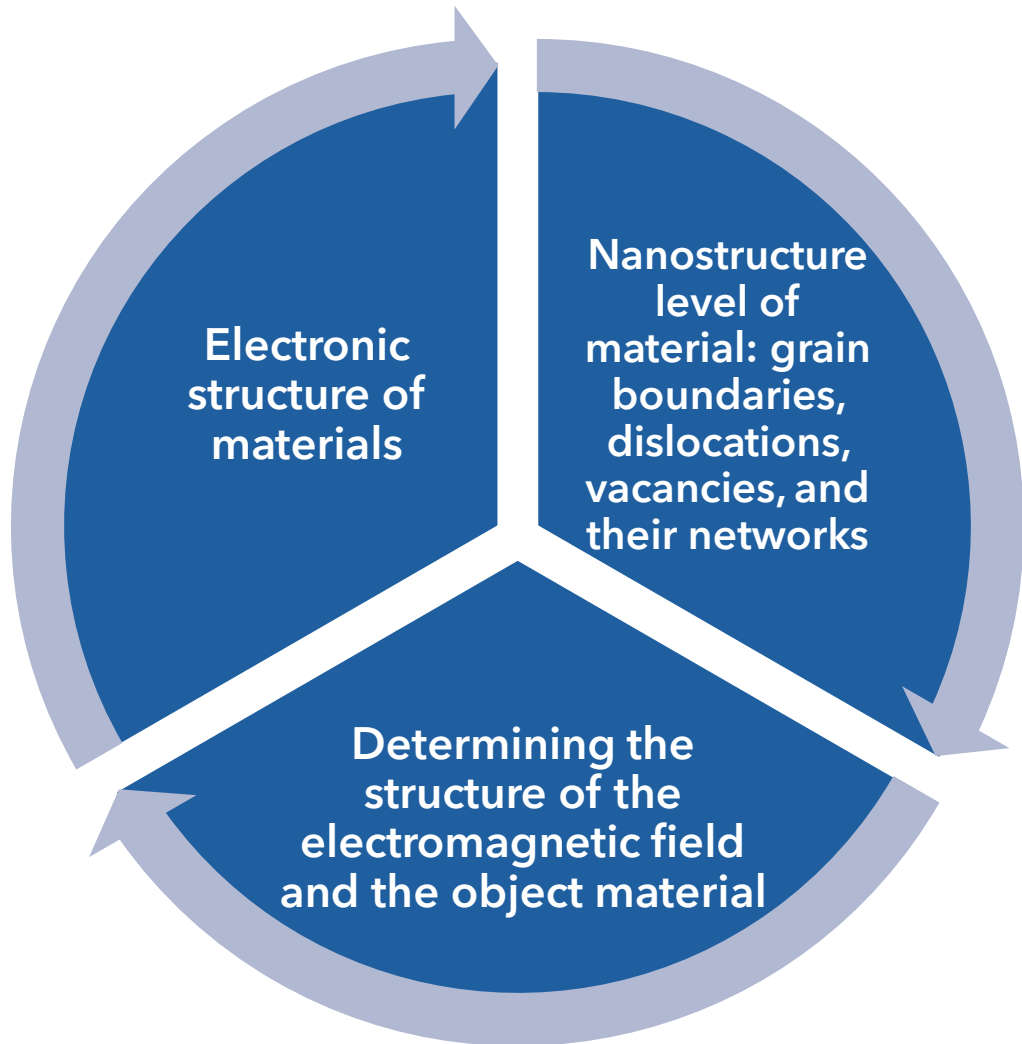


# Structurescope EG+AI (SSEGA I)



**EtherGravity**

# IDEA



# SSEGA1



EtherGravity

*"The generally accepted explanation for the mechanism of metal fatigue is based on dislocation theory".*

Mike Sondalini

Non-destructive determination of chemical-physical, mechanical properties of conductive materials:

metals alloys, carbon-based composites and semiconductors

Precision measurement, patents:

[UA 125413 C2](#)

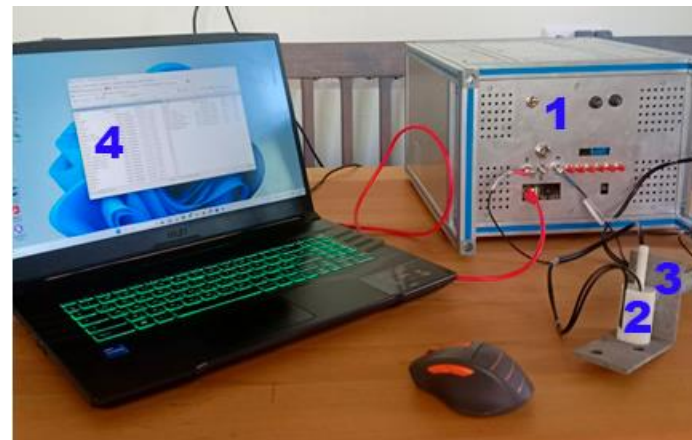
[UA 125416 C2](#)

Determining the structure of the materials electromagnetic field, patent:

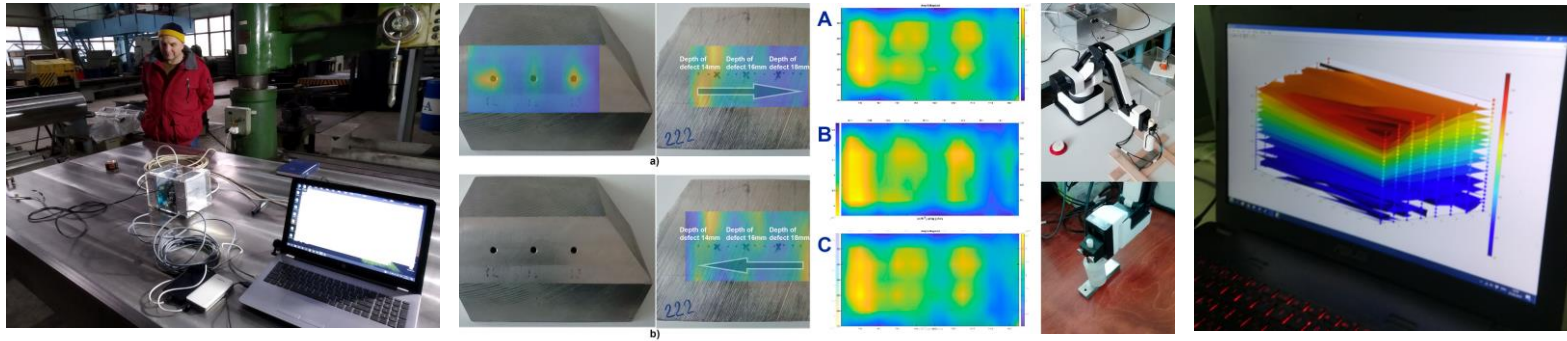
[US 20200278308 A1](#)

[UA 117542 C2](#)

AI to interpret measurement results: accuracy 0.95



1. DSP unit
2. Probe
3. Object under control
4. PC






## Market & Business opportunities:

- Fabricated Metal Product (2021): **518,1** thousand enterprises
- Total value added of FMP (2021) **€281,3 bn**

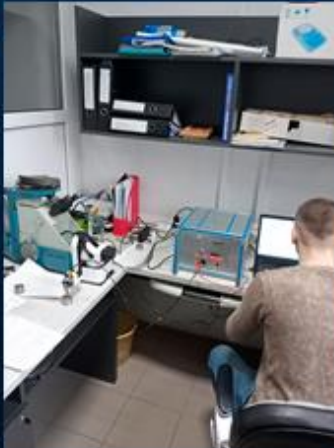
SSEGA

DIH-WORLD



Sample No	Tempering temperature, °C	Rockwell Hardness, HRC	Identified microstructure	Prediction confidence	neural network
1	240	50	Troostomartensit	100.0%	Pass through sensor, ESF* 5 kHz
2	300	48	Troostomartensit	100.0%	Overhead sensor, ESF 40 kHz
3	350	44	Troostite	100.0%	95.0% · 300 °C 5.0% · 350 °C
4	450	40...41	Troostite	100.0%	80.0% · 350 °C 20.0% · 450 °C
5	500	34...35	Sorbite	15.0% · 450 °C 85.0% · 500 °C	100.0%
6	550	31	Sorbite	100.0%	95.0% · 450 °C 5.0% · 550 °C
7	600	30...31	Sorbite	10.0% · 550 °C 90.0% · 600 °C	100.0%
8	650	28...29	Sorbite	100.0%	100.0%
9	700	24...25	Sorbite like perlite	35.0% · 650 °C 65.0% · 700 °C	100.0%



## Key Marketable Innovations:

- SIMPLE: simple automated test
- FAST: **30 sec** test
- LARGE SCALE: replaces up to **80%** metallurgical tests
- CHEAP: €5 against a cost of €2,000 (on average) per metallurgical test



EtherGravity

# Thanks for your attention!

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