

INDUSTRIAL AND RESEARCH PROJECT LIST

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MECHANICAL ENGINEERING AND FIRE HAZARD INDUSTRIAL PROJECT LIST

1. Project audit and calculation of the rotary lime kiln heat recuperation system upgrade .Thermo-mechanical calculations using finite element method.IT -1 PTY LTD Australia, for One Steel Comp. Australia.2003
2. Implementation and training LS-DYNA software package .Finite element Analyst.University of Belgrade.2005
3. Stress analysis of the VESTA wind turbine blade, with accent on material interfacial stress state .Finite element analysis using 2d primal FE method and 3d primal-mixed FE theory.Institute for testing of Materials, Roskilde, Denmark.2005
4. Migration of software package ACOS for the monitoring of fire propagation and smoke evaporation on windows operating platform. Programmer .CIP Institute Belgrade, Srbija.2006
5. Project audit and calculation of the rotary pellet kiln and redesign of the main girth girt bolts .Nonlinear thermo-mechanical contact analysis by FE method using software packages Straus7 and ABAQUS..IT -1 PTY LTD Australia, for One Steel Comp. Australia.2007
6. Calculation of the mechanical integrity of the armor and stress state of the embedded optical fiber. Quasi-static analysis of the composite material with embedded optical by FE method using FE software package Straus7..Metallurgical faculty University of Belgrade.2007
7. Audit of the structural design of the FALN railway wagon upon EN 12663 1 and 2 standards. Dynamic calculations by FE method using software package Straus7..Institute Kirilo Savic, Belgrade, Serbia.2009
8. Modeling of Urinary Bladder Deformation within Passive and Active Regimes. Static structural mechanical calculation using primal-mixed FE original approach. Harvard School of Public Health/ under supervision of Prof.dr M. Kojic.2009
9. Thermo-mechanical optimization of the micro-electronic packaging. Programming and Testing.CADLM, France.2009
10. Verification and audit of the railway bogie design for the wagon BA172 upon standard UIC 510-3.Static analysis by FE method using software packages Straus7 and ANSYS..KOVIS, Slovenia.2010
11. Audit and design revision of the fire protection doors .Three-dimensional nonlinear thermo-mechanical analysis by FE method using software package Straus7.Šamika, Valjevo Serbia.2010
12. Verification and audit of the railway bogie design for the wagon Y25-25T upon standard UIC 510-3 .Static analysis by FE method using software packages Straus7 and ANSYS..KOVIS, Slovenia.2011
13. Design of the new original impact foam-like protection system. .Static and dynamic analysis by FE method using software package ABAQUS.IMWF institute University of Stuttgart for external partner, Germany.2012
14. Biomaterials and Scaffolds design for tissue engineering. Design and performance using CAD, FEA and 3D printing for 3D orthopedic.FABelgrade, 2018
15. Fire hazard steel ropeway rope analysis. Transient heat transfer FE analysis of the ropeway steel rope under fire. SAS Ingenieurbuero AG, Arbon, Canton of Thurgau, Switzerland.2018
16. Railway wagon frame mechanical analysis. Nonlinear static FE analysis .SAS Ingenieurbuero AG, Arbon, Canton of Thurgau, Switzerland.2018
17. Material characterization of new multifunctional composite design of rail vehicle car body. Determination of equivalent mechanical material parameters using unit cell and FE method .SAS Ingenieurbuero AG, Arbon, Canton of Thurgau, Switzerland.2018
18. Coffee heater redesign and simulation. Lowering of the heat energy and time needed to heat the water to 95°C. SAS Ingenieurbuero AG, Arbon, Canton of Thurgau, Switzerland.2018
19. Roller-coaster EUROPA PARK ultimate and fatigue FE analysis .Minimization of the weight .Straintec AG, Weadenswill, Switzerland .2019
20. Roller-coaster COBRA FE analysis. Proof of design. Straintec AG, Weadenswill, Switzerland.2019
21. Bicycle Helmet inlet design and FEM analysis under standard EN 1078, Switzerland 2020. UPWORK Germany,
22. Motorbike Helmet, topology and material design and optimization using FEM, UPWORK Germany, 2021

23. Impact drop test of various geometry and material composition of the motorbike helmet using FEM ANSYS. Upwork, Spain 2021.

GEOTECHNICAL INDUSTRIAL PROJECT LIST

1. Static finite element analysis and geotechnical investigation and project of reconstruction of the dam Banjani (H=30m L=65m), Ministry of Agriculture, Municipality Gornji Milanovac, Srbija, 2003
2. Audit of the piles with aim to minimize its length and steel mass upon standards 2 and 7 for building Fablive in Budva Montenegro, Fablive, Budva, Montenegro, 2008
3. Audit of the piles with aim to minimize its length and steel mass upon standards 2 and 7 for buildings in Block 67a, I, II and III phase, EX ING B&P, Belgrade, Serbia, 2014, 2015 ,2016
4. Project audit and static and dynamic FE calculation of the piles with aim to minimize its length and steel mass upon standards 2 and 7 for Block "Vozdove kapije", Vozdovac, Belgrade, EX ING B&P, Belgrade, Serbia, 2016
5. Project audit and static and dynamic FE calculation of the piles with aim to minimize its length and steel mass upon standards 2 and 7 for buildings in Block on Block 43 -SIRIUS, STRABAG, Belgrade, 2016
6. Project audit and static and dynamic FE calculation of the piles with aim to minimize its length and steel mass upon standards 2 and 7 at location Vrcin - IKEA , STRABAG, Belgrade, 2016
7. Project audit and static and dynamic FE calculation of the piles with aim to minimize its length and steel mass upon standards 2 and 7 at location Silo - Backa Topola, Serbia, LHR d.o.o Belgrade, 2017
8. Project audit and static and dynamic FE calculation of the piles with aim to minimize its length and steel mass upon standards 2 and 7 at location Vozdova Kapija, Belgrade Serbia, EX ING B&P, Belgrade, Serbia, 2017
9. Static analysis of the Hotel POSTA, Belgrade, VND Engineering, Belgrade, 2017
10. Project audit and static and dynamic FE calculation of the piles with aim to minimize its length and steel mass upon standards 2 and 7 at location Navigator, New Belgrade, Serbia, SAS Ingenieurbuero AG, Arbon, Canton of Thurgau, Switzerland, 2018
11. Materially nonlinear static FEM Simulation for Geotextile Tube Stacking, UPWORK, NDA , 2020
12. Finite element analysis of stacked geo-tubes, Freelancer.com, Canada, 2020

ENERGY EFFICIENCY INDUSTRIAL PROJECT LIST

1. Energy consumption and CO2 emission calculations using DesignBuilder/Enegy+ software, the air flow rate and dry-bulb temperature measurement , thermal vision camera diagnostics:
2. Integral energy efficiency calculations for the apartment building in Bulevar AVNOJ-a 201, Block 34, New Belgrade. Ministry of Science of Republic of Serbia.2004
3. Integral energy efficiency calculations for the apartment buildings, Block 25, New Belgrade. Ministry of Science of Republic of Serbia.2006
4. Integral energy efficiency calculation for residential building in street Ljube Jovanovića 7, Belgrade. Privite investor, Senjak, Belgrade.2010
5. Integral energy efficiency calculations of the residential building in 59 Victor Hugo str., Antony, France upon standard RT2012.DP STUDIO DESIGN, Belgrade.2017

INNOVATION AWARDS

1. Best technological innovation, ACCBOX - New sustainable methodology for the soil-pile bearing capacity calculations using wireless measurement and FEM approach, 2015
2. Best technological innovation, seventh place, - SUPPORT, New deep foundation pit excavation procedure, 2010

RESEARCH PROJECTS LIST

Projects in Energy Efficiency in Buildings

1. Mathematical modeling and development of methods and techniques for diagnosis of energetic efficiency in existing and new buildings. No. NPEE813-197b, 2003-2006 (principal investigator)
2. Implementation of the European regulative in heating and cooling of buildings No. NPEE 283011, 2006- (principal investigator)

Projects in Fields of Basic Research

1. Contemporary Problems in Mechanics, No.0402, 1992 - 1995
2. Contemporary Problems in Mechanics, No.04M01, 1995 - 1999
3. Development and implementation of the new reliable methods in mechanics of solid and fluids, No.1865, (principal investigator) 2002 - 2006
4. Mathematical methods and algorithms for 3d contours recognitions, No. 1645, 2002 - 2006
5. Mathematical Models and Optimization Methods with Applications, Project No. 144007, 2009 -...

International Projects

1. FP5 framework EC: FENet - A thematic network for promoting best practice industrial application of FE technology, Project number: GTC2 2000 33057, 2001-2005 (local principal investigator)
2. Project PNII IDEI contract nr. 106/1 octombrie 2007. Caracterizare a bazata pecunoastere a capacitatii de amortizare a nanocompozitelor din materiale auxetice i nanotuburi de carbon. ID_247/2007. Institutul de mecanica solidelor academia. Romania, 2007-2010
3. Deutsche Forschungsgemeinschaft Geforderte, DFG-Projekt Schm 746/74-1, Improved toughness balance of nano particle filled polyamide composite simulation supported properties/morphology correlation, 2012- 2013
4. Deutsche Forschungsgemeinschaft Geforderte, DFG Priority Programme 1420 "Biomimetic Materials Research: Functionality by Hierarchical Structuring of Materials", Theme: Numerical Simulation of Open Cell Foams in passive impact protection, 2012-2013

Projects in Fields of Innovative Research

1. Software for Continual Stress State Representation, No.I.1, 1556. 1997