

anonymous interviewee wrote in an e-mail, that African American women, people with disabilities and members of other minority groups earn tenure and promotion more easily than do their white male (or non-disabled) counterparts. A 2016 report by the Teachers Insurance and Annuity Association of America (TIAA) Institute, based in New York City, found that although US universities and colleges had increased the diversity of their faculties in the past two decades, most of those gains had been off the tenure track (see [go.nature.com/2lha3ah](http://go.nature.com/2lha3ah)). Underrepresented minorities, including African American, Hispanic, American Indian and Alaskan Native individuals, comprised 10.2% of full-time tenured faculty positions in US universities in 2013, the TIAA report found. The proportion of faculty members who are black and were hired between 2007 and 2016 fell from 7% to 6.6%, according to additional federal data analysed by the Hechinger Report, an organization based in New York City that covers higher education (see [go.nature.com/2cgrpmz](http://go.nature.com/2cgrpmz)).

Erika Jefferson, the founder and president of Black Women in Science and Engineering in Houston, Texas, says that the climate is still hostile towards minorities in some US universities. “There are certainly some wonderful schools that are supportive of everyone regardless of race and gender,” she adds. She says that female African American faculty members can benefit when their department contains other African American women who can share their experience and offer support.

**“I didn’t see being denied tenure as a blessing, but having that door closed put me on a path to doing something I really enjoy.”**

#### MOVING ON SWIFTLY

Some universities have a formal process for helping those whose tenure was denied to navigate the next steps. Julie Sandell, senior associate provost at Boston University in Massachusetts, says that doing just that is part of her remit. She says that the university aims to help those in their ‘terminal year’ (almost all colleges offer an extra year of teaching and research, during which academics can search for another post) with an easier transition, offering a reduced teaching load, for example.

And tenure denial is not always the end of the road. Most universities have an appeal process, and the appeal sometimes succeeds. “If people have any inkling that they want to appeal, I tell them they should appeal,” says Sandell. “Otherwise they might have regrets later on.” Not everyone sees the point of appealing, however. Collins, for example, decided against it, reasoning that she could be denied again.

One person who did decide to appeal is Terry McGlynn, an ecologist at California State University, Dominguez Hills, who at the time of his tenure denial was employed by the University of San Diego in California. “I was very confident that the appeal would not result in a reversal,” McGlynn wrote in an e-mail. “Nonetheless, I feel that it was worthwhile for me, because it gave me the opportunity to document the long series of procedural violations during my tenure review, and to provide an airtight rebuttal to the unsubstantiated statements in my file.”

McGlynn, who studies the ecology of litter-dwelling ants in the tropics, advises those considering an appeal to follow the paper trail, if one exists. “I think it’s important to know the actual reason the denial happened,” he says. Asked to comment on McGlynn’s allegations, Pamela Gray Payton, assistant vice-president, media communications, at the University of San Diego, responded: “It is our university’s practice to respect the privacy of current and former employees and thus, I am unable to discuss or comment on personnel issues.” Other universities approached for comment responded by saying that they could not comment on individual cases or specific employment situations. Sandell, meanwhile, advises researchers who are looking for a new position to identify what they most enjoyed about their work and consider what they might do next, rather than focus on their feelings of hurt and anger. Leaving academic research, as Collins did, is entirely viable, she adds.

Johannes Urpelainen found another path after he was denied tenure by Columbia University in New York City in May 2016. In July 2017, he was named founding director of the Initiative for Sustainable Energy Policy at Johns Hopkins University in Baltimore, Maryland. “Deal with it,” he says. “Get closure and move on. I think that’s a better way to live than holding a grudge.”

Urpelainen says that his openness about his unexpected tenure denial — along with a solid professional network — helped him to find a new position despite his disappointment and fear. “I just let everyone know about it right away,” he says, adding that several opportunities came his way within two weeks of his denial. Urpelainen says that his new policy and research role, which is funded by a private endowment, suits him. “It worked out great for me,” Urpelainen says.

Ultimately, researchers say, a denial of tenure is not the end of the world. “You can be denied tenure and still have a very successful career,” Collins says. “I am truly thankful that some things that I once wanted did not work out for me, because I wouldn’t be here doing the work that I’m doing now if that decision had not happened.” ■

**Josie Glausiusz** is a freelance science journalist in Israel.

#### PHD SURVEY

## Gender pay gap exposed

Male researchers who gained PhDs in 2017, with jobs lined up, expect to earn median annual salaries of US\$88,000, compared with \$70,000 for women, the US National Science Foundation’s annual census has found. Almost 50,000 recipients of research-related PhDs, from 428 institutions, responded to the Doctorate Recipients from US Universities survey, whose results were published in December. One reason for the gap is the larger proportion of men in higher-paying fields such as mathematics and computer science, the two highest-paying scientific fields. Men accounted for about 75% of doctoral degrees in those fields (a proportion that has barely changed since 2007), and expected to earn \$113,000 compared with \$99,000 for women. And about 75% of recipients in engineering are male, down slightly from 79% in 2007. In the lower-paid fields of psychology and social sciences, women outnumbered men by 59% to 41%. Lower-paying disciplines showed more equity: in social sciences, for example, men expected to earn \$66,000 compared with \$62,000 for women. Men didn’t always fare better: women in chemistry expected to earn \$85,000 — \$5,000 more than their male counterparts.

#### TUITION REVENUES

## US universities struggle

A report from Moody’s Investors Service warns that tuition revenue for most US higher-education institutions will rise by just 1–3.5% in 2019, with predicted revenue at public colleges and universities increasing by just 1.5%, the “lowest median net tuition growth in a decade”. The predictions are unlikely to keep pace with operating expenses, which analysts at the New York based financial services company expect to grow by about 4% at most institutions. This could lead to a lower credit rating, potentially resulting in higher interest rates on borrowed funds, including bonds, which universities issue to fund building and other infrastructure work. The report, published in December 2018, says that some universities have been containing costs by reallocating faculty members to different academic areas, deploying voluntary retirement programmes and reducing the number of tenured faculty members. Universities in areas with growing populations are seeking to expand, the report adds, but those with slowing enrolments might mothball or close down facilities, including research centres or core laboratories that are too costly to update or maintain.