

Editorial

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PAM Review is the peer-reviewed student research journal produced in the School of Mathematical and Physical Sciences at the University of Technology Sydney. The journal was created to provide a student-centered authentic learning experience in a theory heavy course which allows for students to apply their theoretical knowledge in a professional real research environment. The authentic learning approach that has been taken here facilitates the Faculty of Science *Graduate Attributes* and the University's *Model of Teaching*. The student journal was first introduced in 2014 in the second-year university physics course Energy Science and Technology. The course covers fundamentals of thermodynamics and statistical mechanics and their applications in current and emerging technologies.

The compilation of the journal presented here provides students with an authentic, practical learning experience where professional scientific methods are applied to produce a peer-reviewed original research paper in the form of a meta-study which is aimed to contribute new knowledge to the body of science, i.e., it reaches well beyond a mere literature review that would be normally conducted at this stage.

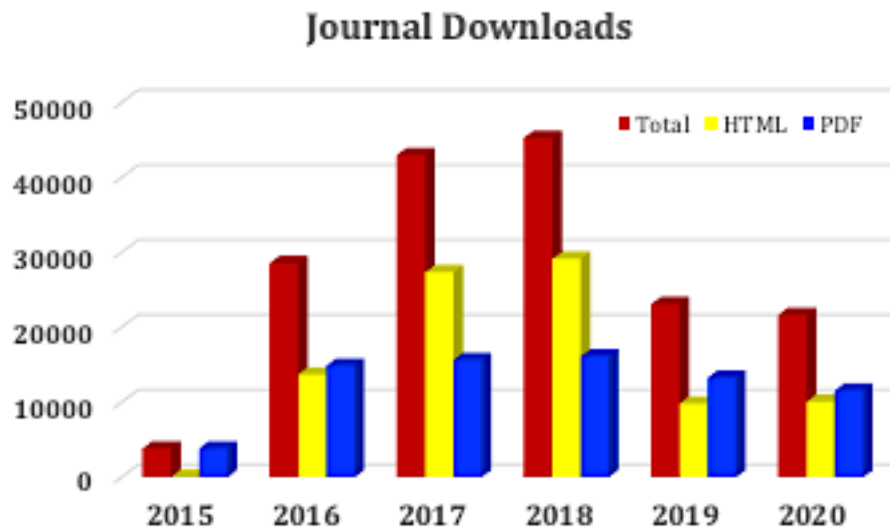
The research task has been designed to create an authentic academic research environment. This includes conducting systematic scientific research as well as its dissemination in a professionally published and peer-reviewed journal. Students work in small research teams with a diverse range of expertise; consult professional scientific databases; gain expertise in a variety of scientific disciplines; research peer-reviewed scientific papers; synthesize relevant information; and produce a professionally written scientific paper for publication in a peer-reviewed, widely read journal. The production of the original pieces of research published in the journal presented here provides students with an opportunity to acquire discipline specific professional skills of lasting impact while at the same time learning about the theoretical concepts behind state-of-the-art thermodynamic applications.



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At the time of the release of this volume, journal articles were perused by over 90,000 unique viewers and respective PDF versions were downloaded over 75,000 times.

The papers presented in Volume 7 of PAM Review were researched and compiled during the COVID-19 pandemic in early 2020.