

# Magnetic Forces Calculation Methods and Some Results & Numerical, Experimental and Design Studies Examples to Improve Bulk Sample and Levitation Force Parameters

报告时间：2021年6月30日（星期三）下午16:00

报告地点：**VooV Meeting ID: 245 216 029**（腾讯会议）

## 主讲人简介：

**Kemal ÖZTÜRK** received his Ph.D. in Graduate School of Natural and Applied Sciences from the Karadeniz Technical University (KTU), 2006. He is now working at Faculty of Science at KTU. His research is primarily in the areas of Superconductivity, Maglev, Energy Storage, Magnetic Materials, Electronic Structure, Solid State Physics, Electromagnetic Modelling, Physical Characterization of Superconductors.



Prof. ÖZTÜRK has published 45 papers in the journals that entered SCI, SSCI and AHCI Indexes and 53 refereed congress / symposium publications in proceedings. He was an Associate Professor at Faculty of Physics & Chemistry at Cambridge in 2010 and at Faculty of Science, Engineering and Medicine at Warwick University in 2015-2016.

## 报告内容：

### Lecture 1:

- 1) Motivation on HTS and Maglev;
- 2) Superconductor base magnetic bearing systems: What is the difference between the PM and Superconductor?
- 3) Magnetic forces calculation methods;
- 4) Single surface analytical magnetic force calculation based on the Modified Frozen Image Method;
- 5) Experimental and analytical magnetic force results of YBCO with seed.

### Lecture 2:

- 1) Numerical study to investigate magnetization, current density and trapped field properties of doped-Sm123 and MgB2 superconductor;
- 2) Principle of superconducting levitation and HTS Maglev train systems;
- 3) Three Axis Magnetic Force Measurement Systems with LN2 and He;
- 4) Comparison of Magnetic Force properties of Single and Multi-Surface HTS Maglev Systems;
- 5) Fabrication studies of the bulk multi-seeded YBCO and doped MgB2.