



# EuroMIM Meeting

Thursday 22<sup>nd</sup> March

14h00 – 16h00

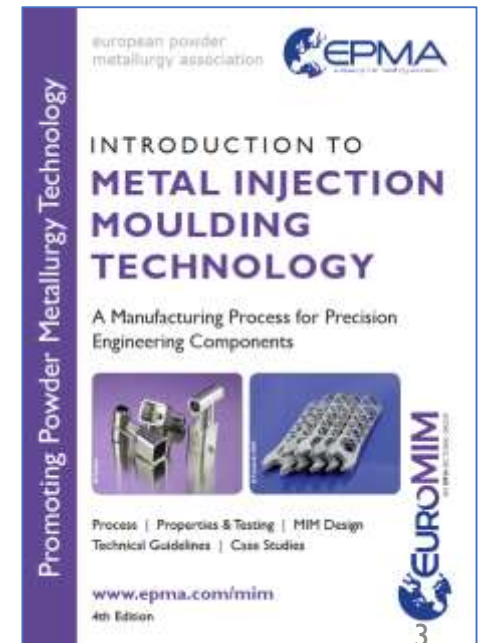
# Agenda

- EuroMIM 2017 Activities Feedback
- 1st results from EPMA EuroMIM Trend Survey
- Euro PM2018
  - Special Interest Seminars
    - Quality and Tolerances of MIM components:
    - Functional Materials: soft and hard magnetic materials
  - Open Meeting
- EuroMIM Seminar 2019: **Basic Design for MIM**
  - Topics, location, attracting End Users, title
- Euro PM2019
  - Special Interest Seminar
    - “The Future of PM” – EPMA’s 30<sup>th</sup> Anniversary

# EuroMIM Sectoral Group 2017



- Seminar: A 2-day Seminar for the Entire MIM Supply Chain – BASF Ludwigshafen
  - 40 participants, few end users
  - 13 speakers
  - Table to show parts
- Milan:
  - SIS : MIM and Aerospace Applications
    - 81 attendees
    - Speakers: Dr.-Ing. Enrico Daenicke (Rolls Royce, Germany), Dr Sébastien Richard (Safran, France) and Dr Pedro Rodriguez (MIMTECH Alfa, Spain)
  - 1 meeting by invitation:
    - Trend Survey
    - Benchmarking Survey
- Trend Survey
- Benchmarking Survey
- Updated MIM brochure



# Trend Survey – Statistics

- [EPMA Trend Survey](#)
- Trend Survey: same participation as 2017 for MIM component suppliers, including some end users producing their own parts
- Benchmarking Survey: same participation as 2017
- Statistical data collection: same participation as 2017. Too low to have reliable statistics on MIM part production → bought external report again

# MIM Market

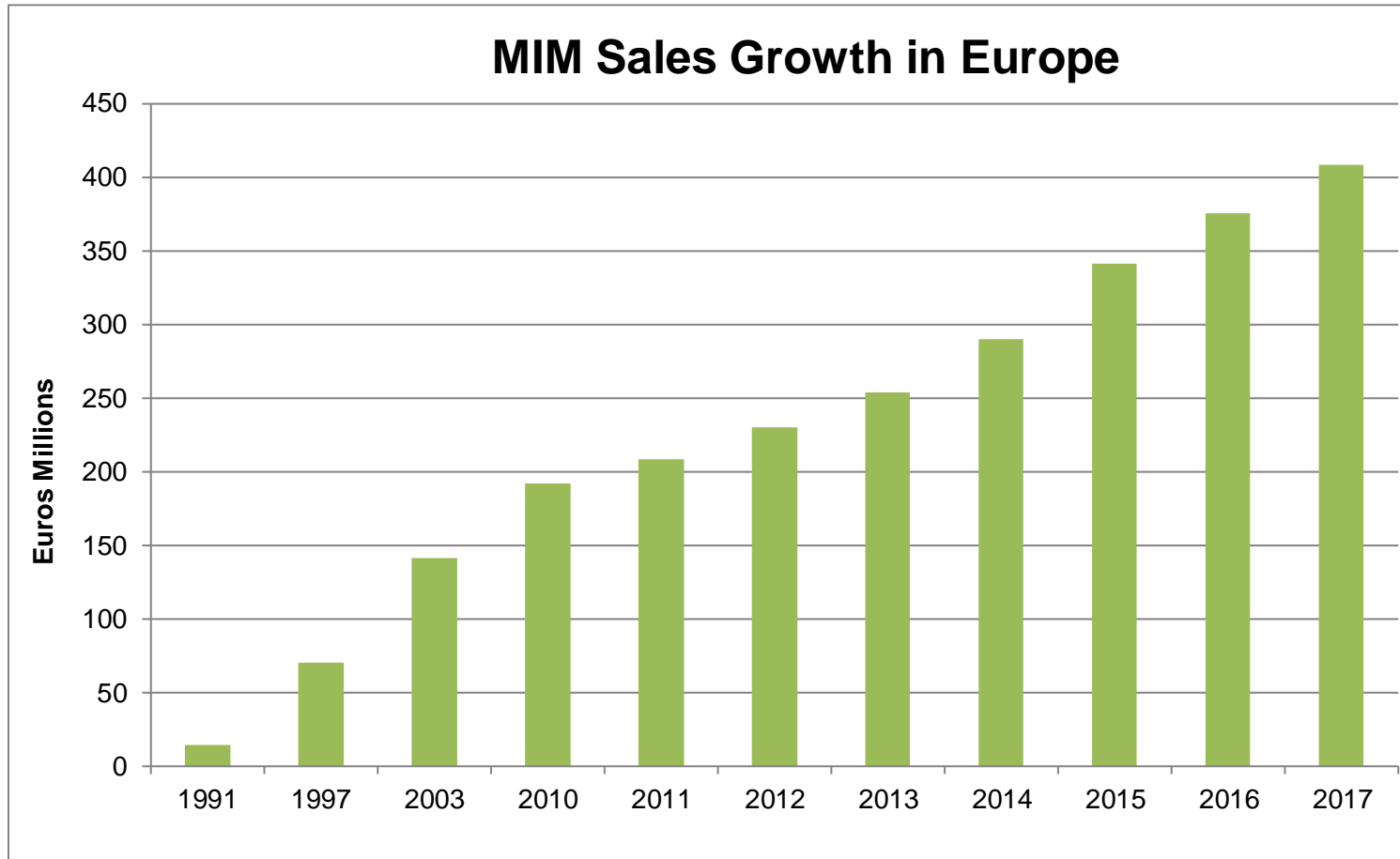


- Expected to Grow at # 8% for the Period 2017-2022
- The metal injection molding market is estimated to be USD 2.58 billion in 2017 and is projected to reach USD 3.77 billion by 2022. The growth of this market can be attributed to the increasing demand for small and complex metal injection molded parts from end-use industries, including electrical & electronics, automotive, medical & orthodontics, industrial, consumer products, and firearms & defense. The major factor restraining the growth of the metal injection molding market is that it is expensive to produce a relatively small quantity of metal injection molded parts

# MIM Sector in Europe: 3.200 Tonnes in 2017



World growth expected at # 8% for the Period 2017-2022\*



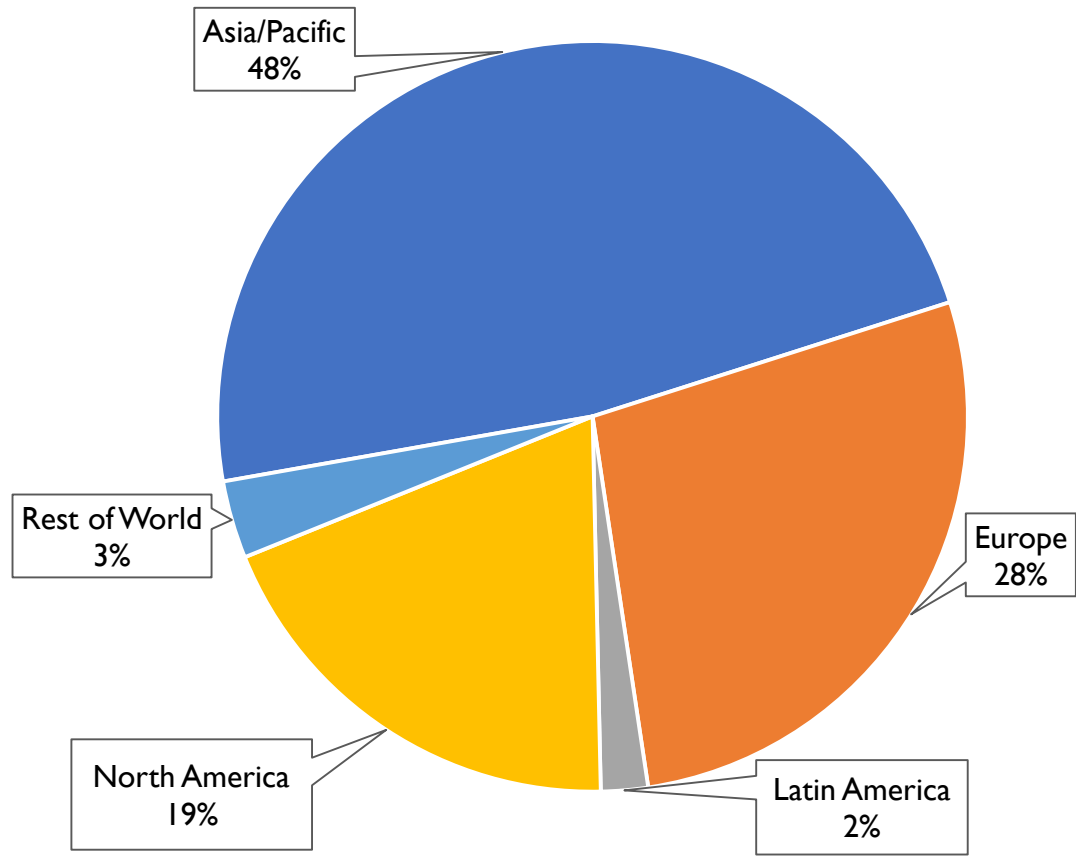
Images Courtesy GKN and MIMEST

Source: EPMA Market Research

\* Source: Global Powder Injection Molding Market 2017-2021

# MIM Sector 2017

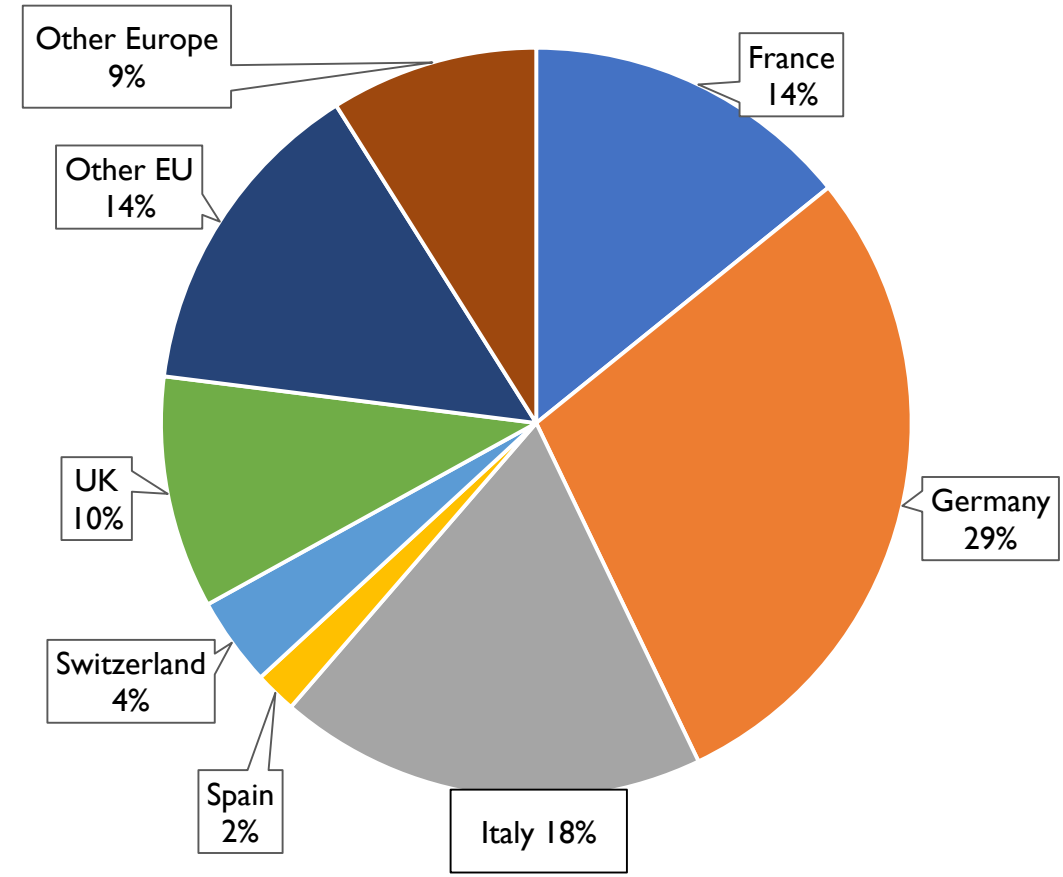
**World PM Parts by MIM Consumption by Region (% metric tons) 2017**



**Growth in metric tons: +11.8% vs 2016**  
**Growth in €: +9.8% vs 2016**

Source: Dedalus Consulting

**European PM Parts by MIM Consumption (% metric tons) 2017**



**Growth in metric tons: +11% vs 2016**  
**Growth in €: +9% vs 2016**

# MIM Sector in Europe: Stainless is by far the Most Used Metal

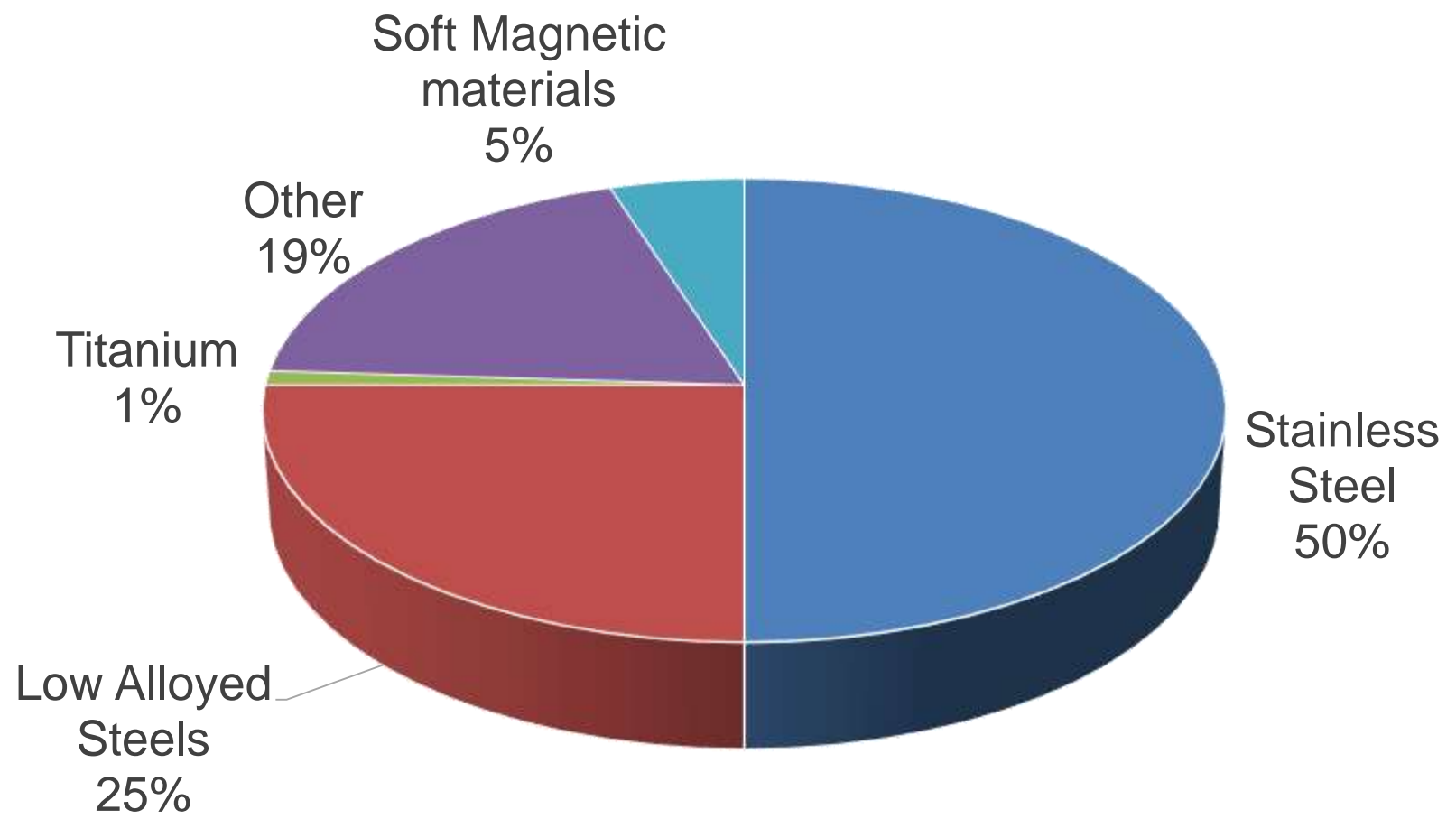


Image Courtesy INDO-MIM

Source: EPMA Market Research



# MIM Sector in Europe

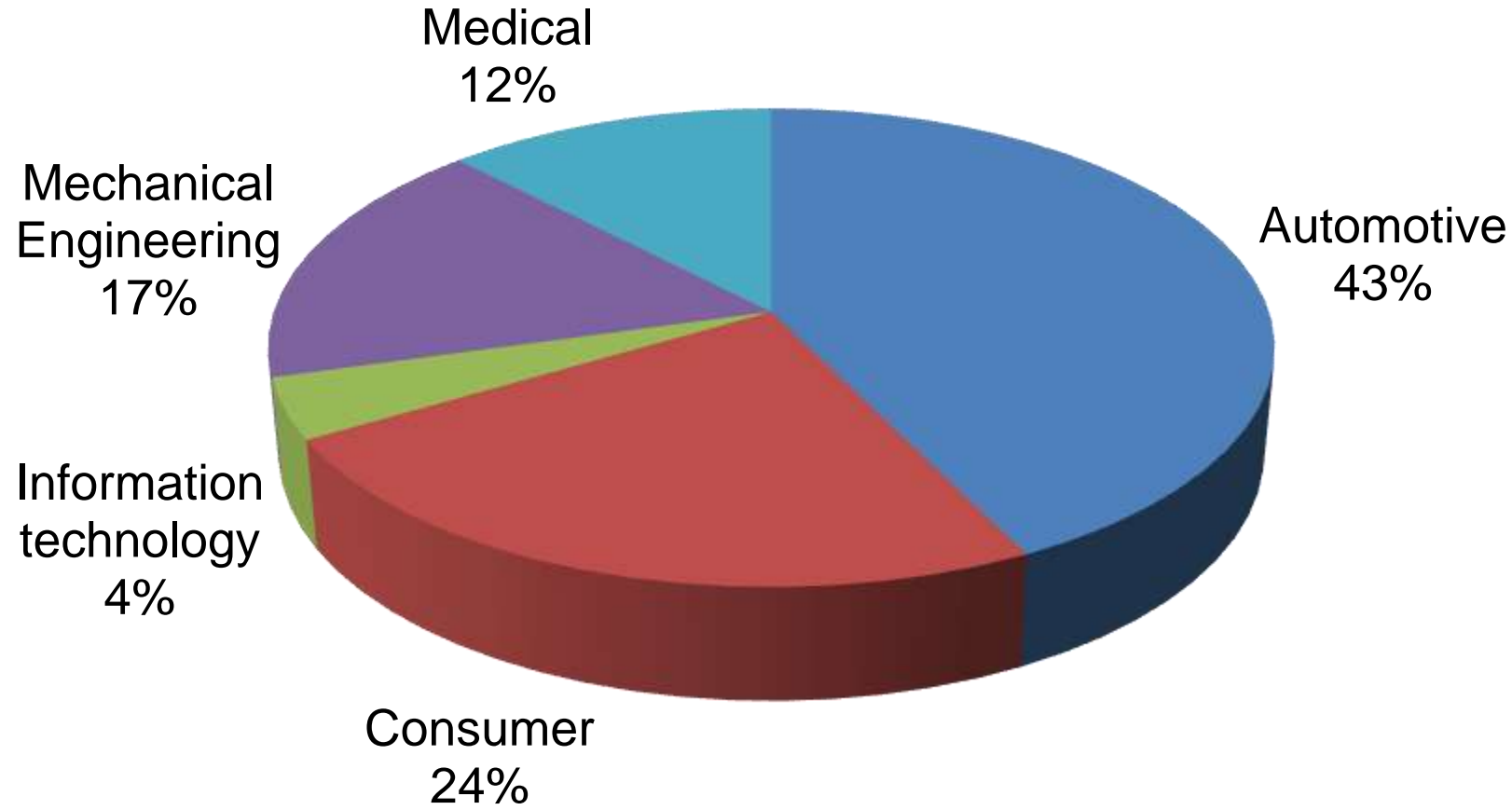


Image Courtesy Mimecrisa

# EuroMIM Sectoral Group 2018



- No seminar
- EPMA to join the Arburg event in June
- During EuroPM2018:
  - SIS 90mn: Quality and Tolerances of MIM components (Monday)
    - Parmaco: Factors that influence the dimensional scatter of MIM components. Concept of process capability measured as cpk and its implication on the required tolerances for MIM parts. A global view.
    - GKN: Case studies of volume production MIM components with a special look on dimensional process capability.
    - Alliance-MIM: Case studies of “cosmetic” MIM components with a special look on visual quality aspects.
  - SIS 90mn: Functional Materials: soft and hard magnetic materials (Monday)
    - Available soft magnetic materials, their properties and applications.
    - An introduction to soft magnetic materials. Mechanisms that lead to desired properties.
    - Influence of chemical composition and processing route on microstructure and soft magnetic properties.
    - Case studies of soft magnetic MIM components
    - Comparison of MIM soft magnetic materials to conventionally produced soft magnetic materials. When should MIM be considered as an alternative to the conventional production of soft magnetic components.
    - Available hard magnetic materials, their properties and applications.
    - An introduction to hard magnetic materials. Mechanisms that lead to desired properties.
    - Influence of chemical composition and processing route on microstructure and hard magnetic properties.
    - Case studies of hard magnetic MIM components
  - I Open meeting (Tuesday)
    - EPMA trend survey (public part of it)
    - Market trend by Keith Murray
    - Future for MIM: JC Bihr
    - I additional speaker
    - Discussion about MIM 2019 Seminar „Basic Design for MIM“
- Sectoral group meeting before the GA

# EuroMIM Sectoral Group 2019

- Seminar 4-5 June 2019 hosted by Parmaco: „Basic Design for MIM“
  - Need speakers
- EuroPM 2019: specific session on „the future for MIM“ as it will be the 30th anniversary for EPMA.
  - When / how do we get organized