

# GIOVANNI MARIA VINAI

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Born in ...omissis... - on ...omissis...; Italian; ...omissis...

## PhD Doctor in Material Science

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### Professional experience

2018 – today **Research fellow** at IOM-CNR, Trieste

**Development of an in-house research field** on magnetoelectric coupling and multiferroic heterostructures

**Beamline scientist** at APE-HE beamline (Elettra Sincrotrone)

**Local contact** at APE-HE beamline for users coming from Elettra, NFFA-TS and NFFA-EU proposals

Participant of the European **FET-OPEN** Project **SINFONIA** (2021-2025)

**Scientific collaboration** with international groups

**Co-supervisor** of two PhD student at Università degli Studi di Trieste

4 papers as first name author, 3 as last name/corresponding, 8 talks at international conferences

2014 – 2018 **Post-Doc fellow** at IOM-CNR, Trieste

**Instrumental development** of UHV chamber system for MBE deposition and in-situ electronic, magnetic and structural characterization for the investigation of highly correlated systems with reduced lateral dimensions.

**In-house research** on multiferroic materials and multiferroic heterostructures.

**Local contact** activity on APE-HE beamline: investigation of electronic, structural, and magnetic properties by means of STM, LEED, XPS, XAS, XMCD, XMLD.

3 papers as first name author, 12 paper as co-author, 6 talks and one poster at international conferences

2010 – 2013 **PhD** at SPINTEC – CEA Grenoble in partnership with Crocus Technology start-up

**Scalability and improvement of exchange bias properties for Thermally Assisted-MRAM:** study of exchange bias variability on IrMn/Co square patterned dots through focalized Kerr effect. Optimization of exchange bias properties in temperature.

Cleanroom accreditation (SEM, IBE, EDX, EBE, chemical bench), simulation (Python),

magnetic characterization (MFM, VSM, MOKE, XRD, EHE)

5 papers as first name author, 1 paper as co-author, 3 talks at international conferences

2010 **Master Final Internship** at Spintec – CEA Grenoble (6 months)

**Magnetic properties of sub-500nm patterned media:** patterning of exchange biased square dot systems for MFM analysis under in-situ applied field

2009 **Master internship** at Spintec – CEA Grenoble (3 months)

**MFM characterization of multilevel magnetic recording on prepatterned media:** study of patterned multilayer systems after demagnetizing field for 2bit-per-dot data recording media

2 papers as co-author

## **Metrics (2024/11/07)**

Total number of publications: 73

Total citations: 971 (Scopus), 1182 (Google Scholar)

h index: 16 (Scopus), 19 (Google Scholar)

h-10 index: 35 (Google Scholar)

## **Formation**

2010 - 2013      **PhD in Physics** at Grenoble University

2009 - 2010      Master of Science EEATS Micro-Nano Electronique at UJF - INPG

2008 - 2010      **Master Nanotech**; Final mark: **110/110**

Master Degree in Nanotechnologies shared by three engineering establishments: Politecnico di Torino, INP Grenoble and EPFL (see <http://nanotech.grenoble-inp.fr/>)

2005 - 2008      **Engineering Physics** Degree at Politecnico di Torino; Final mark: **110/110 with honors**

## **Languages**

Italian            Mother Tongue

English           Full professional proficiency

French            Full professional proficiency