

RESEARCH @

University Research Council – University of Peradeniya



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- Funding opportunities such research grants, early career grants, awards, and fellowships
- Grant search for Medical researchers
- Flyer for the Part 2 of MATLAB workshop for biologists

Analysis

This clearly indicates that for UoP the action plan for growth in rankings, should focus on translating the high citation count to a more sustainable *Research Reputation* measure. This would imply a need for a clear long-term vision for creating a culture for research entrenched in the system has the most potential for future growth.

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FUNDING OPPORTUNITIES

Research Grants

1. Nuffield Foundation - Oliver Bird Fund

Closing date: 14/03/2022

Funding Amount: In the range of £50k-300k

Description: We are looking for applicants to develop interdisciplinary research proposals that can help identify, develop and enhance non-clinical policy and practice interventions. These interventions might benefit people at greater risk of developing musculoskeletal conditions or aim to reduce the negative consequences and improve the quality of life for those who have them. We are keen to fund evaluations of interventions outside of the healthcare system. We welcome applicants from wider fields, as well as those with existing musculoskeletal expertise. Applicants should clearly demonstrate how people living with, supporting, and treating, musculoskeletal conditions will be meaningfully involved throughout the duration of the project.

Eligibility: Applications from UK-based organisations to carry out collaborative projects, possibly involving overseas partners; In exceptional circumstances, we might consider an application from an overseas organisation along the lines of the above where there is no workable arrangement whereby a UK-based organisation can host the grant.

Website: <https://www.nuffieldfoundation.org/funding/oliver-bird-fund>

2. Sepmeyer research grant

Closing date: 15 February 2022

Award amount: max USD 1,000

Description:

The International Education Research Foundation invites applications for the Sepmeyer research grants. This supports research on world education systems and the integration of individuals educated outside of the US into the US educational environment and work force. The aims of the research must include:

- supporting research for the evaluation of foreign academic credentials;
- promoting the integration of students, scholars and professionals holding non-US academic credentials into the US;
- facilitating the publication and dissemination of the results of the research;
- encouraging the exchange of information about educational systems.

Any individual may apply. The applicant must demonstrate experience in the field of credentials evaluation and expertise in the country they propose to research.

Deadline Information Deadlines on: 15 February 2022, 15 August 2022, and repeated annually.

Country of applicant institution Any

3. Innovation grants to nurture initial translational efforts

Closing date: 22 February 2022

Award amount: max USD 750,000

Description: The National Institute of Neurological Disorders and Stroke invites applications for its innovation grants to nurture initial translational efforts (IGNITE) – neurotherapeutic agent characterisation and in vivo efficacy studies (R61/R33 clinical trial not allowed) funding opportunity. This supports pharmacodynamic, pharmacokinetic and in vivo efficacy studies to demonstrate that proposed therapeutic agents have sufficient biological activity to warrant further development to treat neurological or neuromuscular disorders. Therapeutic agents may include but are not limited to small molecules, biologics or biotechnology-derived products.

This funding opportunity uses the NIH exploratory/developmental phased (R61/R33) award mechanism and runs in parallel with two calls of identical scientific scope, PAR-21-123 and PAR-21-124, which solicit applications under the same mechanism.

US and foreign for-profit and non-profit organisations and public and private organisations may apply

Deadline Information: Applications due by 5pm local time of applicant organisation on selected dates until 21 February 2024. Deadlines on: 22 February 2022, 21 June 2022, 18 October 2022, 21 February 2023, 20 June 2023, 20 October 2023, 20 February 2024

Country of applicant institution: Any

Website: A number of grants are available

<https://grants.nih.gov/grants/guide/pa-files/PAR-21-122.html>

<https://grants.nih.gov/grants/guide/pa-files/PAR-21-124.html>

<https://grants.nih.gov/grants/guide/pa-files/PAR-21-123.html>

4. NCI clinical and translational exploratory or developmental studies

Closing date: 22 February 2022

Award amount: max USD 275,000

Description: The National Cancer Institute invites applications for its clinical and translational exploratory or developmental studies (R21 clinical trial optional) funding opportunity. This supports preclinical and early phase clinical research, as well as correlative studies, directly related to advancements in cancer treatment, diagnosis, prevention, symptom management or reduction of cancer health disparities.

Eligible focus areas include: New molecular agents or biologics for cancer treatment; management strategies for cancer-related symptoms or treatment-related toxicity; cancer screening or diagnostic tools; cancer preventive agents or approaches; predictive and prognostic biomarkers for patient selection or stratification; clinically relevant in vivo or in vitro tumour models; strategies to address therapeutic outcome disparities among diverse racial and ethnic populations.

The R21 mechanism is intended to encourage exploratory and developmental research projects by providing support for the early and conceptual stages of these projects.

US and foreign for-profit and non-profit organisations and public and private organisations may apply.

Deadline Information Applications open on 20 September 2020 and are due by 5pm local time of applicant organisation on selected dates until 21 July 2022. Deadlines on: 22 February 2022, 21 June 2022.

Country of applicant institution: Any

Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-20-292.html>

Early-career awards

1. Thrasher Research Fund, US

Closing date: 15 March 2022 (Forecast)

Award amount: max USD 27,000

Description: The Thrasher Research Fund invites concept papers for its early-career awards. These support the development of medical research in child health by awarding small grants to new researchers. The aim is to fund applicants who will go on to be independent investigators.

Eligibility: Physicians in a residency or fellowship training programme, or those who have completed that programme no more than one year before the submission date of the concept paper, may apply. Postdoctoral researchers who received their doctoral degree no more than three years prior to the date of submission are also eligible. Eligible projects must be conducted under the guidance of a mentor. There are no restrictions with regard to citizenship and the award is open to institutions worldwide.

Country of applicant institution: Any

Website: Website: <https://www.thrasherresearch.org/early-career-award?lang=eng>

Awards and prizes:

1. Horizon impact award

Closing date: 08 March 2022

Award amount: Max €25,000

Description: The European Commission Horizon 2020: Societal Challenges invites submissions for its horizon impact award. This recognises beneficiaries that have successfully used proof of effective exploitation and uptake of their research results. their research results to create value for society. Beneficiaries must be able to show

Eligibility: All legal entities, including international organisations or groups of legal entities from FP7 or Horizon 2020 projects that have ended, may apply. National eligibility rules may apply.

Country of applicant institution: EU (European Union); EU Associated Countries; EU All International Cooperation Partner countries (ICPC); Overseas Countries and Territories

Website: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-widera-2022-impactprize;callCode=null;freeTextSearchKeyword=HORIZON-WIDERA-2022-ImpactPrize;matchWholeText=true>

2. Balzan prizes

Closing date: 15 March 2022

Award amount: CHF 750,000

Description: The International Balzan Prize Foundation invites nominations for the Balzan prizes. These recognise achievements in literature, moral sciences and the arts, medicine, and the physical, mathematical and natural sciences.

The focus areas this year are: moral philosophy; ethnomusicology; biomaterials for nanomedicine and tissue engineering; glaciation and ice-sheet dynamics.

Deadline Information Deadlines on: 15 March 2022, and repeated annually.

Country of applicant institution: Any

Website: <https://www.balzan.org/en/subject-areas-and-nominations>

3. Grants-in-aid of research

Closing date: 15 March 2022

Award amount: Max USD 5,000

Description: Sigma Xi invites applications for its grants-in-aid of research. These support students performing scientific investigations in most areas of the sciences and engineering.

Eligibility: Undergraduate and graduate students currently enrolled in degree seeking programmes are eligible. International applications are welcome. While membership is not required, applicants are strongly encouraged to become a member prior to the deadline.

Website: <https://www.sigmaxi.org/programs/grants-in-aid>

Deadline Information Deadlines on: Applications due by 12 midnight.
Deadlines on: 15 March 2022, 1 October 2022, and repeated annually.

Country of applicant institution: Any

Fellowships

1. Rudolf Diesel industry fellowships

Closing date: 01/02/2022

Funding Amount: €20,000

Award Types: Senior fellowships; Early-Career fellowships; Mid-Career fellowships; Academic-Industry links

Description: The Technical University of Munich invites nominations for its Rudolf Diesel industry fellowship. This provides researchers with the necessary time and financial support to explore new venues, to develop novel research areas and to establish intensive international collaborations. All areas of the TUM research portfolio are considered. The aim is to enhance collaboration and knowledge-sharing between research units at TUM and company research laboratories and industry. Fellows may offer special courses and lectures in their field of expertise to enhance the connection between the university and industry and to develop an intensive collaboration with their hosting focus group. Fellows are able to participate in TUM programmes and events, and are asked to organise activities such as a workshop, public talks, or speakers' series in order to contribute to the intellectual life of the institute and the university.

Country of applicant institution: Any

Website: <https://www.ias.tum.de/ias/fellowship-program/rudolf-diesel-industry-fellowship/>

2. Lee Kuan Yew postdoctoral fellowship

Closing date: 01/02/2022

Funding Amount: SGD 495,000

Award Types: Senior fellowships; Early-Career fellowships; Mid-Career fellowships; Academic-Industry links

Description: The National University of Singapore invites applications for the Lee Kuan Yew postdoctoral fellowship. This promotes the development of young academics in science, medicine and engineering. Research interest should fit in computing, engineering, design and environment, medicine, public health, and science. Applicants must be new or recently graduated PhDs and have strong research training with at most one postdoctoral stay from a reputable university. The fellowship is tenable for up to three years. Fellowship holders will receive staff benefits akin to that provided to other academic staff for research support.

Country of applicant institution: Any

Website: <https://www.nus.edu.sg/research/research-management/funding-opportunities/lee-kuan-yew-postdoctoral-fellowship>

3. Newsom-Davis visiting fellowships

Closing date: 20 February 2022

Funding Amount: Max £4,500

Description: The Guarantors of Brain invite applications for the Newsom-Davis visiting fellowships. These enable clinicians to take up short term visits in a UK-based clinical neurology department. The visit can be to obtain further clinical or laboratory experience.

Eligibility: Researchers in former Warsaw pact countries and countries eligible for OECD's official development assistance may apply. Awards must be administrated by the host department.

Deadline Information Deadlines on: 20 February 2022, 20 September 2022, and repeated annually.

Country of applicant institution: Sri Lanka included

Website: <https://www.guarantorsofbrain.org/grants/newsom-davis-visiting-fellowships/>

4. Travelling fellowships

Closing date: 21 February 2022

Funding Amount: Max £2,500

Description: The Company of Biologists' journals invite applications for their travelling fellowships. These enable graduate students and post-doctoral researchers to undertake collaborative visits to other laboratories.

Eligibility: Graduate students and postdoctoral researchers of any nationality may apply. Applicants should be working in the field of the journal to which they are applying. One person may apply per laboratory, per round, per journal. Applicants may receive the award once every two years.

Deadline Information Deadlines on: 8 March 2021, 31 May 2021, 16 August 2021, 18 October 2021, 21 February 2022, 30 May 2022, 15 August 2022, 21 October 2022.

Country of applicant institution: Any

Website: <https://www.biologists.com/travelling-fellowships/#faq>

5. Brooke Hindle postdoctoral fellowship

Closing date: 15 March 2022 (Forecast)

Funding Amount: Max USD 10,000

Description: The Society for the History of Technology invites applications for the Brooke Hindle postdoctoral fellowship. This enables research or writing in the history of technology for a period of minimum three months.

Eligibility: Applicants must have received a doctorate between four years before the deadline date and nine months after the deadline date.

Country of applicant institution: Any

Website: <https://www.historyoftechnology.org/about-us/awards-prizes-and-grants/the-hindle-fellowship/>

RESEARCH RESOURCES

Research Publication Facilitation Fund

This is a scheme initiated by URC to provide financial assistance up to a maximum of USD 1000.00 per year for the researchers of the University of Peradeniya to facilitate publishing their research findings in high-ranking peer reviewed journals. We invite you to utilize this facility by downloading an application form from:

https://www.pdn.ac.lk/centers/urc/doc/Application%20For%20RPFF_URC_2021

Financial assistance: USD 500 per author up to a maximum of USD 1000 per paper per year.

Eligibility:

- The applicant should be a permanent staff member of the University of Peradeniya and one of the authors of the journal article.
- Research work carried out by a permanent staff member of the University of Peradeniya completely outside the University of Peradeniya may also be eligible.
- The journal should be indexed in SCI/SSCI or SCI-expanded/SSCI-expanded journal with a journal impact of 2 or higher.
- Should use the official e-mail address with pdn domain name provided by the University of Peradeniya

Frequency: Once a calendar year.

Procedure: The applicant should fill in an application form and submit the same to the Director, URC through the Head of the Department and the Dean of the Faculty along with the original copy of the receipt for the payment of page charges and a copy of the journal article.

Others: The URC reserves the right to amend the selection criteria. The article processing charge will be reimbursed subject to the availability of funds.

Mailing Address: The Director, University Research Council, A6 Building, Udaperadeniya Road, University of Peradeniya.

E-mail Address: secretaryurc@gs.pdn.ac.lk

RESEARCH RESOURCES

Grant search for **Medical researchers**

The National Institute of Health (U.S. Department of Health & Human Services) Guide for Grants and Contracts publishes notices of grant policies, guidelines and funding opportunities regularly. For some our researchers can apply and details can be found at:

<https://grants.nih.gov/funding/searchguide/index.html#/>

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NIH Guide announcements (PAs, RFAs and Notices) are published daily. At the end of each work week (usually on Friday afternoon), NIH transmits a Weekly NIH Funding Opportunities and Notices e-mail to NIH Guide LISTSERV subscribers, including links to announcements published during the week.

To Subscribe to the NIH Guide LISTSERV, send an e-mail to listserv@list.nih.gov with ONLY (remove automatic signature block and any other text) the following text in the message body (not the "Subject" line):

subscribe NIHTOC-L your name
(Example: subscribe NIHTOC-L Bill Jones)

Your e-mail address will be automatically obtained from the e-mail message and add you to the LISTSERV.

Virtual Library of the Ministry of Defence Website

The Ministry of Defence will publish books and extensive research papers in the virtual library on their website free of charge. The virtual library is a non-fee levying facility and can be accessed via https://www.defence.lk/publication/e_book_cat. Please forward your manuscripts to

Ministry of Defence – Media Centre
No 52, Galle Road, Colombo 03
Tel: 011 2439 757
Email: defence.media2015@gmail.com

UPCOMING EVENTS



URC TRAINING SERIES

Introduction to MATLAB for Biologists - Part 2

- Review- Basics
- MATLAB as a Programming Language
- Solving a System of Equations
- Solving First or Higher Order Differential Equations
- Curve Fitting

OCTAVE

MATLAB
The Language of Technical Computing

February 14th 2022
9:00 am - 12:00 pm



Dr. W.A.N.I. Harischandra
Department of Electrical and
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University of Peradeniya



Organized by the University Research Council
University of Peradeniya

ANALYSIS

Interpreting Metrics for Sustainable Growth

The impact of research work conducted in a university and its “Academic and Research Reputation” go hand in hand. Hence, it is no surprise that the “Reputation” a university has amongst its international peers is weighted heavily in the most popular ranking measures for universities. For instance, the Times Higher Education World University Rankings allocated 33% of its score for Academic and Research Reputation, whereas the QS world ranking allocated 40% for the university’s teaching and research quality, which it assesses based on an academic reputation survey.

If one scrutinizes the dynamics of such a measure (i.e., its variation through the years for a given university), it becomes apparent that the reputation metric adds that bit of inertia to stabilize the rankings. It is one of those metrics that do not fluctuate or change rapidly with time. Hence, it can be called a “high inertial metric” that is used to anchor the ranking system against noisy tides. This is one of the primary reasons why the leading universities of the world in both of these ranking measures (the top 10 or 20 universities in the world for instance) stay very consistent through the years. This is simply because impressions last. In other words, reputation has to be earned through consistent impactful outcomes for years or perhaps even decades. This underscores the difficulty a new and upcoming university has when attempting to penetrate the top. This is exactly why a university in its academic and research ventures should plan for long term goals that are sustainable. It should strive to achieve what is colloquially termed as “creating a culture for research and high academic standards”.

If one examines some of the other metrics considered by ranking methods, they would come across metrics such as:

- Staff to Student ratio and Doctorates to Bachelor’s degree ratio
- Research income, Research publications output and Citations
- International students staff percentages and international collaborations
- Industrial outputs

One can notice that most of these metrics are far more readily attainable in a relatively short term (i.e., if one invests heavily on them). Hence, such metrics can be labeled as more dynamic indicators that are directly related to research or industrial outcomes. Therefore, they can be called a “low inertia metrics” if we were to continue the previous analogy. If these low inertia metrics were maximized in a sustainable manner, they would ultimately contribute towards the aforementioned Academic and Research Reputation in the long run. In a way the Academic and Research Reputation is the long-term manifestation of these more attainable short to medium term goals. This would for example entail the improvement of the staff to student ratio, an increase in research incomes generated through high level grants, uptick in the indexed articles published and resultant citations for published articles, increased presence of international staff, students and collaborations and improvements in industrial output generation. All of which do take time and effort but are not on the same high inertial level as gaining a high reputation among your international peers all of a sudden.

These two types of metrics (low and high inertial) have produced a ranking scheme where Universities with High Academic and Research Reputations such as Stanford, MIT, Harvard, Cambridge, Oxford are effectively a permanent fixture in the top 10 of almost all global ranking systems. Even as you skim through the rest of the top 20 or even top 50 you will notice that a majority have been fixtures for a long time. While as a recent trend you will notice some universities, especially Asian and Australian Universities gradually emerging to the top in the last few decades or so. This does not happen suddenly, as the two types of metrics ensures that only once you continuously perform well in the more dynamical low inertial metrics does it finally translate to a solid reputation that will enable you to break through to the top. So, any university having a “burst” in publications or citations etc. cannot enter the top tier, unless this pattern is sustained for a long period effectively creating a culture for quality research that is recognized by its peers.

Any academic administrator or policy maker would like to know whether their policies for building a sustainable reputation are on track. That they are yielding returns in the short run through publications and research income (grants) etc. for an initiative with such long term aims in mind. A long-term venture with returns in the short run serves as a means to indicate how things are progressing in the right direction for the stake holders. However,

such short-term returns might be a “blip”, a so called “noisy spike”, in the temporal progression. Short-term strategies alone make it impossible for a university to penetrate the top tier. A quick fix to polish the numbers with stimulated investment would not suffice if not backed by a concrete plan with a long-term vision to create a culture of research within the institution. Hence, a visionary policy maker should always plot short term progress through a long-term trajectory.

If we carefully scrutinize the numbers of the current Times Higher Education University ranking score for University of Peradeniya (UoP), for instance, this paints a vivid picture on where we are as a university and what we should do beyond this point for improvement. Out of a 100 the scores for each category in the Times ranking are:

- Teaching – 17.4
- Research – 8.4
- Citations – 100
- Industry income – 35.6
- International outlook – 41.3

This clearly indicates a very skewed pattern, which while has given the university the ability to be among the top 500 universities in the world, and the number 1 ranked in the nation, if not backed with a long-term strategy might not be sustainable. The primary indicator being the obvious decoupling of the Research and Citations metrics. As citations are one of the most direct outcomes of high-quality research, then why are they so detached from each other in Peradeniya's case (i.e., while citations are the best metric research is the worst for UoP)? To analyze the reasons for this, first let us look at the breakdown for the Research metric which has the following subcategories:

- Research Reputation – Accounting for 60 percent of the share quantifies the perceived prestige of the institution in research amongst its international peers.
- Research Income – Accounting for 20 percent of the share is essentially the research income generated through grants as world-class research hinges upon income.
- Research Productivity – 20 percent of the share Publications in Elsevier's Scopus indexed Journal's.

It is obvious that the Research metric is highly dependent on Research Reputation a very high inertial metric. Whereas indicators such as Citations,

which are highly dynamic in nature can be easily skewed through outliers. Or in other words the Citation metric score is not the result of a concerted effort by the institution or a strong well-established tradition for research that has manifested as a solid Research and Citation score but rather a decoupled soft rise only in the Citation metric.

This clearly indicates that for UoP the action plan for growth in rankings, should focus on translating the high citation count to a more sustainable Research Reputation measure. This in turn implies the need for a clear long-term vision for creating a culture for research has the most potential for future growth. Therefore, any action plan should first promote and generate outcomes in what was previously labeled the highly dynamic low inertial metrics for ranking, then try to sustain it in the long term by implementing measures for this to be more entrenched in the system (i.e., the staff and students should continuously strive for excellence in research even after reaching short term targets).

High-level international grants, high impact indexed journal publications, international collaborations and resultant citations would create a more interwoven mechanism that compliments each other. They would create a positive feedback loop, that feeds off each other. This if maintained, would gradually manifest as high Research Reputation among international peers creating a snow ball effect as was the case for the rapidly rising Australian and Asian universities. For this, it is extremely important to incentivize academic staff as well as postgraduate and undergraduate students to be engaged in research activities. Some possible strategies for this can be:

- Leading universities in the world provide various mechanisms to encourage and incentivize academics who generate high research income by obtaining high level grants. In UoP, this can be achieved for instance by accounting for grant activities as a substantial portion of the workload for such high-income grants. Alternatively, the institute can provide vacation or some form of leave to work in such grants as an investigator. This would encourage those inclined towards research to put a more concentrated effort for acquiring and successfully completing high level grants. A high-level grant is generally interdisciplinary or multi-disciplinary in nature and would also require the investigators to generate high level publications while having international collaborations. Therefore, such measures will target multiple performance metrics.

- Promotion of high impact journal article publication by providing rewards such as awards and accolades coupled with more funding opportunities for open access publications (which while requiring higher funding generate high volumes of citations) and recovery of article publication charges. Special consideration for journals with high impact factors for promotions and rewards schemes might motivate staff to provide high quality work. High impact as well as open access articles due to high penetration helps build an institution's research reputation.
- Incorporation of metrics such as the Google scholar h-index for rewards and recognition schemes, similar to the current tier system but more tangible, might encourage more sustainable efforts for research that do not fizzle out once a certain goal is reached. A mechanism to provide funding for Research Assistants (RAs) for academics with a solid recent publication track record would motivate academics to continuously produce research outcomes.
- In addition, there should be mechanisms available for high performing students to use research activities for personal growth. For such students more independent and interdisciplinary or multi-disciplinary research project components can be added to the undergraduate curriculum. This would introduce these students to research methodologies at an early stage while showing them how what they learn aims to tackle complex research questions.
- They can be encouraged to generate high level publications through the previously mentioned research projects. Upon graduation they can be enrolled as RAs under academic staff members with a proven track record. This kind of initiative when done consistently would attract high performing students at the entry examinations to UoP as it enables such students to challenge themselves with cutting edge complex research problems.

Persistence of such efforts would create a general culture conducive to research within the University, which through time would result in gradual growth of the University's reputation among its international peers.

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