



**CDS
RESEARCH CENTER DYNAMIC SYSTEMS
SYSTEMS ENGINEERING**

Dissertation Prize 2020 for Dr. Seyed Ali Hosseini

21.12.2020 - For his doctoral thesis, a collection of numerical methods and algorithms that allow for less costly and time-consuming modeling of different physico-chemical processes, Dr. Seyed Ali Hosseini was honored with one of the dissertation prizes of the Otto-von-Guericke-Universität Magdeburg. He received his doctoral degree from the Faculty of Process and Systems Engineering with Prof. Dr.-Ing. Dominique Thévenin in the frame of the Graduate School IMPRS.

The possibility to predict the outcome of physico-chemical processes is essential in both engineering and science. Given the complexity of these processes and the many parameters involved, it is usually impossible to properly describe them using simple models. Often times, very complex models have to be used. These do not come very cheap and require either a lot of time and computational power.

As an example, a topic that is witnessing growing interest: numerical simulations to assist medical procedures and possibly help surgeons decide on the best course of action. As such developing less costly and more efficient (but still accurate) descriptions of the utmost importance.

[> to the complete article of the OvGU](#)

<https://www.ovgu.de/unimagdeburg/en/University/In+Profile/Key+Profile+Areas/Research/Make+decisions+more+quickly-p-110710.html>

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