job offer, and thus of a labor certification, is in the national interest of the United States. The director found that the petitioner qualifies for classification as a member of the professions holding an advanced degree, but that the petitioner has not established that an exemption from the requirement of a job offer would be in the national interest of the United States.

On appeal, the petitioner submits new exhibits and asserts that the director failed to take the nature of mathematical research into account.

Section 203(b) of the Act states, in pertinent part:

> (2) Aliens Who Are Members of the Professions Holding Advanced Degrees or Aliens of Exceptional Ability. --
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> > (A) In General. -- Visas shall be made available . . . to qualified immigrants who are members of the professions holding advanced degrees or their equivalent or who because of their exceptional ability in the sciences, arts, or business, will substantially benefit prospectively the national economy, cultural or educational interests, or welfare of the United States, and whose services in the sciences, arts, professions, or business are sought by an employer in the United States.
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> > (B) Waiver of Job Offer.
> >
> > > (i) . . . the Attorney General may, when the Attorney General deems it to be in the national interest, waive the requirements of subparagraph (A) that an alien's services in the sciences, arts, professions, or business be sought by an employer in the United States.

The director did not dispute that the petitioner qualifies as a member of the professions holding an advanced degree. The sole issue in contention is whether the petitioner has established that a waiver of the job offer requirement, and thus a labor certification, is in the national interest.

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[1] In April 2009, MetLife Group, Inc., filed a Form I-129 petition (receipt number EAC 09 133 51241) seeking to classify him as an H-1B nonimmigrant. That petition has been approved (conferring status valid from October 1, 2009 to September 22, 2012), and there is no record of any other employer filing a superseding petition.

Neither the statute nor the pertinent regulations define the term "national interest." Additionally, Congress did not provide a specific definition of "in the national interest." The Committee on the Judiciary merely noted in its report to the Senate that the committee had "focused on national interest by increasing the number and proportion of visas for immigrants who would benefit the United States economically and otherwise. . . ." S. Rep. No. 55, 101st Cong., 1st Sess., 11 (1989).

Supplementary information to regulations implementing the Immigration Act of 1990 (IMMACT), published at 56 Fed. Reg. 60897, 60900 (November 29, 1991), states:

> The Service [now U.S. Citizenship and Immigration Services] believes it appropriate to leave the application of this test as flexible as possible, although clearly an alien seeking to meet the [national interest] standard must make a showing significantly above that necessary to prove the "prospective national benefit" [required of aliens seeking to qualify as "exceptional."] The burden will rest with the alien to establish that exemption from, or waiver of, the job offer will be in the national interest. Each case is to be judged on its own merits.

Matter of New York State Dept. of Transportation, 22 I&N Dec. 215 (Commr. 1998), has set forth several factors which must be considered when evaluating a request for a national interest waiver. First, it must be shown that the alien seeks employment in an area of substantial intrinsic merit. Next, it must be shown that the proposed benefit will be national in scope. Finally, the petitioner seeking the waiver must establish that the alien will serve the national interest to a substantially greater degree than would an available U.S. worker having the same minimum qualifications.

It must be noted that, while the national interest waiver hinges on prospective national benefit, it clearly must be established that the alien's past record justifies projections of future benefit to the national interest. The petitioner's subjective assurance that the alien will, in the future, serve the national interest cannot suffice to establish prospective national benefit. The inclusion of the term "prospective" is used here to require future contributions by the alien, rather than to facilitate the entry of an alien with no demonstrable prior achievements, and whose benefit to the national interest would thus be entirely speculative.

We also note that the regulation at 8 C.F.R. § 204.5(k)(2) defines "exceptional ability" as "a degree of expertise significantly above that ordinarily encountered" in a given area of endeavor. By statute, aliens of exceptional ability are generally subject to the job offer/labor certification requirement; they are not exempt by virtue of their exceptional ability. Therefore, whether a given alien seeks classification as an alien of exceptional ability, or as a member of the professions holding an advanced degree, that alien cannot qualify for a waiver just by demonstrating a degree of expertise significantly above that ordinarily encountered in his or her field of expertise.

The petitioner filed the petition on July 30, 2007. In a statement accompanying his initial filing, the petitioner described his work:

[T]he stock market is risky. Stock prices fluctuate widely. . . . [Y]ou can reduce the impact caused by [a] bear market to a minimum level by introduction [of] risk control procedures during investment in [the] stock market.

. . . Nowadays, more than[] 70% people in [the] financial industry use [the] Geometric Brownian motion approach in modeling stock prices.

No doubt that using Geometric Brownian motion is a big step for people to model the stock price but it has its own fundamental shortcoming. That is, it is not able to describe the **jumps or sudden moves in stock prices** which happen[] frequently in [the] stock market. . . . So it is urgent for people to come up with a new model to understand the stock prices moves in some significant events.

After people saw the shortcoming of the widely used Geometric Brownian motion model, Cox and Ross proposed in 1975 that stock prices actually follow a jump process for [the] short-term. . . . This is a more intuitive view of stock markets, which allows larger moves in stock prices caused by sudden world events. . . . It is extremely important to model stock prices movement well in order to better manage the risks investors will have due to unexpected stock prices movement. . . .

The important result I obtained would make the modeling of stock price using stable processes possible. . . . After my work, people now know exactly the distribution of jumps of stable processes, not just estimate it as people did before. . . .

My research results have been highly appraised by the scientific community. . . .

My research results and experience are also recognized in [the] financial industry. . . . I was hired by UBS as an Associate Director in investment risk analysis, which is a high level senior position, although I didn't have any working experience in [a] financial company. I will be in control of the risk exposure. I will make sure that we have enough capital reserve to meet regulatory requirement[s] and to hedge our risk before we run into some trades if extreme events do happen[] in the near future. The better I can control our risk from more accurately modeling prices point of view, the less risks t[e]ns of thousands of UBS individual investors will face. . . .

As the leading expert in theory and modeling of jump processes in the world, I think I can and I have the responsibility to move the rolls going further to help more people to understand jump processes and modeling stock prices using jump processes.

I plan to develop several financial models using jump processes according to today's market. The model itself is not about making money, but to help people[] understand the market in some rare events and thus reduce the risk of people being exposed to [*sic*].

(Petitioner's emphasis.) Several letters accompanied the petitioner's initial submission. All of the witnesses have either worked or studied at the University of Connecticut, where the petitioner earned his graduate degrees. ██████████████ stated:

> I was [the petitioner's] PhD advisor from 2003 to 2006. [The petitioner] is one of the best students I have had. . . . He has made significant contributions to probability theory, much more than is typically done by a graduate student.
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> . . . [The petitioner's] research concerns proving uniqueness and existence for pure jump processes in higher dimensions. . . . [The petitioner] derived explicit formulas for the transition densities of symmetric stable processes, the archetype for pure jump processes.
>
> His results not only have an impact in pure research, but also allow[] practitioners in the financial industry to simulate stock prices and incorporate uncertainty into models using jump processes. It also helps investment traders to fairly price equity options when there exist jumps in the stock prices. The importance of equity options to the United States economy cannot be overstated.
>
> [The petitioner] has the capability to be a world-class mathematician. Although he has chosen to work in the financial industry, I am glad that he can utilize what he has learned for practical purposes. He has the potential to make a solid impact to the national interest of the United States.

██████████████████████ stated:

> [The petitioner] is the best student I have ever met at the University of Connecticut. At such a young age as a graduate student, he has already made a breakthrough achievement in probability theory, that is the proof of the uniqueness and existence of pure jump processes in high dimensions. This problem has been hanging out there for more than a decade since the proof for one dimension case by ██████ in 1988. Prof. ██████ previous result was considered one of the foundations for modern probability theory. I can envision that [the petitioner's] result will also be one of the classical foundations for future development in probability theory.
>
> Furthermore, [the petitioner] has made fundamental contributions by being the first researcher to derive the explicit formula for transition densities for stable processes, one of the most important fundamental jump processes. These two results already qualify [the petitioner] as the leading expert in the field of pure jump processes theory.
>
> . . . [H]is results allow to simulate [*sic*] the abrupt changes of stock prices in the financial markets, which is related to his work in the UBS investment bank. His results also allow to derive [*sic*] the pricing formula for equity options when there are jumps in the stock

prices. His results can be the basis for the purpose of risk management when there are jumps in the market[']s behavior.

[The petitioner] is a leading expert in pure jump processes theory, and he is probably the only person in the world that uses the most advanced knowledge about jump process to model the stock market.

▮, now Assistant Vice President at Tradeweb LLC, stated:

I knew [the petitioner] when I was a graduate student in mathematics at [the] University of Connecticut. As a classmate, I knew that he [was] the best student in the Mathematics Department.

. . . During his PhD study, [the petitioner] derived the transition densities of stable processes, which is a process that can address more complicated jump processes. What I am aware of is that he is the first researcher who derived [an] explicit formula on transition densities for stable process. This result is the foundation for better modeling stock prices using jump process theory.

He is also the first person who proved the existence and uniqueness of pure jump processes of variable order. Both these results will have unprecedented impact on the modeling of stock prices and risk management, and will be a milestone for further theoretical development in probability theory.

. . . As far as I know, [the petitioner] is the first person in the world who applies the most advanced mathematical theory about pure jump process to model the stock price. I have no doubt that his work will have tremendous impact on the investors when they make decisions. I am looking forward to his work [being] published so that I can use his results to incorporate into our financial analysis tools.

▮ now a research scientist at Columbia University, was a doctoral student in biomedical engineering at the University of Connecticut at the same time that the petitioner studied mathematics there. ▮ stated:

During my PhD study [at the] University of Connecticut, when developing new algorithm and system [sic] for reconstructing the structural and functional information of a target embedded in a turbid medium, such as a tumor within an organ, we found that some effects of the boundary conditions on the reconstructed images need probability theory to address the problems. [The petitioner], who is an expert in probability theory, has given me much help and guidance in understanding the appropriate probability theory. The probability theory about pure jump process can help us to determine whether some unexpected effects shown in an image of a tissue suggest bad components or not.

The witnesses quoted above clearly have strong opinions regarding the value of the petitioner's work. The petitioner's initial submission, however, offered no indication that anyone outside of the University of Connecticut shares this view, as we would expect if the petitioner's work has truly revolutionized probability theory and stock market price prediction.

The petitioner admitted that he "didn't have any working experience in [a] financial company" when UBS hired him less than two months before he filed the petition. Therefore, it is not readily clear that he had time to accumulate any sort of significant track record in the financial industry at the time he filed the petition.

On October 23, 2008, the director issued a request for evidence, instructing the petitioner to establish the impact of his past work in his field. The director specifically requested letters from independent witnesses. In response, the petitioner submitted four such letters.

██████████████████ of the University of Washington, a self-described "colleague and co-author [of] ████████," read two of the petitioner's articles and praised their "superb quality." ██████████ stated: "There is no question in my mind that [the petitioner] is an extremely talented junior mathematician."

██████████████ of the University of British Columbia (UBC) stated:

> I am writing upon [the petitioner's] request but was already quite familiar with his research into stochastic processes with jumps as [the petitioner] accompanied his thesis supervisor, ████████████, to UBC in 2004-05. During this time I was able to speak to [the petitioner] about his work which is related to my own work on branching measure diffusions. It was a pleasure talking to him as he clearly had a good grasp of a broad range of issues related to his research. I have no other personal relationship with [the petitioner].
>
> His research concerns the extension of a fundamental and 40-year old method of Stroock and Varadhan to processes with jumps. . . . His results are state of the art. Both the results, and . . . the methods, are sure to [be] extremely useful for both theoreticians and applied probabilists alike. They also point to a promising career ahead for [the petitioner]. He clearly has much more to offer us in probability theory and stochastic modelling applications.

██████████████ of the University of New Hampshire stated:

> I do not have personal relation [*sic*] with [the petitioner]. However, I first knew his work when he presented his results at [a] meeting . . . at [the] University of New Hampshire in November, 2005. I am interested in his work because it has some new

ideas and techniques in operator theory although its purpose is to solve problems in probability theory.

> [The petitioner's] research concerns proving existence and uniqueness of pure jump processes. . . . [The petitioner] not only laid down the foundation for further research but also surprised people with his novel ideas and skills. His results will have a significant impact on the area, dramatically changing researchers' approaches.

███████████ did not specify to what extent the petitioner's work has changed ███ own approach to his work. ███████████ asserted that the petitioner's area of research involves pseudo-differential operators, which "are finding a wide variety of new applications in wireless communications, medical imaging, and geophysics. These applications affect our lives greatly and require new tools and techniques, which will be provided by researchers like" the petitioner. When discussing the applications of the petitioner's work, ███████ did not mention finance. He referred to the petitioner as a "researcher," and did not indicate any awareness that the petitioner is now a financial analyst.

The only witness to mention finance is ███████████████████ of the University of Pennsylvania's Wharton School, who stated:

> [The petitioner's] proof of the uniqueness and existence [of] a class of pure jump processes for high dimensional case [sic] is a ground breaking contribution to probability theory that is all the more remarkable for coming after almost twenty years of negligible progress after the establishment of the one dimensional case by Bass in 1988. . . .

> These results can be expected to have a major impact on the research of the jump processes that are of importance both in pure mathematics and in mathematical finance where jump processes are of increasing importance. [The petitioner's] work extends the range of financial models that are already widely used in financial services. His contributions also make possible a large class [of] new models that are especially relevant during periods of high volatility, such as we have most recently observed.

The witnesses described the petitioner's work as "promising," and stated that it "will have a significant impact." It is far easier to offer vague predictions of future impact than to demonstrate how the petitioner's work has already affected either finance in particular, or mathematics in general.

The petitioner received an electronic mail message dated June 10, 2008, from a German publishing house, offering to publish the petitioner's doctoral thesis in book form. The petitioner also demonstrated that one of his papers, "The martingale problem for a class of stable-like processes," has been downloaded four times. This evidence addresses the availability of the petitioner's work, not its impact. Furthermore, the German publisher's inquiry came nearly a year after the filing date, and the petitioner did not submit his article for publication until September 2007, several months after the filing

date. The thesis, article, and other works were published after the filing date but arose from the petitioner's earlier graduate work. Therefore, these materials do not show that the petitioner continues to engage in mathematical research of the sort that impressed █████████colleagues.

The petitioner submitted copies of two articles citing his work. The petitioner acknowledged that few researchers have cited his published work, but he asserted that this is because articles in his branch of mathematics rarely result in heavy citation. This may be so, but there ought to be some objective means of demonstrating that the petitioner's work has been especially influential within the field, beyond letters attesting to the promise of future impact.

The director denied the petition on December 4, 2008, stating that the witness statements in the record cannot outweigh the lack of objective evidence to establish the impact and influence of the petitioner's work. The director noted that the petitioner must establish eligibility as of the filing date, pursuant to 8 C.F.R. § 103.2(b)(1), and therefore he cannot simply show that, in the opinion of some experts of his own choosing, his work will eventually be highly influential.

On appeal, the petitioner asserts that his work was cited twice before the filing date, and he repeats the assertion that "mathematical papers" are infrequently cited compared to papers in many other academic fields. The record indicates that the citing papers (one of which was co-authored by his advisor, ████ ████)were drafted before the filing date, but required revision and were not published until after the filing date.

in a new letter, asserts that "mathematics papers usually go through a much longer review and proof checking process than other physical science papers," and therefore the petitioner's "papers have not existed long enough for many citations to have appeared." This does not force us to conclude that the petitioner's work is being heavily cited, and that these citations will eventually appear as a matter of course. The burden of proof is on the petitioner to establish that he is eligible for the benefit sought; the petitioner cannot avoid this burden by stating that the evidence of eligibility has not yet had time to come into existence. If anything, this argument indicates that the petitioner filed the petition prematurely.

By the same token, we cannot be persuaded by the petitioner's observation that "Boolean algebra was developed in 1854 by █████████but had no impact on the material world until it became central to computer logic a century later." We must judge the petitioner's work on its demonstrable impact, rather than on speculation that its impact may be apparent in retrospect after years or decades.

Citations are not the only means by which to measure the importance of academic research work. Nevertheless, there must exist some objectively verifiable way to distinguish between truly significant research from other work in the field. The assertion that the distinction will become clear with time will not suffice, and we will not approve a petition now on the expectation that events at some undefined future time will justify that approval.

Furthermore, even if we were to accept all of the petitioner's assertions regarding the importance of his doctoral thesis and the articles that arose from his graduate studies, the petitioner is no longer a graduate student and he no longer works in an academic setting. The petitioner began working for an investment bank shortly before the filing date. The petitioner claims that his research as a graduate student has created considerable excitement among mathematicians, but he has not even claimed, let alone demonstrated, that his work in the financial industry has attracted similar attention or had similar impact. The petitioner has not established the prospective (i.e., future) benefit that will arise from his already-completed student work, and the assertion that he was a productive researcher does not compel the conclusion that his work in banking will be of important national benefit.

As is clear from a plain reading of the statute, it was not the intent of Congress that every person qualified to engage in a profession in the United States should be exempt from the requirement of a job offer based on national interest. Likewise, it does not appear to have been the intent of Congress to grant national interest waivers on the basis of the overall importance of a given profession, rather than on the merits of the individual alien. On the basis of the evidence submitted, the petitioner has not established that a waiver of the requirement of an approved labor certification will be in the national interest of the United States.

The burden of proof in these proceedings rests solely with the petitioner. Section 291 of the Act, 8 U.S.C. § 1361. The petitioner has not sustained that burden.

This decision is without prejudice to the filing of a new petition by a United States employer accompanied by a labor certification issued by the Department of Labor, appropriate supporting evidence and fee.

ORDER: The appeal is dismissed.