

## Dr Mayorkinos Papaelias

Senior Lecturer  
Research Fellow

**[School of Metallurgy and Materials \(/schools/metallurgy-materials/index.aspx\)](/schools/metallurgy-materials/index.aspx)**

### Contact details

**Telephone (+44) (0) 121 414 2626 (tel:+44 0 121 414 2626)**

**Email [m.papaelias@bham.ac.uk](mailto:m.papaelias@bham.ac.uk) (mailto:m.papaelias@bham.ac.uk)**

School of Metallurgy and Materials  
University of Birmingham  
Edgbaston  
Birmingham  
B15 2TT  
UK

### About

Dr Papaelias is an expert in metallurgy, NDT and condition monitoring. He is currently involved as project coordinator in several industrial collaborative research projects related to the wind power and railway sectors which are financially supported by the European Commission.

### Qualifications

PhD in Metallurgy, University of Birmingham, 2004

MSc in New Materials, Aberdeen University, 2000

BEng (Hons) in Materials Science and Engineering, Queen Mary, University of London, 1998

### Research

NDT

Condition monitoring

Metallurgy

### Publications

M. Papaelias et al., "Further developments in high-speed detection of rail rolling contact fatigue using ACFM techniques", Journal of the British Institute of Non-Destructive Testing (Insight), Number 7, July 2010.

M. Papaelias et al., "INTERAIL: Development of a Novel Integrated Inspection System for the Accurate Evaluation of the Structural Integrity of Rail Tracks – Implementation of the ACFM Rail Inspection Module", ECNDT 2010 Conference, Moscow, June 7-11, 2010.

M. Papaelias et al., "Condition monitoring of Oil and Gas pumps and their driving equipment based on Acoustic Emission Techniques", Non-Destructive Testing 2009 Conference, Blackpool, UK, September 2009.

M. Papaelias et al., "Further Developments in high-speed detection of rail rolling contact fatigue using ACFM Techniques", Non-Destructive Testing 2009 Conference, Blackpool, UK, September 2009.

L. Girardi, J. Plu, B. Blakeley, P. Bredif, C. Davis, M. Lugg, M. Papaelias, C. Roberts, 'INNOTRACK SP4.4 – Detection of Rolling Contact Fatigue in Rails Using Electromagnetic and Ultrasonic Phased-Array Inspection Techniques', 8th International Conference on Contact Mechanics and Wear of Rail/Wheel Systems, Firenze, Italy, September 15-18, 2009.

M. Papaelias et al., "Detection and quantification of rail contact fatigue cracks in rails using ACFM technology", Journal of the British Institute of Non-Destructive Testing (Insight), Number 7, July 2009.

M. D. G. Potter, S. Dixon, Y. Fan, R. S. Edwards, M. Papaelias and C. Davis, "A novel guided wave rail inspection system – on-line results from simulated defects in rail track", British Institute NDT 2007 International Conference, September 15-18, 2008, Macclesfield, UK.

M. Papaelias et al., "High-Speed inspection of rails using ACFM technology", Journal of NDT&E International, Vol. 42, Number 4, June 2009.

M. Papaelias et al., "A B-Spline Approach to Alternating Current Field Measurement for RailRoad Inspection", International Conference of Industrial Engineering and Engineering Management", Singapore, December 2008.

M. Papaelias et al., "A review on non-destructive evaluation of rails: state of the art and future development", I. Mech. E. Proceedings, Journal of Rail and Rapid Transit – Part F, Invited Review Paper, Vol. 222, Number F4, December 2008.

R. S. Edwards, Y. Fan, C. Holmes, M. Papaelias et al. "Ultrasonic detection of surface-breaking railhead defects", Journal of the British Institute of Non-Destructive Testing (Insight), Number 7, July 2008.

M. Papaelias et al., "Detection and quantification of rail contact fatigue cracks in rails using ACFM technology", Journal of the British Institute of Non-Destructive Testing (Insight), Number 7, July 2008.

E. Rassekorde and M. Papaelias, "Detection of Defects in Aerospace Low Pressure Compressor Blades Using Eddy Current Arrays", AEROMAT 2008 Conference, Houston U.S.A., June 2008.

