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Executive Board

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Position of the Executive Board of Eindhoven University of Technology regarding the assessment of the department Applied Physics

In December 2018 an international review committee assessed the research in Applied Physics of the period 2010-2017 at Eindhoven University of Technology. The committee assessed the quality and relevance of research conducted in the period 2010-2017, the viability, and the quality of the research training, research integrity and diversity. The assessment was carried out using the Standard Evaluation Protocol 2015-2021 for the research assessment of public organizations in the Netherlands.

The assessment committee consisted of:

- Prof. Dr. Anna Balazs, *Department of Chemical & Petroleum Engineering, University of Pittsburgh, USA*
- Prof. Dr. Jonathan Finley, *Walter Schottky Institute and Physics Department, Technische Universität München, DE*
- Prof. Dr. Niek van Hulst, *ICFO – The Institute of Photonic Sciences, Barcelona, SP*
- Prof. Dr. Eckart Meiburg, *Department of Mechanical Engineering, University of California at Santa Barbara, USA*
- Prof. Dr. Antoine Rousseau, *Laboratoire de Physique des Plasmas, Ecole Polytechnique, Palaiseau, FR*
- Prof. Dr. Marc Vrakking, *Chair, Max Born Institut für Nichtlineare Optik und Kurzzeit-Spektroskopie, Berlin, DE*
- Prof. Dr. Howard Wilson, *Department of Physics, University of York, UK*

The committee made the following general assessment of the department:

Research Quality

‘(...) the panel judges that the research quality of the Applied Physics department at the TU/e is very good to excellent. As evidenced by the publication highlights, which include numerous papers in high-profile journals, and important marks of recognition received by faculty members (including prestigious scholarships and prizes, such as a Spinoza award, and major research grants, including several ERC

Grants and more than 10 grants in the NWO VENI/VIDI/VICI scheme), the research groups in the department are in certain research areas among the most influential groups in the world, while in other research fields there seems to be a clear potential for achieving such a position in the near future.'

Relevance to society

'Presently, the majority of the research groups within the department are already engaged in successful valorization activities. (...) it recognizes that the contribution that the department makes to the Dutch economy by way of its valorization and training activities is already clearly outstanding.'

Viability

'The extensive reorganization that the department has undergone in the last few years has solved serious financial problems that had accumulated and has significantly improved the chances for success in crucial upcoming funding programs that are essential to the department's development in the coming years. As attested by many of its researchers, excellent facilities exist in the new building that the department moved into a few years ago. As such, the pre-conditions for sustaining and further developing a highly successful research program are clearly given, and the realization of this goal will depend to a large extent on several key choices that the department will make regarding its research strategy in the near future.'

The committee also assessed the various research groups, providing specific feedback.

It also made concrete recommendations for the Future Strategy:

Recommendations on Future Strategy

- in the upcoming strategic choices faced by the department (applications to Sector plan and TU/e-internal Cross-disciplinary Research Themes) the department needs to strike a balance between the strengthening of individual existing research directions, and the development of novel "out of the box" research directions.
- the department should consider using its healthier financial situation to become an active agent promoting interdisciplinary, collaborative research, by setting up an incentive system where groups can jointly apply for modest amounts of seed money in order to start collaborative research without having to rely on external support. The panel considers it acceptable if such an initiative goes at the expense of a 1 or 2 % reduction of the coverage percentage (currently at 90%).
- Opportunities for increasing the interactions between the research groups in the department, for example modelled on the two joint annual conferences that are organized within the Plasma and Beams cluster, should be identified, in order to encourage the emergence of new ideas and innovative technologies.
- The attraction of highly-talented (in particular, female) tenure-track researchers should remain a top priority in the years to come.
- the department should increase the uniformity of the opportunities that junior faculty receive in terms of mentoring by senior faculty, in terms of publishing of research results without co-authorship of more senior faculty and in terms of the promotion of an independent research profile by means of a web presence.
- While recognizing the value of in-house collaborations, external (especially international) collaborations of tenure-trackers should be encouraged, since they are vital for the development of an independent scientific career beyond the initial stage.

In addition, the committee made specific recommendations concerning PhD-policy, research integrity and personnel policy, specific the two body problem for recruiting.

On a university level, several of the recommendations have been taken up. For a better control of the time PhDs take to finish their degree, a PhD-follow system will be implemented. Concerning the two body problem our Personnel & Organization department has devised a specific program cooperating with other organizations in the region. To make the program better known, it was recently presented to all the Department Deans. Also more and more positions within TU/e are advertised in English.

The committee expressed that it felt that the self-evaluation report lacked data on individual research groups and recommended that this information was made available for a next evaluation. The report was written according the current national Standard Evaluation Protocol which prescribes providing data on the level of the whole unit being assessed. Although reporting on this level has drawbacks, it also means that the self-evaluation remains concise and the focus of the assessment stays on the strategy of the unit as a whole.

The Executive Board highly appreciates the work of the committee and the recognition of the quality of the research of TU/e's department Applied Physics. It is equally appreciative of the many concrete recommendations of the committee. The Executive Board will discuss the recommendations with the Department Board in the bi-annual meeting in March 2019 and has asked the department to make a plan for following up on the assessment.

The Executive Board of TU/e has accepted the report and its recommendations and wishes to thank the assessment committee for the considerable time and effort it has spent on this assessment.

On behalf of the Executive Board,



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