

# TEC+2022

## PANEL 4: ELECTRIC MOTOR DESIGN ADVANCEMENTS



### Speakers:



#### **BERKER BILGIN**

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Aside from power electronics and batteries, the electric motor is the most crucial component in the EV powertrain. Regardless of the long history of electric motors, they are still advancing regularly with novel designs featuring higher efficiency, improved performance, as well as more cost-effective materials. Fewer losses in motors enable extended range given the same size of the battery. High power and torque density ensure a more compact package, allowing EVs to provide more space with less weight. Different types of electric motors have been adopted in EVs. Each type has its own advantages therefore sometimes a combination of different types of motors is used as an optimal trade-off among cost, efficiency, and performance. In this panel, the industry experts will elaborate on their practical design experiences and realistic challenges. The academic professors will discuss and demonstrate the emerging technologies and future trends of electric motor design and control.

**15 JUNE 2022**  
**4:00 PM - 5:40 PM**