

Thu. Jun 1, 2023

Plenary Lecture Room

特別講演・計算工学大賞授賞式

[SL] 特別講演

4:00 PM - 5:00 PM Plenary Lecture Room (1F Leo Esaki Main Convention Hall)

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5:00 PM - 5:15 PM Plenary Lecture Room (1F Leo Esaki Main Convention Hall)

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Computational autonomous synthesis of robot mechanisms – challenge and response

Yoon Young Kim

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6月1日(木)に、2022年度計算工学大賞を受賞された韓国・ソウル国立大学の Yoon Young Kim 教授の特別講演及び計算工学大賞授賞式を開催致します。

特別講演と計算工学大賞授賞式は無料でご参加になれます。多数のご参加をお待ちしております。参加登録については 参加登録と参加費 をご覧ください。

Yoon Young Kim

Distinguished Professor, Integrated Design & Analysis Laboratory for Multi-physics Systems, Department of Mechanical and Aerospace Engineering, Seoul National University, Korea.

Mechanisms are mechanical components that convert an input motion (force) to the desired, possibly complicated, motion (force). Undoubtedly, they critically affect the mechanical performance of machines or robots that are equipped with them. However, it has been so far impossible to generate or design mechanisms without any initial design especially if they are rigid-body mechanisms allowing large motion and high-force transmission. Unlike structural design problems that are now tackled by the structural topology optimization method, the design of rigid-body mechanisms has still remained impregnable.

In this talk, I will answer the following questions:

- 1) “why is there no computational method of autonomous mechanism synthesis that simultaneously determines mechanism topology and dimensions?” ,
- 2) “what different thinking is needed in exploring this new approach - the autonomous mechanisms synthesis?” , and
- 3) “Can this method be practically helpful in the design of robot mechanisms such as wearable exoskeletons and transformable wheel robots?”

Yoon Young Kim教授の公式Webサイト（外部サイト）

ポスター（PDF版）

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特別講演の後、計算工学大賞授賞式を行います。

授賞式は特別講演終了後に開催するため、開始時刻が前後することがございます。

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