MATHMET

EMN MATHMET

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EMN Advanced Manufacturing Stakeholder Meeeting
Online – 11.10.2021

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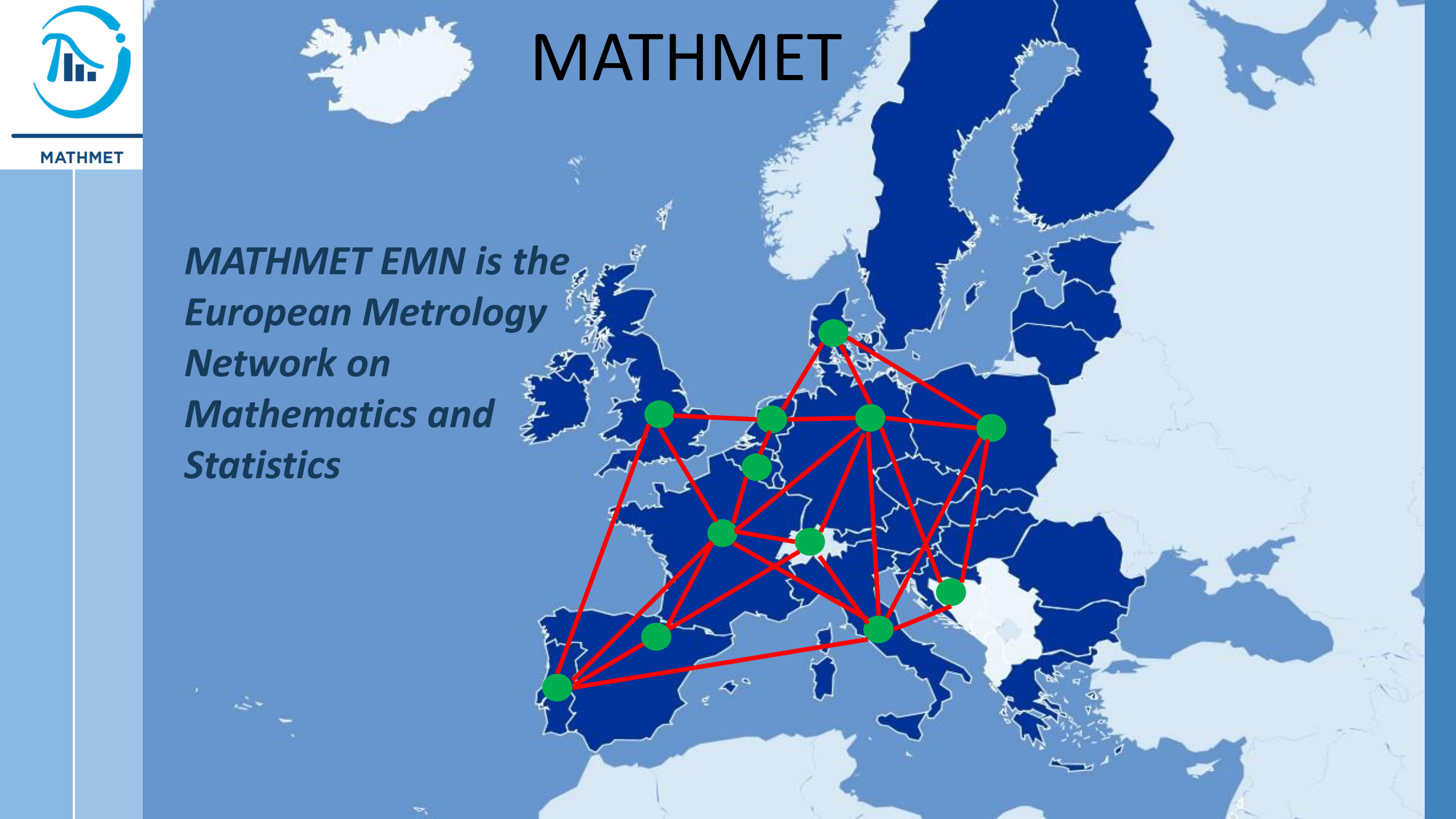
MATHMET EMN is the European Metrology Network on Mathematics and Statistics



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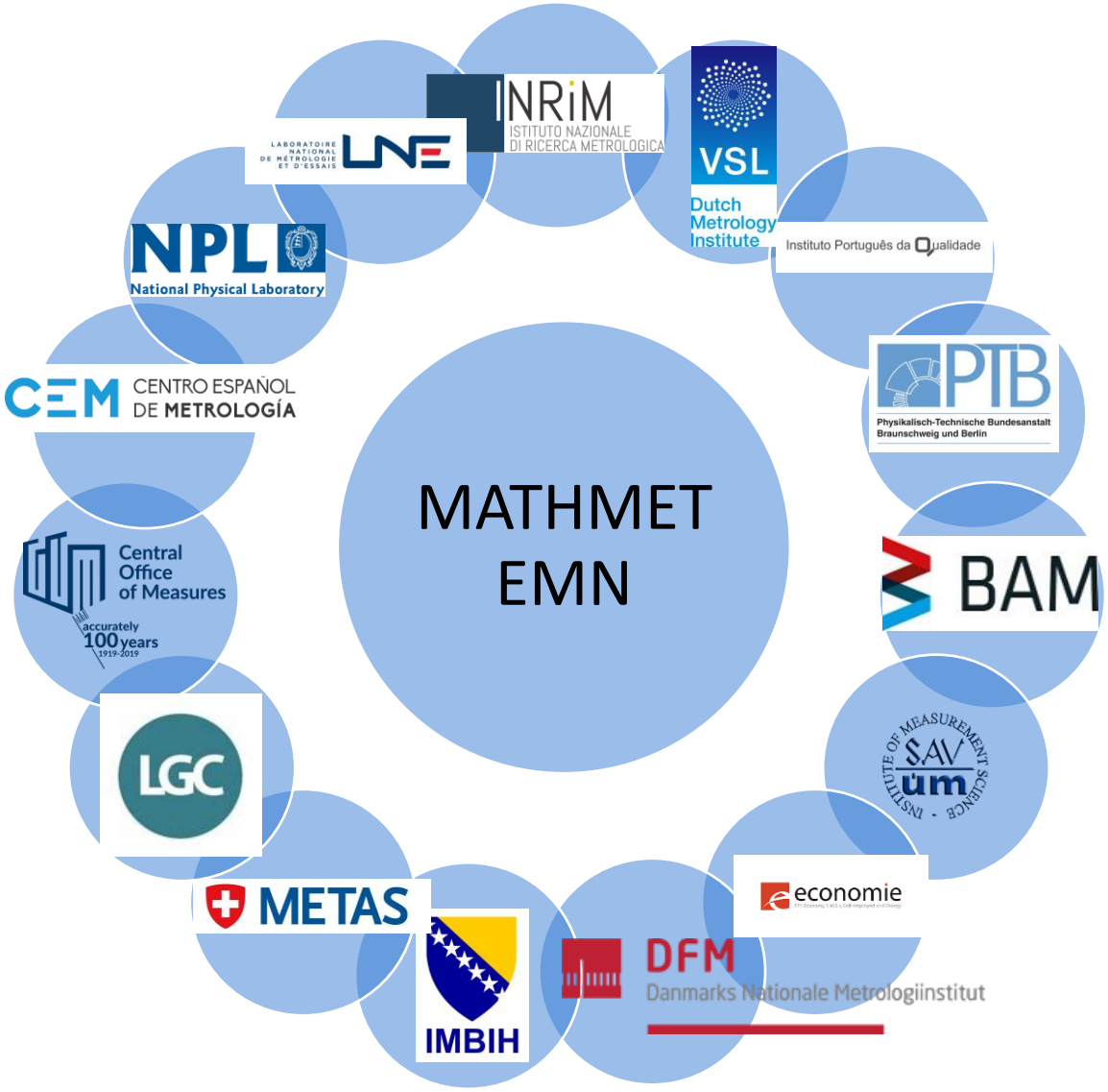
Who we are

- EMN was established in June 2019
- Today it comprises 15 NMIs/DIs and partner institutes
- Supported by EMPIR project 18NET05



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Our Objectives

*We **build links between** National Metrology Institutes, academia and industry to **foster mathematics and statistics for metrology.***

- Collaborative research
- Point of reference
- Creating a sustainable infrastructure

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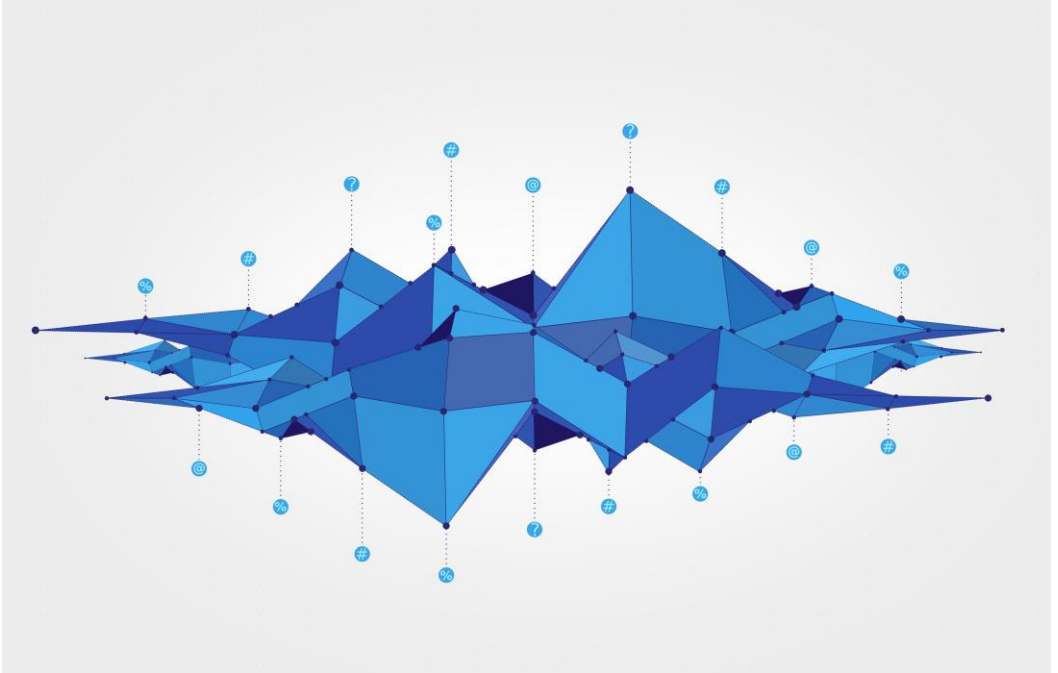

Applications

AI | **Uncertainty** | **Modelling**

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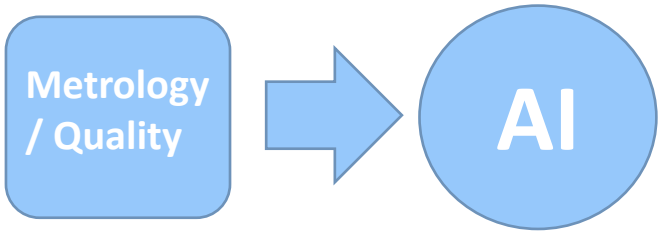
Research Priorities



Trustworthiness and Secure AI

Reliability

- Robustness
- Repeatability
- Validation
- Quality of training data
- Standardisation

Explainability

- Interpretability of results
- Transparency
- Comprehensibility/ understanding AI
- Confidence

Traceability

- Uncertainty evaluation
- Examples for metrology

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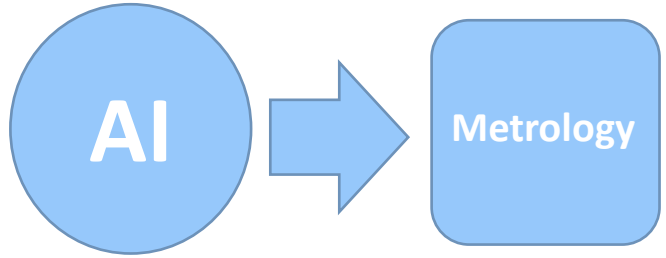
Research Priorities



Next generation Metrology

Improved data analysis

- Big data
- Automatized data analysis
- improved inline metrology

New metrological applications

- Imaging
- Sensor networks
- Improved calibrations
- Autonomous driving

Virtual metrology

- Digital twins
- AI + modelling
- Predictive maintenance of experiments
- Forecasting

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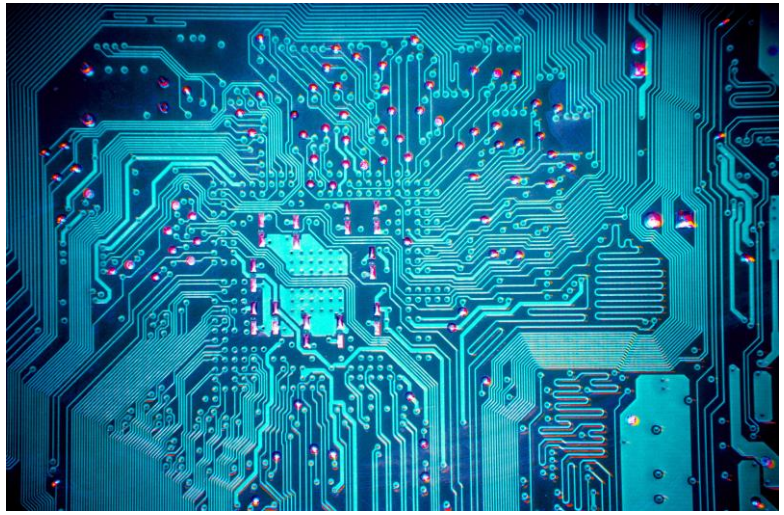
Why the effort?

Health

- EMPIR: MedalCare
- Medical imaging
- Electromagnetic dosimetry
- ECG/EEG feature analysis
- …

Industry



- EMPIR: ATMOC
- EMPIR: Met4FoF
- Scatterometry
- Optical form measurements
- Process optimization
- …

Environment

- Sensor networks
- Condition monitoring

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You want to know more?

Visit our Website!

https://www.euramet.org/european-metrology-networks/mathmet/

You have an interest in math for metrology ?

Become a Stakeholder !

Contact:

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