高校校长被指控抄袭学生？或面临辞职风险

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高校校长被指控抄袭学生？或面临辞职风险。编译 卜金婷 田瑞颖

美国马里兰大学帕克分校（UMD）校长Darryll Pines近日麻烦缠身。

有媒体报道，Pines在2002年和2006年发表的论文中大量抄袭他人作品且未注明出处。其中，他于2002年发表的一篇仅有5000多个单词的论文中，约有1500个单词与一名学生在教辅网站上所发的几乎完全相同。

Pines承认论文中存在“ 重复的文字 ”，但否认完全抄袭，“ 虽然我不认为这些指控有任何根据，但公正的审查符合大学的最佳利益 ”。

Pines是UMD首位黑人校长，他的故事与哈佛大学前校长Claudine Gay有些相似。他们都因处理校园反犹太主义问题而受到批评，并被质疑有学术抄袭行为。Gay在自己的抄袭行为被曝光后辞职，而Pines则要求对自己的学术研究进行独立审查。

Darryll Pines 图源：UMD

被指控学术抄袭

根据美国新闻网站《每日电讯》的调查，Pines的2篇学术文章抄袭了澳大利亚学生Joshua Altmann在多年前创建的网站上的内容。

2002年，Pines与一位合作者发表了一篇题为“ Health monitoring of one dimensional structures using empirical mode decomposition and the Hilbert-Huang Transform ”的论文。该论文有5000多个单词，其中约1500个单词的内容与1996年Altmann创建的教辅网站“ Surfing the Wavelets ”上的内容几乎完全相同，但论文中没有引用或提及Altmann和该网站。

Darryll Pines (2002)	Joshua Altmann (1996)
2.1.1. Time Domain Analysis	Time Domain Analysis
Prior to the discovery of the FFT and the implementation of the first real time spectral analyzers, vibration analysis was predominantly performed by looking at details of the time domain waveform of the signal. Although this enabled rudimentary detection and diagnosis of faults by examining the major repetitive components of a signal, complex signals with a multitude of components could not be accurately assessed.	Prior to the discovery of the FFT and the implementation of the first real time spectral analysers, vibration analysis was predominantly performed by looking at the time waveform of the signal. Although this enabled rudimentary detection and diagnosis of faults by examining the major repetitive components of a signal, complex signals with a multitude of components could not be accurately assessed.
This led to the emergence of several techniques that could be used to enhance the characteristics that exist, otherwise not readily observable from the time waveform. These include time-synchronous averaging, and auto-correlation of the signal. Time synchronous averaging uses the average of the signal over a large number of cycles, synchronous to the running speed of the machine.	Several techniques can be used to enhance the characteristics that are otherwise not readily observable from the time waveform. These include time-synchronous averaging, and auto-correlation of the signal. Time synchronous averaging uses the average of the signal over a large number of cycles, synchronous to the running speed of the machine.
This attenuates any contributions due to noise or non-synchronous vibrations. The auto-correlation function is the average of the product. Application of the auto-correlation function on the time series allows us to indirectly obtain information about the frequencies present in the signal. However, these techniques only provide a limited amount of additional information. The need to distinguish between components of a similar nature or hidden within a complex vibration signal led to the mathematical representation of these signals in terms of their orthogonal basis functions, a field of mathematics whose origins date back to Joseph Fourier's investigations into the properties of heat transfer.	This attenuates any contributions due to noise or non-synchronous vibrations. The auto-correlation function is the average of the product. Application of the auto-correlation function on the time series allows us to indirectly obtain information about the frequencies present in the signal. However these techniques only provide a limited amount of additional information. The need to distinguish between components of a similar nature or hidden within a complex vibration signal led to the mathematical representation of these signals in terms of their orthogonal basis functions, a field of mathematics whose origins date back to Joseph Fourier's investigations into the properties of heat transfer.
2.1.2. Frequency Domain Analysis	Frequency Domain Analysis
The advent of the Fourier Series in the early 1800's by Joseph Fourier (1768-1830) provided the foundations for modern signal analysis, positing the basis for a significant proportion of the mathematical research undertaken in the 19th and 20th centuries. Fourier introduced the concept that an arbitrary function, even a function which exhibits discontinuities, could be expressed by a single analytical expression.	The advent of the Fourier Series in the early 1800's by Joseph Fourier (1768-1830) provided the foundations for modern signal analysis, positing the basis for a significant proportion of the mathematical research undertaken in the 19th and 20th centuries. Fourier introduced the concept that an arbitrary function, even a function which exhibits discontinuity's, could be expressed by a single analytical expression.
At the time this idea had its detractors within the mathematical fraternity, including some of the more prominent mathematicians of the time, Biot, Laplace and Poisson. However, his research has since been vindicated and has provided the kernel to many advances in mathematics, science and engineering.	At the time this idea had its detractors within the mathematical fraternity, including some of the more prominent mathematicians of the time, Biot, Laplace and Poisson. However, his research has since been vindicated and has provided the kernel to many advances in mathematics, science and engineering.
Fourier was obsessed with heat after his return to France from the warmer shores of Egypt where he partook in Napoleons' Campaign. This probably explains his fervent fascination in the phenonomem of heat transfer. In his principal composition, "The Analytic Theory of Heat", Joseph Fourier established the partial differential equations governing heat diffusion and solved it by using an infinite series of trigonometric functions, the Fourier series.	Fourier was obsessed with heat after his return to France from the warmer shores of Egypt where he partook in Napoleons' Campaign. This probably explains his fervent fascination in the phenonomem of heat transfer. In his principal composition, "The Analytic Theory of Heat", Joseph Fourier established the partial differential equations governing heat diffusion and solved it by using an infinite series of trigonometric functions, the Fourier series.
For a continuous function of period 2P, the Fourier series is given by [equation] where the Fourier coefficients are calculated by [equation]	For a continuous function of period 2P, the Fourier series is given by [equation] where the Fourier coefficients are calculated by [equation]
The coefficients of these orthonormal basis functions represent the contribution of the sine and cosine components of the signal at all frequencies. This allows the signal to be analysed in terms of its frequency components.	For a more detailed and informative exposition on the life of Baron Jean Baptiste Joseph Fourier I suggest visiting the WWW site, maintained by David A. Nesbon from the University of Glasgow, or another site that provides an excellent index of bibliographies on famous mathematicians including Joseph Fourier. The characteristic of the Fourier transform that has made it such a valuable tool is its ability to decompose any periodic function, such as machine vibrations or a complex sound into a set of orthonormal basis functions, of sines and cosines.
Despite the functionality of the Fourier Transform, especially in regard to obtaining the spectral analysis of a signal, there are several shortcomings of this technique. The first of these is the inability of the Fourier Transform to accurately represent functions that have non-periodic components that are localised in time or space, such as transient impulses. This is due to the Fourier Transform being based on the assumption that the signal to be transformed is periodic in nature and of infinite length. Another deficiency is its inability to provide any information about the time dependence of a signal because results are averaged over the entire duration of the signal. This is a problem when analysing signals of a non-stationary nature, where it is often beneficial to be able to acquire a correlation between the time and frequency domains of a signal. This is often the case when monitoring machine vibrations.	The coefficients of these orthonormal basis functions represent the contribution of the sine and cosine components of the signal at all frequencies. This allows the signal to be analysed in terms of its frequency components as shown below.
A variety of alternative schemes have been developed to improve the description of non-stationary vibration signals. These range from developing mathematical models of the signal, to converting the signal into a pseudostationary signal through angular sampling, and time-frequency analysis of the vibrations.	A major development which revolutionised the computational implementation of the Fourier transform was the introduction of the fast Fourier transform (FFT) by Cooley and Tukey in 1965, which enabled the implementation of the first real time spectral analysers [COLE65]. The FFT improved the computational efficiency of the Fourier transform of a signal represented by n discrete data points, from an order of n x n to n x log(n) arithmetic operations.
2.1.3. Time-Frequency Signal Analysis	Despite the functionality of the Fourier transform, especially in regard to obtaining the spectral analysis of a signal, there are several shortcomings of this technique. The first of these is the inability of the Fourier transform to accurately represent functions that have non-periodic components that are localised in time or space, such as transient impulses. This is due to the Fourier transform being based on the assumption that the signal to be transformed is periodic in nature and of infinite length. Another deficiency is its inability to provide any information about the time dependence of a signal, as results are averaged over the entire duration of the signal. This is a problem when analysing signals of a non-stationary nature, where it is often beneficial to be able to acquire a correlation between the time and frequency domains of a signal. This is often the case when monitoring machine vibrations...
As noted by Jean Ville2 in 1947 there are two basic approaches to time-frequency analysis. The first approach is to initially cut the signal into slices in time, and then to analyse each of these slices separately to examine their frequency content. The other approach is to first filter different frequency bands, and then cut these bands into slices in time and analyse their energy content. The first of these approaches is used for the construction of the short time Fourier Transform and the Wigner-Ville Transform, while the second involves the application of the wavelet transform.	A variety of alternative schemes have been developed to improve the description of non-stationary vibration signals. These range from developing mathematical models of the signal, to converting the signal into a pseudo-stationary signal through angular sampling, and time-frequency analysis of the vibrations.
The wavelet transform is a mechanism used to dissect or breakdown a signal into its constituent parts, thus enabling analysis of data in different frequency domains with each component's resolution matched to its scale. Alternatively, this may be seen as a decomposition of the signal into its set of basis functions (wavelets), analogous to the use of sines and cosines in Fourier analysis to represent other functions. These basis functions are obtained from dilations or contractions (scaling), and translations of the mother wavelet. The important difference that distinguishes the wavelet transform from Fourier analysis is its time and frequency localization properties. When analysing signals of a non-stationary nature, it is often beneficial to be able to acquire a correlation between the time and frequency domains of a signal. In contrast to the Fourier Transform, the wavelet transform allows exceptional localization in both the time domain via translations of the mother wavelet, and in the scale (frequency) domain via dilations. Although the wavelet transform has come into prominence during the last decade, the founding principles behind wavelets can be traced back as far as 1909 when Alfred Haar discovered another orthonormal system of functions, such that for any continuous function f(t), the series $\sum_{j=0}^{\infty}\sum_{k=0}^{2^j-1} a_{jk}\psi_{jk}(t)$ converges to f(t) uniformly over the interval. Haar's research led to the simplest of the orthogonal wavelets, a set of rectangular basis functions depicted in Figure 1.	As noted by Jean Ville in 1947 [VILL47] there are two basic approaches to time-frequency analysis. The first approach is to initially cut the signal into slices in time, and then to analyse each of these slices separately to examine their frequency content. The other approach is to first filter different frequency bands, and then cut these bands into slices in time and analyse their energy content. The first of these approaches is used for the construction of the short time Fourier transform and the Wigner-Ville transform, while the second leads to focus of this thesis, the wavelet transform.
The Haar basis function was of limited use due to it being discontinuous in nature. This resulted in it being inefficient in modelling smooth signals, as many levels need to be included to obtain an accurate representation. The theories expounded by Haar were extended in the 1930's by Levy in the study of Brownian motion where he used the Schauder basis to examine local regularity properties that were not accessible via the Fourier Transform. A similar problem was being tackled by Littlewood and Paley, who were attempting to localise the contributing energies of a function. They were interested in whether the energy of a function was spread evenly over its entire interval or concentrated about a few points. In order to reveal this information, which is hidden within the Fourier coefficients, Littlewood and Paley discovered a series of manipulations that could be applied to the Fourier series to retrieve this information. They introduced the dyadic block, a sequence of operators that act essentially as a bank of band pass filters with an interval of separation of approximately an octave. The dyadic block was defined by Littlewood and Paley as, [equation]. This allows us to rewrite the Fourier series in terms of its dyadic blocks, [equation].	The wavelet transform is a mechanism used to dissect or breakdown a signal into its constituent parts, thus enabling analysis of data in different frequency domains with each components resolution matched to its scale. Alternatively this may be seen as a decomposition of the signal into its set of basis functions (wavelets), analogous to the use of sines and cosines in Fourier analysis to represent other functions. These basis functions are obtained from dilations or contractions (scaling), and translations of the mother wavelet. The important difference that distinguishes the wavelet transform from Fourier analysis is its time and frequency localisation properties. When analysing signals of a non-stationary nature, it is often beneficial to be able to acquire a correlation between the time and frequency domains of a signal. In contrast to the Fourier transform, the wavelet transform allows exceptional localisation in both the time domain via translations of the mother wavelet, and in the scale (frequency) domain via dilations. Although the wavelet transform has come into prominence during the last decade, the founding principles behind wavelets can be traced back as far as 1909 when Alfred Haar [HAAR10] discovered another orthonormal system of functions, such that for any continuous function f(x), the series converges to f(x) uniformly over the interval. Haar's research led to the simplest of the orthogonal wavelets, a set of rectangular basis functions depicted in Figure 1.1.
However it was not until 1946 that the first time-frequency wavelets (Gabor wavelets) were introduced by Dennis Gabor, an electrical engineer researching communication theory. Gabor's idea was to break a wave up into segments, and then analyze the individual segments of the wave (wavelets), each of which had a well defined frequency band and position in time. Although Gabor's wavelets worked for continuous decomposition's of signals they were limited in their usefulness as corresponding wavelets for discrete systems did not exist. Shortly after Gabor's work, Jean Ville,7 proposed another approach for obtaining a mixed signal representation. Ville's work was tied into the research of Hermann Wigner (1932), a physicist working in the field of quantum mechanics, and led to the development of the Wigner-Ville Transform, given by [equation] where f(t) is the original time signal. Unfortunately, the Wigner-Ville Transform renders imperfect information about the energy distribution of the signal in the time-frequency domain, and an atomic decomposition of a signal based on the Wigner-Ville Transform does not exist.	The Haar basis function was of limited use due to it being discontinuous in nature. This resulted in it being inefficient in modelling smooth signals, as many levels need to be included to obtain an accurate representation. The theories expounded by Haar were extended on in the 1930's by Levy in the study of Brownian motion where he used the Schauder basis to examine local regularity properties that were not accessible via the Fourier transform. A similar problem was being tackled by Littlewood and Paley, who were attempting to localise the contributing energies of a function. They were interested in whether the energy of a function was spread evenly over its entire interval or concentrated about a few points. In order to reveal this information which is hidden within the Fourier coefficients, Littlewood and Paley discovered a series of manipulations that could be applied to the Fourier series to retrieve this information. They introduced the dyadic block a sequence of operators that act essentially as a bank of band pass filters with an interval of separation of approximately an octave. The dyadic block was defined by Littlewood and Paley as, [equation]. This allows us to rewrite the Fourier series in terms of its dyadic blocks, [equation].
The next major step forward did not come until the emergence of wavelet theory during the 1980's and 1990's from the research of Grossmann and Morlet. They employed wavelets to analyze earthquakes and model the process of sound waves traveling through the Earth's crust, introducing the concept of using wavelets to analyze signals of a non-stationary nature.	Other contributions to the mathematics laying the groundwork for wavelets during the 1930's include the works of Antoni Zygmund, Phillip Franklin and Lusin.
Following on this work, Yves Meyer, a mathematician researching harmonic analysis, developed a family of wavelets that he showed to be the most efficient for modeling complex phenomena. The final transition from continuous signal processing to discrete signal processing was achieved by Stephane Mallat4 and Ingrid Daubechies of Bell Labs. 5 6. Since then there has been a proliferation of activity with comprehensive studies expanding on the wavelet transform and its implementation into many fields of engineering. Applications that have been explored include multi-resolution signal processing, image and data compression, telecommunications, fingerprint analysis, numerical analysis, speech processing and structural dynamics.	However it was not until 1946 that the first time-frequency wavelets (Gabor wavelets) were introduced by Dennis Gabor (GABO46), an electrical engineer researching into communication theory. Gabors idea was to break a wave up into segments, and then analyse the individual segments of the wave (wavelets), each of which had a well defined frequency band and position in time. Although Gabor's wavelets worked for continuous decomposition's of signals they were limited in their usefulness as corresponding wavelets for discrete systems did not exist. Shortly after Gabor's work, Jean Ville [VILL47] proposed another approach for obtaining a mixed signal representation. Ville's work was tied into the research of Hermann Wigner (1932), a physicist working in the field of quantum mechanics, and led to the development of the Wigner-Ville transform, given by [equation], where f(t) is the original time signal. Unfortunately the Wigner-Ville transform renders imperfect information about the energy distribution of the signal in the time-frequency domain, and an atomic decomposition of a signal based on the Wigner-Ville transform does not exist [MEYE93].
	The next major step forward did not come until 1975 when Coifman and Weiss extended Lusin's work to invent what we now consider the 'atoms' and 'molecules' which were to form the basic building blocks of a function space, and the rules of assembly necessary to reconstruct the function space in its entirety from these 'atoms'. The first synthesis of these theories leading up to wavelet analysis, and the impetus for the enormous interest in wavelet theory during the 1980's and 1990's came from the research of Grossmann (theoretical physicist) and Morlet (geophysicist). They employed wavelets to analyse earthquakes and model the process of sound waves travelling through the Earth's crust, introducing the concept of using wavelets to analyse signals of a non-stationary nature. Grossmann and Morlet defined a wavelet as a "function in L2 whose Fourier transform satisfies the criterion almost everywhere" [MEYE93].
	Following on from this work Yves Meyer, a mathematician researching into harmonic analysis, developed a family of wavelets that he showed to be the most efficient for modelling complex phenomena. The final transition from continuous signal processing to discrete signal processing was achieved by Stephane Mallat [MAL189] and Ingrid Daubechies of Bell Labs [DAUB88]. Since then there has been a proliferation of activity with comprehensive studies expanding on the wavelet transform and its implementation into many fields of engineering. Applications that have been explored include multi-resolution signal processing, image and data compression, telecommunications, fingerprint analysis, numerical analysis and speech processing.

Joshua Altmann1996年的网站和Pines的论文对比。图源：《每日电讯》

Altmann发表这篇论文时，还是一名澳大利亚的大学生。彼时的Pines拥有美国麻省理工学院的博士学位，并领导马里兰大学的一个项目，旨在“ 增加工程学院四个系中少数族裔博士的数量 ”。

2006年，Pines与合作者发表了题为“ Structural health monitoring using empirical mode decomposition and the Hilbert phase ”的论文。这篇论文使用了2002年所发论文的大部分内容，包括被指抄袭Altmann的部分，而该论文同样也没有注明来源。

《每日电讯》披露抄袭事件后，Pines向全体大学教职员工发送了一封主题为“ 即将进行公正审查 ”的电子邮件。

Pines写道：“ 在向学术期刊提交论文的近40年中，我始终为自己能够撰写出最高质量的科学作品而自豪。作为一名将诚信纳入个人及职业价值观的人，我立即与合作者联系，对稿件进行评审。虽然我坚信我们的结果、数据和发现是可靠的，但我承认引言部分的语言存在重复。 ”

他还表示，“ 虽然我不认为这些指控有任何根据，但公正的审查符合大学的最佳利益。根据现有的研究行为相关政策，我已要求研究诚信办公室（ORI）开展独立审查。 ”

September 18, 2024

Dear faculty colleagues,

In the past year, like many of my fellow higher education presidents and chancellors, I have come under aggressive scrutiny, both personally and professionally, including aspersions cast on my decision-making and my values. Just yesterday, a blogger contended that I co-authored papers in 2002 and 2006 on the topic of structural health monitoring that used language from an online tutorial without citation.

I have always prided myself on producing the highest-quality scientific work over nearly four decades of submitting peer-reviewed research to academic journals. As someone who holds integrity as both a personal and professional value, I immediately connected with my co-author to review the manuscript. While I am steadfast that our results, data and findings are sound, I acknowledge recurrent language in the introductory sections.

While I do not believe there is merit to these claims, an impartial review is in the best interest of the university. Consistent with existing policies related to research conduct, I have asked the Office of Research Integrity (ORI) to begin an independent review. The findings of the ORI review will be shared with the University System of Maryland Chancellor Jay Perman through our Office of Faculty Affairs in the Provost's Office.

I hold myself to the same standards and practices as my esteemed colleagues across the university.

Sincerely,

Darryll J. Pines
President, University of Maryland
He/Him/His

Pines致全体师生的邮件 图源：《每日电讯》

在《每日电讯》报道之前，Pines的一位发言人试图为这些重复的内容辩护，称其为“重复的语

言”，并表示“在介绍材料中使用习惯用语或通用语言，并不能说明数据的完整性或调查结果的真实性”。

此举引起多位学者的震惊和愤怒。他们表示，没有学者会认为从一位鲜为人知的作者那里粘贴1500个单词是“习惯用语或通用语言”。

此事被披露后，《巴尔的摩旗帜报》引用了近20年来一直研究抄袭问题的专家Jonathan Bailey的话。Bailey说，针对抄袭的指控在去年有所增多，尤其是对有色人种学者的研究指控。然而，这些指控往往可疑且站不住脚，只集中在几句话或改写得很差的段落上。但对Pines的指控“似乎更有力”，因为论文部分内容与Surfing the Wavelets网站的上几乎完全一样。

Bailey表示，尽管时下流行的抄袭检测器TurnItIn于1998年问世，但在21世纪初期并未得到广泛使用。他补充说，当时不注明出处地复制粘贴可能更为常见，他认为Pines的文章在提交时并未经过任何形式的抄袭检测。

“当时互联网非常流行，人们都在网上做研究。”Bailey说，“互联网无处不在，而抄袭检测软件却并非如此。这就是这篇论文的问题所在。”

一位来自国际光学工程学会的发言人表示，“作者和贡献者任何形式、任何程度的剽窃都是不道德的、不可接受的，是严重违反职业规范的行为”。

集会风波

在抄袭事件被曝光前夕，《每日电讯》多次对Pines进行批评报道，主要涉及马里兰大学在反以色列团体举行集会事件上的反应。

8月29日，《每日电讯》报道，马里兰大学将允许反以色列的巴勒斯坦正义学生会（SJP）在10月7日举行周年纪念日集会。

9月6日，《每日电讯》称，一名犹太妇女通过电子邮件批评马里兰大学对反犹太主义的回应。Pines在回复邮件中要求她停止与学校反犹太主义特别工作组成员的所有通信，否则将“采取进一步行动，包括但不限于寻求马里兰大学警察局的协助”。

此外，Pines还回复了另一位马里兰州居民的邮件，他在邮件中为SJP的活动作出解释，称其“只是想行使第一修正案和言论自由权，纪念那些在这场冲突中丧生的巴勒斯坦人”。

《每日电讯》报道称，Pines不顾反对批准了该活动。9月1日，马里兰大学系统介入，禁止所有学生团体在10月7日举行活动。

在此次写给全校师生的邮件里，Pines写道：“在过去的一年里，像我的许多高等教育校长和校监同事一样，由于各种原因，我在个人和职业上都受到了审查和攻击，包括对我的决策和价值观的诽谤。”

Pines与Gay的经历有些类似。去年12月，Gay参加了反犹太主义众议院听证会。当被问及呼吁对犹太人进行种族灭绝是否会违反学校行为准则时，她没有明确回应“是”或“否”，并称必须在它与自由之间取得平衡。

之后几周，Gay深陷听证会风波和学术剽窃指控，并于1月2日辞职，标志着哈佛大学近400年历史上第一位黑人校长和第二位女校长的任期结束。

相关参考信息：

1.https://www.dailywire.com/news/university-of-maryland-president-acknowledges-recurrent-language-submits-to-plagiarism-review

2. https://www.dailywire.com/news/university-of-maryland-president-copied-rocket-science-paper-from-aussie-student

3. https://www.dailywire.com/news/u-of-maryland-prez-said-anti-israel-protesters-could-rally-on-10-7-then-threatened-to-call-police-on-jew-for-complaining

4. https://www.dailywire.com/news/university-of-maryland-president-plagiarized-from-chatgpt-to-justify-anti-israel-oct-7-rally

5. https://www.thebaltimorebanner.com/education/higher-education/university-of-maryland-darryll-j-pines-ZUVIHYS4Z5EFJIY7BUSVFGY6XA/

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