

Dr. Mátyás Andó

Associate Professor

Eötvös Loránd University, Faculty of Informatics,
Savaria Institute of Technology
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ACADEMIC EDUCATION

- 2017/1 Habilitation**
Fields of Technology, materials science and technology. University of West Hungary and Habilitation Council, Sopron, Hungary
- 2011/07 Ph.D. in Engineering Sciences: Electro-mechanical Engineering**
Title of dissertation: *Development of Technical Polymer Composites for Agricultural Engineering Application*
Ghent University, Faculty of Engineering and Architecture, Ghent, Belgium
- 2011/06 Ph.D. in Engineering Sciences: Agricultural Engineering Sciences**
Title of dissertation: *Development of Technical Polymer Composites for Agricultural Engineering Application*
Szent István University, PhD School of Mechanical Engineering, Gödöllő, Hungary
- 2007/06 M.Sc. in Economics and Social Sciences: Teacher of mechanical engineering**
Title of master thesis: *Additions at Szent István University*
Szent István University, Faculty of Economics and Social Sciences, Gödöllő, Hungary
- 2007/06 M.Sc. in Mechanical Engineering: Specialization in CAD/CAM**
Title of master thesis: *Mechanical and tribological research on cast polyamide 6 with new additives*
Szent István University, Faculty of Mechanical Engineering, Gödöllő, Hungary

PROFESSIONAL CAREER

- 2017 - Associate Professor, Director of Institute**
Eötvös Loránd University, Faculty of Informatics, Savaria Institute of Technology
- 2014 – 2017 Associate Professor**
University of West Hungary, Faculty of Natural Sciences:
Savaria Institute of Technology, Department of Mechanical Engineering
- 2013 – 2014 Senior Lecturer**
Szent István University, Faculty of Mechanical Engineering:
Institute for Mechanical Engineering Technology, Department of Maintenance of Machinery
- 2010 – 2013 Assistant Lecturer**
Szent István University, Faculty of Mechanical Engineering:
Institute for Mechanical Engineering Technology, Department of Maintenance of Machinery
- 2010 – 2010 PhD scholar, researcher**
Ghent University, Faculty of Engineering and Architecture:
Laboratory Soete, Department of Mechanical Construction and Production
- 2007 – 2010 PhD scholar, researcher**
Szent István University, Faculty of Mechanical Engineering:
Institute for Mechanical Engineering Technology, Department of Maintenance of Machinery

- 2012 – Managing director**
Andó Mérnöki Iroda Kft.
- 2008 – 2011 Mechanical Engineer**
Gépész Tuning Kft.
- 2007 – 2008 Tool Designer**
Hungaro-SLR Gépipari Kft.

RESEARCH FIELDS

- **Manufacturing Technology:** Establish and develop computer aided manufacturing systems (CAD/CAM) in single production.
- **Develop of brake caliper:** Fundamental questions on a complex model of special brake calipers.
- **Tribology:** Polymer-metal contact in case of twin-disc or abrasive system, online monitoring.
- **Development of polymer:** investigation and evaluation different cast polyamide 6 subtypes.

EDUCATION ACTIVITIES

Coordinator and lecturer

- Subject (BSc): Fundamentals of Engineering Tribology, CAE practices II., Practical problems from manufacturing, Polymer technology II., CAM practices

Lecturer

- Subject (BSc): Tribology, Industrial tribology, Vehicular tribology, CIM systems, Integrated (CIM) systems, Flexible Manufacturing Systems, Computer Added Manufacturing, Manufacturing Processes and Systems, Computer Integrated Manufacturing, CAE practices III., Maintenance of Machinery

NYELVISMERET

- English: Professional working proficiency (B2)
- German: Elementary proficiency (A2)
- Hungarian: Native (C2)

SOFTWARE SKILLS

- CAM software: Edge CAM,
- CAD software: Solid Edge, Solid Works, Topsolid
- CNC programing: Siemens, Fanuc, Emco

SCIENTIFIC ACTIVITIES AND MEMBERSHIPS

Scientific reviewer

- Journal of Petroleum and Gas Engineering (JPGE)
- Journal of Reinforced Plastics and Composites (JRPC)
- Wear
- Journal of Testing and Evaluation

Ph.D. reviewer, committee member

- Péter Bakonyi: Analysis of long term creep behavior of polymers and polymer composites
- Enikő Soós: Development of self-cutting screw joints

Evaluation of proposal

- Sapientia Foundation
- OTKA

MEMBERSHIPS

- From 2013: Member of the VI. Section of Engineering Sciences (Committee on Fibre Technology)
- 2012-2013: Member of the Hungarian Association for Material Testing

SCIENTIFIC ACHIEVEMENTS

2007. június 23.	"AGRIKON SAM" performance award
2006. november 29.	Excellent study award
2006. november 22.	Special Award (Scientific Conference for Students)
2006. szeptember 1.	Fellowship granted by the Republic
2006. június 24.	"KITE" performance award
2006. április 4.	Excellent study award
2005. november 23.	1. Place (Scientific Conference for Students)
2005. november 2.	Excellent study award
2005. szeptember 1.	Fellowship granted by the Republic
2005. június 18.	"AGRIKON SAM" performance award
2005. április 4.	Excellent study award
2004. december 1.	Excellent study award
2004. november 24.	Special Award (Scientific Conference for Students)
2004. szeptember 1.	Fellowship granted by the Republic
2004. június 12.	"IKR" performance award
2004. március 25.	Excellent study award
2003. november 5.	Excellent study award
2003. szeptember 1.	Fellowship granted by the Republic
2003. május 26.	2. place (Mechanical Scientific Contest, Timisoara, Romania)
2003. március	Excellent study award

PUBLICATIONS

Journal papers with impact factor:

1. R Lefanti, M Ando, J Sukumaran: Fatigue and damage analysis of elastomeric silent block in light aircrafts. *MATERIALS & DESIGN* 52: pp. 384-392. Paper <http://dx.doi.org/10.1016/j.matdes.2013.05.039>. (2013) IF: 2.913*
2. Sukumaran J, Ando M, De Baets P, Rodriguez V, Szabadi L, Kalacska G, Paepegem V: Modelling gear contact with twin-disc setup. *TRIBOLOGY INTERNATIONAL* 49: pp. 1-7. (2012) IF: 1.536
3. Sukumaran J, Soleimani S, De Baets P, Rodriguez V, Douterloigne K, Philips W, Andó Mátyás: High-speed imaging for online micrographs of polymer composites in tribological investigation. *WEAR* 296:(1-2) pp. 702-712. (2012) IF: 1.262
4. M ANDO, J SUKUMARAN: Effect on Friction for Different Parameters in Roll–Slip of Polyamide–Steel Nonconformal Contacts. *TRIBOLOGY TRANSACTIONS* 55:(1) pp. 109-116. (2012) IF: 0.914
5. Andó Mátyás, Czigány Tibor, Kalacska Gábor: Investigation on the Flammability of Diverse Cast PA6 Semi-Finished Products. *JOURNAL OF TESTING AND EVALUATION* 40:(6) pp. 1027-1032. (2012) IF: 0.384
6. Ando M, Kalacska G, Czigany T: Electrical Properties of Magnesium Catalyzed Cast PA6 Semi-Finished Products. *JOURNAL OF THERMOPLASTIC COMPOSITE MATERIALS* 24:(3) pp. 415-428. (2011) IF: 0.810

Journal papers:

7. Vanessa Rodriguez, Jacob Sukumaran, Yeczain Perez, Patrick De Baets, Matyas Ando, *TRIBOLOGICAL BEHAVIOUR OF THE LOW AND HIGH VISCOSITY PEEK AGAINST STEEL USING DIFFERENTS CONTACT PRESSURES*. *SUSTAINABLE CONSTRUCTION & DESIGN* 4:(2) Paper Rodriguez. p. 10 (2013)
8. P D Neis, J Sukumaran, Y Perez Delgado, M Ando, N F Ferreira, P De Baets: *METHODOLOGY FOR CHARACTERIZING BRAKE FRICTION MATERIAL ON HIGH TEMPERATURES*. *SUSTAINABLE CONSTRUCTION & DESIGN* 4:(2) Paper Neis. p. 7 (2013)
9. Jacob Sukumaran, Vanessa Rodriguez, TD Nguyen, Jan De Pauw, Ando Matyas, Patrick De Baets: *TRANSFER LAYER DYNAMICITY IN ROLL-SLIP OF POLYMER METAL PAIRS*. *SUSTAINABLE CONSTRUCTION & DESIGN* 4:(2) Paper Sukumaran. p. 8 (2013)
10. Jacob Sukumaran, Vanessa Rodriguez, Siva Irullappasamy Winowlin Jappes, Jebas Thaniah, Matyas Ando, Patric De Baets: *Exploration of tribological characteristics of naturally woven fiber composites*. *MECHANICAL ENGINEERING LETTERS: R AND D : RESEARCH AND DEVELOPMENT* 9: pp. 7-15. (2013)
11. Andó Mátyás, Kalácska Gábor, Czigány Tibor: *Speciális tulajdonságú öntött poliamid 6 receptúrák fejlesztése II.: Eredmények és értékelésük*. *MŰANYAG ÉS GUMI* 50:(6) pp. 208-211. (2013)
12. Andó Mátyás, Kalácska Gábor, Czigány Tibor, Sárosi Gyula: *Speciális tulajdonságú öntött poliamid 6 receptúrák fejlesztése I.: Kísérleti stratégia és vizsgálati módszerek*. *MŰANYAG ÉS GUMI* 50:(3) pp. 94-97. (2013)
13. J Sukumaran, V Rodriguez, P De Baets, Y Perez Delgado, M Ando, H Dhieb, P Neis: *A review on water lubrication of polymers*. *SUSTAINABLE CONSTRUCTION & DESIGN* 3:(2) pp. 144-149. (2012)
14. Á Horváth, Z Csík, J Sukumaran, P Neis, M Andó: *Development of brake caliper for rally-car*. *SUSTAINABLE CONSTRUCTION & DESIGN* 3: pp. 191-198. (2012)
15. Vanessa RODRIGUEZ, Jacob SUKUMARAN, Patrick DE BAETS, Wouter OST, Yeczain PEREZ DELGADO, Mátyás ANDÓ: *Friction and wear properties of polyamides filled with molybdenum disulphide (MoS₂)*. *MECHANICAL ENGINEERING LETTERS: R AND D : RESEARCH AND DEVELOPMENT* 5: pp. 68-80. (2011)
16. J Sukumaran, M Ando, V Rodriguez, P. De Beats: *Effect of velocity on roll/slip for low and high load conditions in polymer composite*. *SUSTAINABLE CONSTRUCTION & DESIGN* 2:(1) pp. 122-127. (2011)

17. V Rodregues, J Sukumaran, M Ando: Roughness measurement problems in tribological testing. *SUSTAINABLE CONSTRUCTION & DESIGN* 2:(1) pp. 115-121. (2011)
18. Jacob SUKUMARAN, Mátyás ANDÓ, Vanessa RODRIGUEZ, Patrick DE BAETS, Patric Daniel NEIS: Friction torque, temperature and roughness in roll-slip phenomenon for polymer –steel contacts. *MECHANICAL ENGINEERING LETTERS: R AND D : RESEARCH AND DEVELOPMENT* 5: pp. 7-16. (2011)
19. Andó M, Sukumaran J, Rodrigez V, Neis P, Kalácska G, Czigány T, DeBaets P: Development of new PA6 composites. *MECHANICAL ENGINEERING LETTERS: R AND D : RESEARCH AND DEVELOPMENT* 5:(5) pp. 145-153. (2011)
20. M Andó, J Sukumaran: Tribological behavior of composite-steel on rolling/sliding contacts for various loads. *SUSTAINABLE CONSTRUCTION & DESIGN* 2:(1) pp. 29-34. (2011)
21. Andó M, Kalácska G, Czigány T: High conductive graphite additives for magnesium catalyzed cast PA6 polymer matrix. *SUSTAINABLE CONSTRUCTION & DESIGN* 1: pp. 86-90. (2010)
22. Andó M, Kalácska G, Czigány T: Dynamic Mechanical Tests on Magnesium Catalyzed Cast Polyamide 6 Composites Having Different Additives. *MATERIALS SCIENCE FORUM* 659: pp. 269-275. (2010)
23. Mátyás Andó, Gábor Kalácska, Tibor Czigány: The effects of humidity on surface resistance of magnesium catalyzed cast polyamide 6. *MECHANICAL ENGINEERING LETTERS: R AND D : RESEARCH AND DEVELOPMENT* 2:(1) pp. 120-126. (2009)
24. Mátyás Andó, Gábor Kalácska, Tibor Czigány: Shore D hardness of cast PA6 based composites. *MECHANICAL ENGINEERING LETTERS: R AND D : RESEARCH AND DEVELOPMENT* 2:(1) pp. 42-47. (2009)
25. Andó M, Kalácska G, Czigány T, Sárosi Gy: Öntött poliamid 6 kompozitok vizsgálata és anyagfejlesztése mezőgazdasági gép alkalmazásokhoz. *GÉP* 60:(4-5) pp. 79-84. (2009)
26. Andó M, Kalácska G, Czigány T: Magnézium katalizálású öntött poliamid 6 antistatikus tulajdonságainak fejlesztése. *GÉP* 60:(8) pp. 19-23. (2009)
27. Andó M, Kalácska G, Czigány T: Cast polyamide 6 polymer composites for agricultural machine applications. *HUNGARIAN AGRICULTURAL ENGINEERING* 21:(1) pp. 67-69. (2008)
28. Andó Mátyás: Öntött poliamid 6 nanokompozitok mechanikai és tribológiai tulajdonságainak kutatása. *MŰANYAGIPARI SZEMLE* 3:(1) pp. 85-92. p. 8 (2006)

Conference proceedings:

29. Jacob Sukumaran, Seyfollah Soleimani, Vanessa Rodriguez Ferreira, Matyas Ando, Wilfried Philips, Patrick De Baets: Transition of surface morphology in rolling/sliding of polymer-metal contacts. In: 5th World Tribology Congress 2013 (WTC - 2013). Torino, Olaszország, 2013-09-08 -2013-09-13. Torino: 2013. pp. 1-4. Paper 4145758.
30. J Sukumaran, V Rodriguez, M Ando, J De Pau, P De Beats: A Novel Measuring Technique to Evaluate Frictional Characteristics of Roll-Slip Contacts in Polymer-Metal Pairs. In: International Conference on Advanced Materials And Processing: ICAMP-2011. Chennai , India , 2011-12-19 -2011-12-20. Chennai: 2011. pp. 153-159.
31. Andó M, Kalácska G, Czigány T: Antistatic characteristics of cast PA6 containig graphite additives. In: International Multidisciplinary Conference of the Carpathian euro-Region specialists in Industrial Systems. Baia Mare , Románia , 2008-05-21 -2008-05-23. 2009. pp. 13-17.
32. Otto-paul Eberst, Sever Pop, Andó Mátyás: Therapeutical Applications of Semi-finished Engineering Plastics. In: The International Conference of the Carpathian Euro-region Specialists in Industrial Systems. Konferencia helye, ideje: Baia Mare, Románia, 2008-05-20-2008-05-21. Baia Mare: Editura Universitatii de Nord Baia Mare , 2008. pp. 1-6. (Scientific Bulletin Serie C; 22.)
33. Andó Mátyás, Kalácska Gábor, Czigány Tibor: Műszaki műanyag kompozitok fejlesztése. Fialat Műszakiak Tudományos Ülésszaka XIII. Nemzetközi Tudományos Konferencia. Konferencia helye, ideje: Kolozsvár, Románia, 2008-03-14-2008-03-15. Kolozsvár: Erdélyi Múzeum-Egyesület , 2008. pp. 1-4. (Műszaki Tudományos Füzetek - FMTÜ; XIII.)

34. Andó Mátyás, Kalácska Gábor, Czigány Tibor: Development of magnesium catalyzed polyamid 6 matrix composites. In: Erősített Műanyagok 2008, Nemzetközi BALATON Konferencia, Keszthely, Magyarország, 2008-05-20 -2008-05-22. Keszthely: 2008. pp. 81-87.
35. Andó Mátyás, Kalácska Gábor, Czigány Tibor: Cast Polyamide 6 Polymer Composites for Special Application. 14th Building Services, Mechanical and Building Industry Days. Konferencia helye, ideje: Debrecen, Magyarország, 2008-10-30-2008-10-31. Debrecen: Debreceni Egyetem, 2008. pp. 296-303.
36. Andó M, Kalácska G, Czigány T: Öntött poliamid 6 kompozitok vizsgálata és anyagfejlesztése. Magyar Tudományos Akadémia Agrártudományok Osztálya Agrárműszaki Bizottság Kutatási és Fejlesztési Tanácskozás Nr. 32. Konferencia helye, ideje: Gödöllő, Magyarország, 2008-01-22. Gödöllő: FVM Mezőgazdasági Gépesítési Intézet - Szent István Egyetem Gépészmérnöki Kar, 2008. pp. 251-256.
37. Andó M, Kalácska G, Czigány T: Development of technical polymer composites for agricultural engineering application. Gépészet 2008: Proceedings of Sixth Conference on Mechanical Engineering. Konferencia helye, ideje: Magyarország, 2008-05-29-2008-05-30. Budapest: Budapesti Műszaki és Gazdaságtudományi Egyetem, 2008. pp. 1-7.
38. Kalácska G, Deák F, Sárosi Gy, Andó M: Öntött poliamid 6 alapú nano- és mikro kompozitok fejlesztése különleges gépészeti alkalmazásokhoz. XXXI. MTA AMB kutatási és fejlesztési tanácskozás. Konferencia helye, ideje: Gödöllő, Magyarország, 2007-01-23. Gödöllő: FVM Mezőgazdasági Gépesítési Intézet, 2007. pp. 251-255.