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Abstract for an Invited Paper for the MAR16 Meeting of the American Physical Society

The European Theoretical Spectroscopy Facility: an illustration for the power of collective research LUCIA REINING, CNRS-Ecole Polytechnique

As researchers and citizens, we should contribute to facing the grand challenges of our epoch. It is important to work on problems such as climate change or limited ressources. However, maybe the biggest challenge is to find ways to unite our forces and develop models of collaborative problem solving. This is mandatory to deal with complex problems, and it can boost efficiency in any case. Code development is just one example where a constructive and well-organized collaboration can take us much further than individual attempts. On the background of this general idea, we will analyze the impact of the European Theoretical Spectroscopy Facility (ETSF, www.etsf.eu) on the day-to-day research of its members, on the theoretical and computational tools that are produced, and on a wider field of theoretical or experimental research. We will see that much can be learnt from this attempt to consider ideas in competition, with people in collaboration.