**Title:**

**Analysis and novel approach to applications of magnetic field generators in magneto-optic interferometric systems**

**Abstract**

The ability to handle optical signals without converting them into the electrical domain has always been a common factor for the research community. Altering photons by photons unravel new scenarios, in theory allowing for a new frontier of signal processing and computing possibilities. Optical switching can be seen as an area of development in which researchers operate to find solutions to their specific applications by different techniques; although the challenges can be substantially different, a solution to the problem can be addressed using knowledge and technological platforms that are multidisciplinary. This knowledge can benefit other scientific communities, providing vertical solutions to their problems and leading to novel applications. This research aims to provide a broad view of the state-of-the-art in this lively scientific research field and discuss the advances required to tackle emerging challenges, thanks to contributions authored by experts affiliated with academic institutions and high-tech industries. The path is organized to contrast contributions on multidisciplinary uses of magnetic field generators or magneto-optic interferometer systems, aiming to enhance the cross-contamination of ideas between scientists working in two fields of magneto-optic interferometric switching: optical switching and power. The ultimate intent of this thesis is to guide young scientists and provide research-funding institutions and stakeholders with a comprehensive overview of perspectives and opportunities offered by this research field.

**How to join the meeting. When (February 5 th @ 2:30pm)**

Microsoft Teams meeting

**Join on your computer, mobile app or room device**

[Click here to join the meeting](https://teams.microsoft.com/l/meetup-join/19%3Ameeting_YTMzNGY5OWEtZGM1ZS00OGE2LWE2YzUtMjI1MjYwM2JjNmQ3%40thread.v2/0?context=%7b%22Tid%22%3a%229ef58ab0-3510-4d99-8d3e-3c9e02ebab7f%22%2c%22Oid%22%3a%22915ed0bc-8e7c-4840-affa-6466bdd6cad1%22%7d)

Meeting ID: 297 757 760 888
Passcode: GFcX4H

[Download Teams](https://www.microsoft.com/en-us/microsoft-teams/download-app) | [Join on the web](https://www.microsoft.com/microsoft-teams/join-a-meeting)

**Or call in (audio only)**

+1 816-406-3989,,674260004#   United States, Kansas City

Phone Conference ID: 674 260 004#

[Find a local number](https://dialin.teams.microsoft.com/827da0a1-5e2c-406e-97bb-ef9966b4479c?id=674260004) | [Reset PIN](https://dialin.teams.microsoft.com/usp/pstnconferencing)

Booked a Teams Room or Cart? Click the Help link below for instructions on how to use the equipment

[Learn More](https://aka.ms/JoinTeamsMeeting) | [Help](https://gppower.sharepoint.com/sites/DW/SitePages/Teams-Room-System-and-Surface-Hub-Instructions.aspx) | [Meeting options](https://teams.microsoft.com/meetingOptions/?organizerId=915ed0bc-8e7c-4840-affa-6466bdd6cad1&tenantId=9ef58ab0-3510-4d99-8d3e-3c9e02ebab7f&threadId=19_meeting_YTMzNGY5OWEtZGM1ZS00OGE2LWE2YzUtMjI1MjYwM2JjNmQ3@thread.v2&messageId=0&language=en-US)