

# Development of an Integrated Modular Motor Drive (IMMD) System



**Mesut Uğur**

*Department of Electrical and Electronics Engineering  
Middle East Technical University*

**Ozan Keysan**



## Introduction

Conventional motor drive systems vs.

## Motivation

Motivation behind integration  
Motivation behind modularization  
Advantages of IMMDs  
Critical applications

## Challenges

Fitting into a small volume  
Subject to vibration & temperature  
WBG devices: address  
Parasitic problems  
Careful layout design

## DC link capacitor optimization

Large volume/cost  
Model  
Algorithm  
Effect of Interleaving  
Results

## IMMD Design

Fractional slot machines  
Frameless motor  
Modular PCB  
GaN  
Master/slave

## Conclusion

Here are my conclusions

## References

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Subject to vibration & temperature