Letter of Support for Ana Maria Oprescu

To Whom It May Concern:

The purpose of this letter is to support the Veni application of Ana Maria Oprescu, and to acknowledge the research collaboration of Parallel and Distributed Systems (PDS) group at the Delft University of Technology with her. I will be in charge of this collaboration, on behalf of the PDS group.

My name is Alexandru Iosup, Ph.D., Eng., and I am currently an Assistant Professor with the Parallel and Distributed Systems group at the Delft University of Technology. I have nine years of experience in the field of Distributed Computing, in both industrial and academic settings, both in the United States and Europe. I graduated first of my M.Sc. class and at the top on my Engineering classes at Politehnica University of Bucharest (where I met and was impressed first by Ana, who is a few years my junior), worked in the energy industry in Romania, and as consultant to various companies in the Netherlands and Germany. For my M.Sc. thesis, I have received a Werner von Siemens Excellence award from Siemens AG. I have received numerous academic awards and nominations, including best paper awards at IEEE P2P 2006, EuroPar 2009, and IEEE CCGrid 2010, during my Ph.D. track with the Delft University of Technology. I was a visiting scholar at U. Dortmund, U.Wisconsin-Madison, U. Innsbruck, U.California-Berkeley, and Technion—Israel Institute of Technology in 2004, 2006, 2008, 2010, and 2013, respectively. In 2011, I have received a Dutch NWO/STW Veni grant. I have co-authored over 50 articles published in good-quality conferences and journals in the area of large-scale distributed computing, including 14 articles that have attracted over 50 citations each and should thus be considered highly cited. I am consistently invited to use my expertise in reviewing the work submitted to the top conferences and journals in the field, such as ACM HPDC, IEEE CCGrid, IEEE TPDS, Elsevier CCOPE, etc. In 2012, I have served as co-chair of the theme (research) committee of ICT.OPEN 2012, which is the largest ICT conference in the Netherlands, and I have been named Chair of the SPEC Cloud Working Group, a leading and international multi-organization group focusing on theoretical and practical aspects of performance evaluation and benchmarking in cloud computing. I have served and will continue to serve the role of publicity chair in conferences such as ACM HPDC and IEEE CCGrid. Due to my long-term experience and recognized expertise in the field of large-scale distributed systems, and to my prior experience with Veni grants, I am uniquely qualified to offer this objective analysis of Ana Maria Oprescu.

I have followed closely the progress of Ana Oprescu over the past five years. I have seen her progress from a junior M.Sc. student to a well-prepared, eager Ph.D. candidate, and now to a mature researcher who is genuinely curious about her topic of work and increasingly successful in her field of expertise. One of the qualities I most appreciate about Ana is her ability to get multi-faceted work done, as demonstrated by her ability to start a new research topic in her group, that of adaptive applications for the highly dynamic and emerging commercial clouds. I was very positively impressed by scientific solutions, including here the BaTS scheduler, which
ingeniously and efficiently uses small samples to job runtimes to predict runtime and cost for a much larger set (bag) of jobs. Her ability to study both analytically and empirically an entire class of systems that can use BaTS also demonstrates her versatility, which is to me a useful indicator of future scientific success.

The research proposed by Ana focuses on efficient resource management in IaaS clouds, with an ambitious programme that thoroughly extends her previous work and will make use of her versatility. In her approach, computing customers who are not experts in the use of clouds will be able to use her automated mechanisms and protocols to exploit existing and future cloud infrastructure more efficiently than is currently possible. Ana will define methods to automatically characterize the needs of the applications these customers will send to the users, and provide methods to translate application-specific requirements (accessible to the user) into efficient cloud requests (accessible typically only to the experts). Then, she will design algorithms to find near-optimal provisioning and allocation decisions that address performance-cost trade-offs – currently and for the foreseeable future, an important problem in our community. Last, she will assess the impact of her approach on the cloud market, using all her technical and personal skills, and also addressing a difficult problem at the border of exact and technical sciences – how to evaluate distributed systems?

In summary:

I have great expectations for the future of Dr. Ana Oprescu. She is a good researcher, and personally determined, skilled, and able to operate in a team. I believe in her as a credible Veni candidate and wish her success with the Veni application.

With kind regards,

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