



Anna Brunerová

Date of birth: 16/05/1990 | **Nationality:** Czech | **Gender:** Female |

Phone number: (+420) 737077949 (Mobile) | **Email address:**

anna.brunerova@fd.cvut.cz |

Address: Práčská 2596/91, 10600, Prague, Czechia (Home)

● WORK EXPERIENCE

01/02/2021 – CURRENT Prague, Czechia

PROJECT MANAGER FACULTY OF TRANSPORTATION SCIENCES, CZECH TECHNICAL UNIVERSITY IN PRAGUE

Project manager, administrator and developer of national and international research and education projects with special focus on fundings from European Commission.

Occupation description:

- work with EU Funding & Tenders Portal
- pre-award and post-award support of research teams, topical calls search, proposal preparation
- administrative support, work packages management
- financial and accountancy support, final financial audit at faculty level
- new partner search - international partnership and cooperation establishment (matchmaking events, platforms, helixes)
- attendance at matchmaking venues, Infodays, trainings and webinars
- communication with NCPs worldwide

01/06/2018 – 31/12/2020 Prague, Czechia

POSTDOCTORAL RESEARCHER FACULTY OF ENGINEERING, CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Scopus Author ID: 57189391028

ORCID number: 0000-0001-5152-9906

Researchgate profile: <https://www.researchgate.net/profile/Anna-Brunerova>

Investigated topic:

Research was performed on the subject of combining of proper waste management principles with clean renewable energy generation by using of waste biomass (renewable source of energy) as a feedstock for solid biofuel production (briquetting process) with subsequent outcomes in the form of scientific publications, conference participations, projects management and completion and educational activities.

Occupation description:

- independent research performance
- research topics: waste biomass, solid bio-fuels, briquetting, pelleting, densification process, waste management, renewable energy, environmental conservation
- primary data collection in the field
- data processing, statistical analysis
- experimental work in laboratory, chemical analysis



- scientific writing and publication
- management and administration of research projects
- active attendance at international scientific conferences
- participation at international internships
- international cooperation and partnership establishment
- educational workshops and seminars leading
- teaching activities
- university representation at international fairs

01/07/2020 – 30/11/2020 Lubia, Spain

SCIENTIFIC LABORATORY TECHNICIAN CENTRE FOR THE DEVELOPMENT OF RENEWABLE ENERGY SOURCES (CEDER) - CIEMAT

Occupation description:

- training in Laboratory of Biomass Characterization
- performance of chemical analyses within biomass composition and properties
- determining mechanical, physical and chemical tests of solid biofuels
- training in Scanning electron microscopy laboratory
- performance of image analysis by electron microscope

01/01/2019 – 31/08/2019 Lampung, Indonesia

POSTDOCTORAL RESEARCHER LAMPUNG UNIVERSITY

Investigated topic:

6 months lasting research internship at University of Lampung, Indonesia, focused on sustainable reuse of waste biomass, namely, tropical fruit waste biomass. Performed research involved monitoring of tropical fruit waste biomass production and related waste management, experimental measurements of investigated biomass chemical and mechanical parameters. Subsequently, bio-pellet fuel production and torrefaction with its final quality indicators determination.

Occupation description:

- independent research internship at Lampung University
- research topics: waste biomass, solid bio-fuels, briquetting, pelleting, densification process, waste management, renewable energy, environmental conservation
- primary data collection in the field
- data processing, statistical analysis
- scientific writing and publication
- active attendance at international scientific conferences
- leading educational workshops and seminars
- university representation at international fairs

01/01/2016 – CURRENT Prague, Czechia

INTERNATIONAL INTERNSHIPS CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Description:

Short-term and long-term international internships performed within scientific research activities and international project and co-operation establishment. Performed research activities focused on environmental and sustainability issues within waste management and sustainable technologies for solid biofuel production and green clean energy generation. Activities as monitoring of waste biomass production and related waste management, primary data collection and processing, chemical analyses of biological samples (laboratory measurements) and application of research results into practice were performed. International project and co-operation activities contained of student and university employees' trainings and seminars (scientific writing and publication). Further performed activities contained of participation at international conferences as a presenter and a keynote speaker, international relationships development, new research partner search, attendance at matchmaking venues, administrative



support of international projects and governmental or non-profit organizations, promoting and presenting of Czech academic sphere at international fairs.

Target countries:

Turkey, France, Israel, Ukraine, Spain, Germany, **Republic of Indonesia**, Socialistic Republic of Vietnam and Kingdom of Cambodia.

Cooperating organizations:

Sabancı University (TR), Tel Aviv University (IL), Technion - Israel Institute of Technology (IL), Sumy National Agrarian University, Sumy State University (UA), Centre for the Development of Renewable Energy Sources (CEDER) - CIEMAT (ES), Dresden University of Technology (DE), Hue University of Agriculture and Forestry (VN), Universitas Sumatera Utara (ID), Nommensen HKBP University (ID), University of Lampung and Institut Teknologi DEL (ID), University of Battambang (KH).

01/06/2022 – CURRENT Brussel, Belgium

EXPERT FOR EUROPEAN COMMISSION EUROPEAN COMMISSION

Occupation description:

- registered and accepted expert for European Commission
- work with EU Funding & Tenders Portal
- work with specific programme parts documentation
- evaluator of MSCA actions proposals for European Research Executive Agency (REA)
- final evaluation of project proposals based on evaluation criteria as excellence, impact, and quality and efficiency of the implementation

01/03/2021 – CURRENT Prague, Czechia

PROJECT EVALUATOR THE TECHNOLOGY AGENCY OF THE CZECH REPUBLIC (TA CR)

Occupation description:

- project proposals evaluator
- completed projects evaluator
- work with the project documentation
- work with the ISTA/SISTA portal
- final statements of quality of proposals and projects based on evaluation criteria as excellence, impact, and quality and efficiency of the implementation

01/10/2018 – CURRENT Basel, Switzerland

SCIENTIFIC JOURNAL REVIEWER AND GUEST EDITOR MULTIDISCIPLINARY DIGITAL PUBLISHING INSTITUTE (MDPI)

Occupation description:

- scientific articles reviewer for *Energies* and *Agriculture* journals
- opponent reporting
- feedback on manuscript (improvements and recommendation)
- guest editor of Special Issue of *Sustainability* journal
- topic advisory panel member of *Sustainability* journal
- assistance to senior editors
- content, spelling, style, and grammar proofchecks
- assistance with page layouts and publication design



● EDUCATION AND TRAINING

01/09/2015 – 14/06/2018 Prague, Czechia

DOCTORAL DEGREE COMPLETED Faculty of Engineering, Czech University of Life Sciences Prague

Research idea: "*A briquetting technology is not only the technology of clean renewable energy production, but it is also the technology of proper waste management.*"

Performed practical research focused on combination of proper waste management principles with clean renewable energy generation by using waste biomass (renewable source of energy) as a feedstock for solid biofuel (biobriquettes) production by using densification process with subsequent outcomes in the form of scientific publications, conference participations, projects management and completion and educational activities.

Website <https://www.tf.czu.cz/en> | **Field of study** Solid biofuel | **Final grade** Ph.D. title awarded |

Thesis Briquetting of Materials Suitable for the Energy Production

01/09/2013 – 30/06/2015 Prague, Czechia

MASTER OF SCIENCE DEGREE COMPLETED Faculty of Tropical AgriSciences, Czech University of Life Sciences Prague

Website <https://www.ftz.czu.cz/en> | **Field of study** Rural Development in the Tropics and Subtropics |

Final grade M.Sc. title awarded

01/09/2010 – 30/06/2013 Prague, Czechia

BACHELOR DEGREE COMPLETED Faculty of Tropical AgriSciences, Czech University of Life Sciences Prague

Website <https://www.ftz.czu.cz/en> |

Field of study Sustainable Development in the Tropics and Subtropics | **Final grade** Bc. title awarded

01/07/2014 – 31/07/2014 Olomouc, Czechia

SUMMER SCHOOL OF DEVELOPMENT COOPERATION Palacký University Olomouc

Website <https://www.upol.cz/en/>

03/04/2013 – 07/04/2013 Prague, Czechia

FIRST AID FOR DEVELOPMENT WORKERS Salanga

Website <https://salanga.org/>

11/09/2014 – 17/09/2014 Prague, Czechia

THE COURSE PERSONAL SECURITY AND RISK MANAGEMENT IN DEVELOPMENT PROJECTS Salanga

Website <https://salanga.org/>

01/07/2012 – 31/07/2012 Ha Noi, Vietnam

THE SUMMER SCHOOL TRAINING COURSE ON THE AGRICULTURE OF VIETNAM Vietnam National University of Agriculture

Website <https://eng.vnua.edu.vn/>



09/06/2012 – 30/09/2012 Prague, Czechia

CERTIFICATE ECDL (EUROPEAN COMPUTER DRIVING LICENCE) Czech Society for Cybernetics and Informatics

Website <https://www.ecdl.cz/index.php>

● HONOURS AND AWARDS

15/10/2019

Award of the Minister of Agriculture of the Czech Republic for year 2019 – Ministry of Agriculture of the Czech Republic

Award is given by the Ministry of Agriculture of the Czech Republic for an excellent dissertation thesis for graduates of doctoral study programs. Award is annually given for outstanding doctoral thesis with significant contribution to practice in agriculture, forestry, water management, landscape protection, food and rural development.

03/09/2019

Award of Prof. Stoklasa for year 2019 – Czech University of Life Sciences Prague

Award for the best graduates of doctoral study programs. Awards of prof. Stoklasa is conceived as the most prestigious award of doctoral degree graduates in Czech Republic. The award criteria are quality and practical impact of dissertation thesis, publication activity and overall scientific results during the whole doctoral study time period.

● PUBLICATIONS

2024

[Manual wooden low-pressure briquetting press: An alternative technology of waste biomass utilisation in developing countries of Southeast Asia](https://doi.org/10.1016/j.jclepro.2024.140624)

<https://doi.org/10.1016/j.jclepro.2024.140624>

Keywords: Waste management; Renewable energy; Densification process; Solid biofuels; Bio-briquette; Vietnam; Indonesia

Although briquetting is an appropriate technology for the production of renewable energy, its widespreadness in Southeast Asia is limited. Especially due to the high initial investments and energy consumption of a high-pressure briquetting press. However, manual low-pressure briquetting presses (operating pressure <5 MPa) can represent a relevant alternative, regarding to their ease of use and modest energy consumption. The aim of the present research was to develop and verify a manual wooden low pressure briquetting press with a square-shaped pressing chamber, piston and a single lever as a pressing unit. In practice, press was designed, manufactured, and verified by successful bio-briquette samples production. The press efficiency, feasibility and practicability were positively evaluated within their possible utilisation in rural areas of developing countries. The importance of research increases constantly due to the worldwide need for a transition from fossil fuels to renewable energy sources, proper waste management, and reduction of environmental and health risks related to improper treatment of waste materials. The final idea of the article contributes to the development of the sector of clean green energy production, simultaneously with raising awareness about sustainable technologies for proper waste management within the wide public.

BRUNEROVÁ et al. Journal of Cleaner Production, Volume 436, 10 January 2024, 140624

2020

[Briquetting of sugarcane bagasse as a proper waste management technology in Vietnam](#)



<https://doi.org/10.1177/0734242X209384>

Keywords: Waste management; Renewable energy; Densification process; Solid biofuels; Bio-briquette; Vietnam;

The present research describes an application of high-pressure briquetting technology to the waste management of sugarcane processing in Vietnam. The amount of generated sugarcane bagasse was monitored during sugarcane processing within the street juice production in Hue city, Vietnam. Generated sugarcane bagasse was subjected to fuel parameters analysis within its suitability for direct combustion. The obtained sugarcane bagasse was converted into bio-briquette fuel by a high-pressure briquetting press and its mechanical quality was determined. Results proved that the proportion of generated sugarcane bagasse from whole sugarcane stem mass was equal to 35.45%. This indicated generation of an abundant amount of sugarcane bagasse worldwide in general. In general, the observed results indicated suitability of sugarcane bagasse valorization within the production of bio-briquette fuel by using high-pressure briquetting technology. Finally, analysis of such waste biomass proved its great potential for energy recovery, thus, the advantage of its valorization within the sustainable technologies.

BRUNEROVÁ et al. Waste Management & Research, 2020, Article:0734242X20938438

2020

Analyses of Waste Treatment in Rural Areas of East Java with the Possibility of Low-Pressure Briquetting Press Application

FAJFRLÍKOVÁ, P. – BRUNEROVÁ, A. – ROUBÍK, H. Analyses of Waste Treatment in Rural Areas of East Java with the Possibility of Low-Pressure Briquetting Press Application. Sustainability, 2020, 12(19), 8153. <https://doi.org/10.3390/su12198153>

2020

Valorization of Bio-Briquette Fuel by Using Spent Coffee Ground as an External Additive

BRUNEROVÁ, A. – ROUBÍK, H. – BROŽEK, M. – HARYANTO, A. – HASANUDIN, U. – IRYANI, D. A. – HERÁK, D. Valorization of Bio-Briquette Fuel by Using Spent Coffee Ground as an External Additive. Energies, 2020, 13(1), 54. <https://doi.org/10.3390/en13010054>

2020

Analysis of physical-mechanical properties of pelleted chicken litter organic fertilizer

BRUNEROVÁ, A. – Müller, M. – Gürdil, G. A. K., – ŠLEGER, V. – BROŽEK, M. Analysis of physical-mechanical properties of pelleted chicken litter organic fertilizer. Research in Agricultural Engineering, 66(4):131-139, 2020. <https://doi.org/10.17221/41/2020-RAE>

2018

Bamboo Fiber and Sugarcane Skin as a Bio- Briquette Fuel

BRUNEROVÁ, A. – ROUBÍK, H. – BROŽEK, M. Bamboo Fiber and Sugarcane Skin as a Bio-Briquette Fuel. Energies, 2018, 11, 2186. <https://doi.org/10.3390/en11092186>

2018

Biopellet Fuel from Oil Palm Empty Fruit Bunches (EFB): Using European Standards for Quality Testing

BRUNEROVÁ, A. – MÜLLER, M. – ŠLEGER, V. – AMBARITA, H. – VALÁŠEK, P. Biopellet Fuel from Oil Palm Empty Fruit Bunches (EFB): Using European Standards for Quality Testing. Sustainability, 2018, 10(12), 4443. <https://doi.org/10.3390/su10124443>



2018

Energy balance of briquettes production from various waste biomass

BRUNEROVÁ, A. – BROŽEK, M. – ŠLEGER, V. – NOVÁKOVÁ, A. Energy balance of briquettes production from various waste biomass. Scientia Agriculturae Bohemica, 2018, vol. 49, n. 3, pp. 236-243. ISSN 1211-3174. <https://doi.org/10.2478/sab-2018-0030>

2018

Agricultural residues in Indonesia and Vietnam and their potential for direct combustion: with a focus on fruit processing and plantation crops

BRUNEROVÁ, A. – ROUBÍK, H. – BROŽEK, M. – VELEBIL, J. Agricultural residues in Indonesia and Vietnam and their potential for direct combustion: with a focus on fruit processing and plantation crops. Agronomy Research, 2018, vol. 16, n. 3, pp. 656-668. ISSN: 1406-894X. <https://doi.org/10.15159/AR.18.113>

2018

Factors influencing use of fuelwood and its environmental impacts in Tapanuli Utara regency, North Sumatra

ROUBÍK, H. – MAZANCOVÁ, J. – BRUNEROVÁ, A. – HERÁK, D. Factors influencing use of fuelwood and its environmental impacts in Tapanuli Utara regency, North Sumatra. Agronomy Research, 2018, vol. 16, n. S1, pp. 1228-1236. ISSN: 1406-894X. <https://doi.org/10.15159/AR.18.095>

2017

Potential of Tropical Fruit Waste Biomass for Production of Bio-Briquette Fuel: Using Indonesia as an Example

BRUNEROVÁ, A. – ROUBÍK, H. – BROŽEK, M. – HERÁK, D. – ŠLEGER, V. – MAZANCOVÁ, J. Potential of Tropical Fruit Waste Biomass for Production of Bio-Briquette Fuel: Using Indonesia as an Example. Energies, 2017, 10, 2119. <https://doi.org/10.3390/en10122119>

● **PROJECTS**

01/09/2015 – 30/06/2020

International research projects conducted and funded at CULS in Prague

Principal investigator:

- 2017/2018 - "Development and verification of manual low- and medium-pressure briquetting presses and comparative analyses of produced briquettes (with particular use of presses in rural areas of Southeast Asia)".
- 2018 - "Energy use of agricultural residues (waste biomass) by the densification process (production of bio-briquettes) in domestic and commercial conditions".
- 2017 - "Statement of suitability of exotic and local waste biomass for solid biofuel production within its energy potential evaluation".
- 2016 - "Influence of feedstock specific mechanical parameters and type of storage conditions on final quality of briquettes from waste biomass".

Co-investigator:

- 2019 - "Energy intensity of the compacting process in the production of briquettes from waste materials with a focus on waste biomass in the scale of small-scale production".
- 2016/2017 - "Do small-scale biogas plants use their emission reduction potential? Case study in central Vietnam".

● **RECOMMENDATIONS**

Assoc. prof. Hynek Roubík Research partner



Research and publication partner in 2015 - 2024.

Email roubik@ftz.czu.cz

Dr. Veronika Chaloupková Research partner

Research and publication partner in 2015 - 2024.

Email v.chaloupkova@outlook.com

RNDr. Jiří Schlanger Superintendent

Head of the research team in 2015 - 2016.

Email jiri.schlanger@gmail.com

Prof. Ing. Milan Brožek, CSc. Supervisor

Dissertation thesis supervisor, research partner in 2015 - 2020.

Email brozek@tf.czu.cz

Prof. Udin Hasanudin Superintendent

Head of the research team in 2019, research partner in 2019 - 2024.

Email udinha@fp.unila.ac.id

Dr. Dewi Agustina Iryani Research partner

Research and publication partner in 2019 - 2024.

Email dewi.agustina@eng.unila.ac.id

● LANGUAGE SKILLS

Mother tongue(s): **CZECH**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2
SPANISH	A2	A2	A2	A2	A2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● COMMUNICATION AND INTERPERSONAL SKILLS

Scientific venue organizer

- small-scale conferences, workshops and seminars leader and presenter
- great organizational skills
- stress resistant individual
- great communication skills
- positive attitude for work and personal self-growth
- both, team player and independent worker



- **DIGITAL SKILLS**

Microsoft Office | Social Media

- **DRIVING LICENCE**

Driving Licence: B1

- **HOBBIES AND INTERESTS**

Enthusiastic dog owner and trainer

- cynology enthusiast
- American Staffordshire Terrier Blue nose owner