

# James and Mary Ross' Provost's Award for Excellence



Dan Miller

Daniel Miller, recently a professor in the Civil Engineering Department and now head of the Mechanical and Industrial Engineering Department, will receive the James and Mary Ross' Provost's Award for Excellence in recognition of excellence in teaching and scholarship. The award comes with a \$2,500 honorarium.

Miller is an internationally recognized researcher in the field of snow mechanics and engineering who plays an equally vital role as a primary instructor. Miller has taught the large-section sophomore engineering mechanics courses that are taken by more than 50 percent of the sophomores in the College of Engineering multiple curriculums. Since coming to MSU, Miller has been specifically tasked with improving student engagement in those courses without sacrificing content or lowering performance expectations. Student ratings for those courses have consistently shown improvement under his tenure. The high ratings do not appear to come at the expense of academic rigor, with one recent student evaluation summing him up as an "excellent instructor. Fantastic ability to relate concepts to everyday real life experiences. Very difficult course." When students learned that Miller's appointment to department head might keep him out of the classroom, evaluations also requested that his new appointment be rescinded "so he can continue teaching statistics and dynamics."

Part of Miller's success in motivating and engaging students comes from his ability to stimulate interest in course materials through what he (and now all of his students) now call "Engineering Fridays," during which a significant amount of class time is dedicated to the presentation and discussion of how to relate a course concept to a real-world application.

Miller's own scholarly pursuits into cold regions engineering and snow mechanics have seen him serve as principal investigator or co-PI on projects worth more than \$1 million in research expenditures. Since joining the MSU faculty in 2008, he has published 29 papers for journals or conferences and has delivered 12 invited presentations at avalanche seminars and workshops across the Pacific Northwest. He has also been a major adviser for two doctoral and three master's students, as well as working every year with high school research interns through the Army's Research and Engineering Apprenticeship Program.