

Piotr Duda



Academic degrees : doctor habilitatus in Engineering, prof. of CUT

Position : Professor

Engineering - technical field

Discipline Mechanical engineering

Academic qualifications:

Head of the Chair of Thermal and Process Engineering.

Membership in professional and academic boards :

Committee on Thermodynamics and Combustion of the Polish Academy of Sciences - Thermodynamics Section: member (2003- 2018); Committee on Mechanics of the Polish Academy of Sciences - Fluid Mechanics Section: member (from 2020); European Organization for Nuclear Research CERN / Geneva, LHC member (from 2021).

Academic merits :

(I) Selected international projects: COST 538 High Temperature Plant Lifetime Extension, 2005-2008; KIC M9 ,Multi-fuel energy generation for Sustainable and Efficient use of Coal (SECoal), 2010-2013; The Magnet Station Project, CERN, Geneva LHC member (from 2021). (II) Selected national projects: leader of the cycle of projects: 3 T10B 033 26, 2004-2007; M5/698/PBZ/2006, 2007-2008; R06 004 03, 2007-2010; UMO-2015/19/B/ST8/00958, 2016-2019; KGHM-ZW-U 0072-2019, 2019-2020; KGHM-ZW-U 0131-2022, 2022-2023. (III) author or co-author of 166 publications on inverse problems; diagnostic systems; mixing; steam boilers; lepton measurements; energy recovery and recycling. (IV) Selected publications: Taler, J., Duda, P., Solving direct and inverse heat conduction problems, Springer-Verlag, 2006; Aaij, R., et al., Test of Lepton Universality in $b \rightarrow sl + l -$ Decays, Physical Review Letters, 131, 2023; Duda, P., et al., A new method for identification of thermal boundary conditions in water-wall tubes of boiler furnaces, Int. Journal of Heat and Mass Transfer, 52, 2009; Duda, P., A general method for solving transient multidimensional inverse heat transfer problems, Int. Journal of Heat and Mass Transfer 93, 2016; Duda, P., A method for transient thermal load estimation and its application to identification of aerodynamic heating on atmospheric reentry capsule, Aerospace Science and Technology 51, 2016; Duda, P., Numerical and experimental verification of two methods for solving an inverse heat conduction problem, Int. Journal of Heat and Mass Transfer 84, 2015; Duda, P., Solution of an inverse axisymmetric heat conduction problem in complicated geometry, Int. Journal of Heat and Mass Transfer 82, 2015; Duda, P., Solution of Inverse Heat Conduction Problem using the Tikhonov Regularization Method, Journal of Thermal Science 26, No.1, 2017; Szostak, E., et al., Characteristics of plastic waste processing in the modern recycling plant operating in Poland, Energies, 14(1), 35, 2021; Duda, P., Dwornicka, R., Optimization of heating and cooling operations of steam gate valve, Journal of Structural and Multidisciplinary Optimization 40, 2010; Płusa, T, et al., Modeling mixing dynamics in uncovered baffled and unbaffled stirred tanks. AIChE J. 67, No 9, 2021. (V) Scientific indexes: Scopus: H = 20.

Professional qualifications/language skills

English, German, French.

Research field :

inverse problems; diagnostic system; mixing; steam boilers; lepton measurements; energy recovery; recycling; circular economy.

Address

Cracow University of Technology,
Faculty of Mechanical Engineering
Address: Chair of Thermal and Process Engineering
31-864 Krakow
phone . +48 126283420
e-mail : piotr.duda@pk.edu.pl

Useful links :

<https://cris.pk.edu.pl/info/author/CUT981179958fa94dd2ad57742711c4f7a0?r=author>