

**1. Evaluator: Eytan Domany, The Henry J Leir Professor of Physics, Dept of Physics of Complex Systems, Weizmann Institute of Science, Rehovot Israel; Head, the Kahn Family Center for Systems Biology.**

**2. Evaluation of each paragraph**

	<i>Grade</i>	<i>Comments</i>
<b>Quality of the training aims</b>	<i>excellent</i>	<i>The research areas covered by the members of the faculty cover a wide range of cutting-edge topics in experimental and theoretical physics. Hence training Ph D students in these areas constitutes excellent preparation of the students for a career in academic or industrial environments.</i>
<b>National and international collaborations with Academic partners</b>	<i>excellent</i>	<i>Several of the research groups participate in leading international collaboration, and it appears that the students also benefit from these international interactions. In addition, several joint Ph D supervision programs are in effect, both on individual and more structured institutional basis.</i>
<b>National and international collaborations with non Academic partners</b>	<i>excellent</i>	<i>See comment above regarding various research laboratories in Europe and the US</i>
<b>Research funds of the teaching staff</b>	<i>Very good</i>	<i>The list provided was only indicative and hence it is difficult to assess the funding of all faculty, but from the attached file of scientific activities of the members of the faculty it is evident that these are active and well funded research groups.</i>
<b>School funds availability</b>	<i>satisfactory</i>	<i>Funds of about 1000 Euro per year per Ph D student are supposed to cover travel to conferences and schools. I assume salaries and fellowships are covered from other sources, in which case these funds are probably sufficient. Perhaps this is not the correct item to bring this matter up but the self-evaluation mentions (two paragraphs down) the low level of salaries of Ph D students in Italy, which reduces significantly the competitiveness of the Padova Ph D program. This matter should be evaluated, in my opinion, under the item discussed here, hence my low grade.</i>
<b>Spaces and instruments of the School</b>	<i>Can not evaluate</i>	<i>I do not feel competent to comment on this without a site visit, which was not feasible on such short notice</i>

<b>Relevance of the research areas</b>	<i>Very good</i>	<i>The research areas cover a very broad section of the most relevant experimental and theoretical physics. In particular, there are 5 or 6 experimental groups dealing in high energy physics and accelerator physics! Perhaps there should be room for theoretical condensed matter physics and added experimental solid state or low-temperature physics, as well as an experimental biophysics group.</i>
<b>Teaching staff publications</b>	<i>excellent</i>	<i>The publications of the teaching staff are in high impact factor journals and at a very impressive level.</i>
<b>PhD students publications</b>	<i>Very good</i>	<i>Ph D student publications, albeit very uneven between the various groups, do reflect a high level of activity.</i>
<b>Quality of the courses/seminars of the School</b>	<i>good</i>	<i>The small number of students accepted each year together with the large number of faculty members in the physics department and the wide areas of research activities covered – posed a serious problem: it is very difficult to have a full set of courses every year. Therefore the policy of allowing students to postpone their exams to the second year makes a lot of sense. Unfortunately the list of courses offered during to consecutive years was not provided and hence I am unable to assess the extent to which all necessary topics were covered in two years. The idea of not counting lectures given in a Ph D program as part of a professors teaching load is inconsistent with the concept of a "Ph D School". If the Italian government recognizes the need for such schools and opts for answering this need, teaching in these schools should give full teaching credits. The seminars seem to be at high level and the school uses external lecturers and speakers to give specialized topical lectures.</i>
<b>PhD students training activities outside the University of Padova</b>	<i>Very good</i>	<i>The student take part in a large number of courses and activities outside the University</i>
<b>Relevance of the PhD students teaching activities to the training aims</b>	<i>Very good</i>	<i>Teaching activity is highly relevant to the training aims</i>
<b>Vocational and academic recruiting</b>	<i>Very good</i>	<i>There seems to be an acute shortage of positions in Italian Universities – everywhere in Europe one encounters outstanding Italian Junior faculty and young researchers on 3-5 year appointments. I am sure that graduate of the University of Padova are very competitive for these positions.</i>

### 3. Overall evaluation: very good

**4. Conclusions and recommendations:** The scope of research activities in Physics at the University of Padova is wide and of a very high level. The Ph D school has a very significant role in maintaining this high level, provided it succeeds to attract excellent students. The low level of salaries for Ph D students and the very rigid timetable and procedures for accepting new students seem to be detrimental and may have a serious long-term effect on the quality of the applicants. This, in turn, may generate a snowball effect from

which the present strong department and school may suffer. Some of these problems seem to be purely bureaucratic and must be solved.

Another serious issue is lack of recognition of the full number of hours taught in the Ph D School as part of a faculty member's teaching load. It is hard for me to understand such a rule, which is completely inconsistent with the concept of a "Ph D School".

The balance of the activities should perhaps be shifted over the next few years slightly, by creating a position in experimental biophysics and theoretical condensed matter physics.