

JOHANNES KEPLER UNIVERSITÄT LINZ INSTITUT FÜR NUMERISCHE MATHEMATIK

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Talk announcement

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Modelling of the aortic dissection: The deterioration of the mechanical properties of the vessel wall in aortic diseases"

That topic is of the most importance for the modeling part because in the epidemiological circumstances we have encountered the old statistical methods fail to help in understanding the phenomena from the medical perspective. The Epidemiology of the aortic dissection is 3-8 cases per 100 000 people per year. Collection of the data is not impossible but it takes time long enough to create the incoherence in the group itself. On the other hand we, the surgeons, meet our patients suffering from the aortic dissection after the disastrous onset of the disease. What we lack is the past history of the patient and the events which lead to the state we encounter. The only method to augment our understanding of the natural history of the disease is through mathematical model. In opposite to statistical methodology, phenomenological model of the disease is based upon causality and chain of events. Those are the crucial characteristics necessary for development preventive measures for the rare but life threatening disease.