



**Centre for Innovation  
and Technology Transfer  
Management**

WARSAW UNIVERSITY OF TECHNOLOGY

# WHAT IS SUCCESS FOR WARSAW UNIVERSITY OF TECHNOLOGY GRADUATES?

- ANALYSIS OF STUDY RESULTS



**WUT**

# What is success for Warsaw University of Technology graduates? Analysis of study results

## REPORT

as part of the study entitled

### Success Stories. Warsaw University of Technology graduates (a diagnosis of professional success factor)

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## INTRODUCTION – WHAT THE REPORT IS ABOUT

The study entitled “Success stories. Warsaw University of Technology graduates (a diagnosis of professional success factors)” provided a wealth of interesting opinions, memories and recommendations from 110 Warsaw University of Technology (WUT) graduates. They offered some interesting facts about their careers and experiences related to studying at the WUT, and spoke about the difficulties they encountered and successes they had.

Based on this material, a series of five reports were published, comprehensively addressing a range of topics around success:

1. **“What is success for Warsaw University of Technology Graduates? Analysis of study results”**
2. “How to become successful? Diagnosis of success factors among Warsaw University of Technology graduates”
3. “Career in four sentences. Analysis of responses from Warsaw University of Technology graduates”
4. “Coincidence or hard work – the factors behind WUT graduates’ success”
5. “The impact of the family background on WUT graduates’ educational choices (until entry into higher education) and their success”

**This report focuses on analysing how Warsaw University of Technology graduates define success and on identifying their achievements.**

### 1. WHAT WAS THE CONTEXT OF THE STUDY?

This is part of a series of studies to investigate the needs and expectations of WUT graduates’ employers, conducted since 2016 by the Research and Analysis Department of the Centre for Innovation and Technology Transfer Management at the Warsaw University of Technology (DBA CZłiTT PW). By diagnosing the professional status of WUT graduates on the labour market and identifying the circumstances that helped to achieve this status, we have gained valuable insights into the quality of education at WUT. The conclusions drawn from the study have illuminated certain aspects that are useful for managing the quality of education at WUT. Research of graduates’ careers forms part of the efforts by tertiary institutions to perform the broadest-possible evaluation of educational outcomes and to examine how these outcomes contribute to graduates’ future careers.

## 2. HOW THE STUDY WAS CONDUCTED

This study aimed to diagnose the factors behind WUT graduates' professional success. The aim was translated into six research questions (two of which are analysed in this report):

- » **How do WUT graduates define "success"?**
- » **What are the unique academic/scientific, commercial and social achievements of WUT graduates?**
- » What did the career paths of WUT graduates look like (milestones, motivations)?
- » What were the internal factors behind WUT graduates' success?
- » What were the external factors behind WUT graduates' success?
- » What role did WUT play in graduates' success?

The aim of this report is to explore and describe the notions of success as defined by WUT graduates, as well as to identify their unique achievements within three areas: commercial, scientific/academic, and social.

An additional objective of the study was to promote Warsaw University of Technology by creating material on WUT graduates' success stories to be published on WUT's website.

The study was based on individual in-depth interviews (IDI) with successful WUT graduates, i.e. alumni with an outstanding track-record of academic or scientific achievements, professional successes, community involvement, or work in high-profile organisations. The question of whether or not a graduate became successful was ultimately left to the subjective opinion of that graduate. Individual in-depth interviews involve direct interaction between researchers and respondents. It is based on a scenario comprising a set of subjects to be addressed to gain insights into the experiences, interpretations of events and in-depth opinions of the respondents<sup>1</sup>.

The following thematic areas were discussed in the interviews:

- » success: definition, types of success, respondents' achievements,
- » professional career: what the career looks like, milestones, current position, barriers and difficulties encountered during the career,
- » education: what did education outside tertiary institutions look like, which study programme was chosen and how it was completed, the best memories from WUT, an assessment of WUT's educational services and overall activities, respondents' assessment of whether they would choose the same educational pathway, educational activities after graduating,
- » external (family, environment) and internal factors (personality traits),
- » advice for WUT students and candidates,
- » four sentences to be completed – career path summary.

A variety of channels were used to recruit respondents:

- » recommendations from the management and staff of individual WUT Faculties,
- » recommendations from WUT graduates (respondents),
- » own search using LinkedIn, <https://www.eksperci.pw.edu.pl/> and other pw.edu.pl domain websites and websites of high-profile companies in individual industries specific to profiles of WUT Faculties,
- » announcements on social media (Facebook, LinkedIn) with information about the study and a link to the registration form,
- » posters displayed within WUT's spaces.

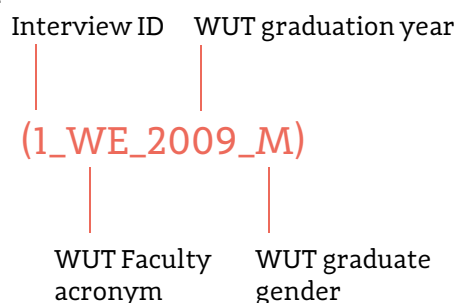
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<sup>1</sup> Cf. Babbie, E., *The Basics of Social Research*, Fourth Edition, Thomson Wadsworth 2008, p. 327.

The interviews were recorded<sup>2</sup>, and reflections were formulated as preliminary reports in which their authors provided tentative interpretations of the responses. Some of the interviews were also fully transcribed. Due to their structured format, the preliminary reports were the first tool to analyse individual stories. They also helped to create “personas” – graphics depicting graduates’ careers and opinions, available on pw.edu.pl domain websites.

WUT graduates’ responses related to their definitions of success were compiled and analysed in the individual parts of this publication. This was followed by an analysis of the contents of their responses, and the identification and aggregation of individual components of the definition of success. Based on response analysis, some unique achievements of WUT graduates were identified in three areas: scientific/academic, commercial, and social. The definitional components were then compared against WUT graduates’ achievements – both individual (including the investigation of possible correlations between the definition of success and specific achievements) and in relation to the entire sample.

### Explanation of cited sources:



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<sup>2</sup> All the interviews were recorded following respondents’ full consent.

## JACEK ROSTKOWSKI



### GRADUATE

Institute of Transport (Faculty of Transport)  
field of study: Vehicle Operation and Maintenance  
(1976)

### preparations for emigration

"I was always preparing to be suitable for the foreign labor market: I studied languages and I was trying to be good professionally"

### immigration to Canada

(1985)

### winning an application competition in Canadian Department of the Environment

Emissions Research and Measurement Laboratories (1986)

### HEAD OF TECHNOLOGY DEPARTMENT

Emissions Research and Measurement Laboratories  
(1992-2015)

## GREATEST ACCOMPLISHMENTS

- construction and worldwide patenting of a dynamometer system for testing the multi-axle vehicles
- leader in the implementation of emission regulations for small combustion engines in Canada and the USA

## ADVICE FOR STUDENTS

- "Whatever you do, even if your job is below your qualifications, always remember what led to this moment of your career."
- "If you really set yourself up for a goal, there is no possibility for you not to achieve it."

## THOUGHTS ON THE CAREER

"I am at this point of my career because...  
of my ability to learn."

"What I appreciate most about my career...  
is the independence."



"Success is when you're talking to 50 busy people and they are listening to you - not because they are afraid of you nor because they think they can gain something from it, but because they think you have something interesting to say."

## MEMORIES FROM WUT

"The moment I first met my wife."

## TIME AT WUT - KEY ASSETS

- abstract thinking skills
- mathematics
- Russian language
- ability to learn constantly

### 3. RESULTS OF STUDY MATERIAL ANALYSIS

#### 3.1 THE NOTION OF SUCCESS IN RESEARCH TO DATE

Defining success is a problematic task. One way to exemplify these difficulties is to look at the definition provided in the Polish language dictionary. It defines “success” as both “the favourable outcome of something undertaken, the achievement of a goal” and “becoming famous, acquiring wealth, achieving a high status”<sup>3</sup>.

The former definition is very general and vague. It can refer to achieving an outcome in the most simple, as well as in the most complicated aspects. The latter is a non-exhaustive set of subjectively selected examples of success, stemming from the socio-cultural backgrounds of the authors of the definition. The sociocultural background can involve both place of residence and occupation. A teacher and an engineer do not have the same measure of success, as shown by research to date on the notion of success.

A study conducted in 2013 found that the large majority of Poles associated success with having a good family situation and a good life, including work, financial status, and family (29%). Elements such as achieving goals (5%), self-actualisation (2%), and dignity and autonomy (1%) were much less prevalent<sup>4</sup>. In a Strayer University study, success was associated with achieving life’s goals (67%), having good relations (66%) and doing what one loves (60%)<sup>5</sup>. According to a 2017 study by the Russian FOM, success is associated with happiness in personal life, the well-being of the family, children, and grandchildren (32%), financial well-being (27%), having a good, interesting, favourite job, having a successful career (20%), health (13%), fulfilling plans, achieving goals (6%)<sup>6</sup>.

Research to date has proven that cultural background is an important factor in the definition of success.

#### 3.2 WUT GRADUATES’ DEFINITION OF SUCCESS

Graduates of the Warsaw University of Technology are its major asset. The knowledge and competencies acquired by high-level engineers and managers over the course of their careers can provide a highly valuable addition to the content taught by university teachers. Given that they followed very diverse career paths after leaving university, WUT graduates are a truly exhaustive source of insights into the different notions of success. The analysis of the different ways of defining success is broken down into three segments: assessing the perception of success for objectivity/subjectivity, assessing success against the context of current life situation and in terms of the mentioned elements of success.

##### 3.2.1 Objective versus subjective perception of success

The definitions of success formulated by WUT graduates are notably marked by a belief in the objectivity of these definitions. Viewed from this angle, success is the degree of achievement of the set goals that are at once difficult, ambitious, and distinctive among other pursuits – i.e. unique. It involves the pursuit of goals that fulfil objective criteria by being recognised in a specific community, social community, or in society at large.

*A successful person today is the one who gets recognised, and who is of no modest means, that’s for sure. It’s not enough to do interesting stuff in a lab, you should have it patented.*

24\_WF\_2004\_M

WUT graduates’ definitions of success were also marked by a belief in their subjectivity, with objective criteria being secondary to one’s psychological comfort, afforded by feeling that one’s actions have led to good outcomes, and even to the freedom of doing things one’s own way.

*Success is something people define. There is no objective success.*

84\_WE\_1970\_K

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<sup>3</sup> The term „success”, <https://sjp.pwn.pl/sjp/sukces;2576536>, [accessed on 17/07/2020].

<sup>4</sup> Life success and its determinants, [https://www.kozminski.edu.pl/fileadmin/wspolne\\_elementy/Dokumenty/Raporty\\_ALK-CBOS/K089\\_13\\_sukces\\_zyciowy.pdf](https://www.kozminski.edu.pl/fileadmin/wspolne_elementy/Dokumenty/Raporty_ALK-CBOS/K089_13_sukces_zyciowy.pdf), [accessed on 14/07/2020].



*Success is not always a big-time thing. I guess you have to find a spot where you feel happy instead of being bent on fulfilling your ambitions that are purely prestige-driven.*

68\_WCh\_2011\_F

What these two perceptions have in common is the belief that both perspectives can exist within the definition of success being constructed – as a result of the subjective assessment of our actions and the belief that they are meaningful, while recognising the external assessment of the results of such actions. Defined in this way, success should be understood as an outcome that is assessed positively by the person achieving it, as well as by other people. It is a sense of satisfaction from the outcome of one's actions accompanied by the social recognition of the significance of these actions or their outcomes.

*First, we can draw our own conclusion that we have attained success on our own. The criteria can vary here. For me, it's about fulfilling my dreams. And second, it involves the external assessment based on the results of our actions, work outcomes, and comparisons to others.*

105\_WE\_1998\_M

*You can look at success from two perspectives – our own (do I feel that I'm fulfilling myself?) and that of the external world and the way it perceives our actions. These two visions do not always overlap.*

17\_WBMiP\_2003\_M

*There are two sides involved in assessing/measuring value – ourselves and other people. It is about finding out whether it is success for us and for others.*

14\_WMEiL\_2014\_M

### 3.2.2 Success as the path or the destination?

An important role in the way WUT graduates formulated their definitions of success was played by the point in time in which they achieved it. Success can be associated with isolated achievements made at specific points of time, or with meeting certain goals, such as attaining a specific occupational status or fulfilling specific objectives. The term “success” can also be associated more with the process leading to its achievement rather than with the achievement alone.

*I think you can't have only a single goal and achieve a single success. You need to plan your life on many different levels. You can succeed in one aspect of life but get no joy out of it if there is too much missing in other aspects of your life.*

10\_WM\_2003\_M

*And it's kind of objective, but if you have this sense of being successful and fulfilled, then it's ok too. As far as I'm concerned, I'm always hungry for more. That's the way I see it.*

105\_WE\_1998\_M

### 3.2.3 Elements of success according to WUT graduates

#### **Self-actualisation, the ability to realise one's potential, to fulfil one's goals**

WUT graduates defined success primarily as the achievement of their goals, plans, and/or aspirations. In their opinion success is the result of deliberate and planned actions with specific outcomes. It is important that the planned actions require considerable effort and ability, and that their outcomes either bring satisfaction to those performing them, or are objectively recognised by society as meaningful. Depending on how important they are, such goals can be remote and complex; sometimes they are the crowning of one's efforts and the gratification derived from their fulfilment may be distant in time.

*Success is about achieving [...] a difficult goal or something you desire..*

2\_WiP\_1999\_M

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<sup>5</sup> What success means, <https://www.strayer.edu/buzz/what-success-means-americans-infographic> [accessed on 18/07/2020]

<sup>6</sup> Что такое успех, <https://fom.ru/TSennosti/13865>, [accessed on 18/07/2020].

*Success is about achieving your goals: goals that are ambitious on the one hand, but not so much bringing big money as satisfaction, on the other.*

21\_WEITL\_2005\_M

*Graduating from, say, primary school or secondary school, is not a success. Getting excellent scores on secondary school finals definitely is.*

14\_MEIL\_2014\_M

*I stick to my goals and somehow manage to pull it all off.*

44\_WA\_2000\_M

However, WUT graduates' goals were not confined to their professional work. They view their goals – like the very concept of success – in a broader context encompassing all spheres of life.

*Success means being able to follow your dreams, to meet your expectations and satisfy your desires. And these desires can relate to different aspects of our lives – it can be a matter of personal life, professional life, social activism.*

18\_WMiNI\_1998\_M

The definitions that mentioned the goal-achievement component also referred to the continuity aspect – success is being able to set further goals and continue to grow personally therethrough. Those who mentioned the continuity of setting goals stressed their constant need to define new objects of their pursuits.

The ability to set one's life goals and act on them consistently is also an important part of the definition of success.

*The definition of success in my case was, to some extent, influenced by the philosophy behind what I studied at university – knowing what to look for and where to look for it.*

108\_WSiMR\_1976\_M

*Success is being able to realise your potential, but also to define your mission.*

41\_WZ\_2008\_M

What was frequently mentioned in the context of defining success was the ability to self-actualise or to fulfil the need for self-actualisation – in the sense of reaching one's full potential. This part of the definition can be considered to bear a strong relation to the element involving goal achievement. The self-actualisation component of the definition was mentioned particularly by respondents with higher professional status.

*I define success as something that fulfils our topmost need – that is, the need for self-actualisation.*

19\_WEITL\_2003\_M

*To have a sense that my past achievements are serving a purpose.*

31\_WIP\_2007\_M

*To me, success is being able to fulfil my mission, and I think that at some point every one of us should step back and reflect on what our mission is.*

41\_WZ\_2008\_M

*Success is being able to tap your potential.*

41\_WZ\_2008\_M

### **Sense of purpose, usefulness**

WUT graduates considered the usefulness of their professional activity to be a component of success.

*Having a sense that what I have done is actually meaningful.*

100\_WGiK\_2017\_F

*It's not work without meaning or purpose. It's work that the world ..., it is recognised and needed.*

16\_WEITL\_2016\_F

### **Work-life balance**

Another element of WUT graduates' definition of success is work-life balance. In addition to occupational work and family life, these spheres of life involve scientific/academic work and the pursuit of passions. Those respondents who considered this criterion to be important for their definition of success believed that even the biggest professional achievements could not lead to total success when made at the expense of family life.

*I am slowly getting to grips with it, making all these aspects work together. I have time for my passions, to learn a second language, which gives me a lot of joy, I have time to meet with friends, and I'm not tired after work.*

8\_WCh\_2013\_F

For female WUT graduates, the work-life balance element fairly often involves coming back to professional work after maternity leave and being faced with the challenge of pursuing success while fulfilling maternal roles, of striking the perfect balance between career and raising children.

*I think that striking the work-life balance is one of the greatest successes you can achieve in life. You may have had a great career, but then you realise that your children have grown up and you've spent so little time with them. The only childhood memories they will have will be that daddy was always at work.*

7\_WF\_2011\_M

Taking care of each sphere of life has a positive impact on other areas – pursuing a passion can provide a refuge from occupational work, and having a good relationship with the family can help alleviate stress and make work less tiresome.

*If think that being more or less content with your private life influences all the work-related aspects and the overall picture.*

47\_WIP\_2014\_F

### **Deriving pleasure from work and job satisfaction**

In their responses as to what defines success, WUT graduates also mentioned the sense of comfort associated with performing their daily duties. In this context success is understood as having a job that gives comfort and satisfaction. It involves performing work that is interesting, free from monotony and often aligned with one's passion, while also ensuring a good quality of life.

*You are successful when you are doing what you really like, because then work is not a burden and you get the most pleasure out of it. Clearly, it can get monotonous and wear on you at times, but you have a different outlook on these things if you're passionate about your work.*

6\_WF\_2012\_M

Pleasure from work can be derived not only in relation to the scope of duties or work outcomes, but also to working conditions, the specific nature of the job, a nurturing environment and working with specific people.

*You do things that you find enjoyable. In other words you get a kind of reinforcement from your work – I've done something I'm happy about. Some like to serve other people, others feel great organising the work of others, and some prefer to work alone in the privacy of their own space.*

9\_WE\_2018\_M

*It's not a burden of having to work 8 or more hours.*

20\_WM\_2010\_M

*In my opinion success is about liking what you do. It's about having a job that is your hobby.*

28\_WF\_2008\_M

Another way to achieve success was to have a job that made it possible to pursue passions. This meant that the respondent was in a position financially and time-wise to pursue his or her passions.

*Financial success, although helpful in self-actualising and giving a certain sense of security, is not success in and of itself.*

107\_WIBHiŚ\_2004\_M

### **The financial aspect**

The definition of success also comprises the financial component. For some WUT graduates, having a high salary is an end in itself – it is a gratification, a symbol of their social status, one which they worked hard to attain.

*It is the combination of financial success and professional fulfilment. You like what you do, get satisfaction from it, and get paid well while you're at it.*

61\_WAiNS\_2016\_M

*In my opinion, financial success is an inseparable part of the overall sense of success. It is essential, albeit not sufficient on its own.*

89\_SIMR\_2010\_M

Nevertheless, it was much more common for the respondents to mention financial security as the integral aspect of success. As in the case of family life, they claimed that this element was absolutely essential to considering oneself successful. Even with all other elements of success in place, without financial security, they would be unable to secure their basic needs, which would close them off, for instance, to development opportunities.

*Being financially able to support yourself and your family doing something you actually like.*

20\_WM\_2007\_M

*A successful person is someone who pursues their passion, are content with their job, and who earn income that gives them financial security and long-term security in life.*

38\_WMEIL\_2019\_M

Another level of comfort associated with the financial success component relates to being financially independent and having the freedom to fulfil one's potential to the fullest.

*To me, the most important thing is having a sense of freedom. I don't care about the money and financial status in a strictly materialistic sense. What I do care about is the freedom money gives you. (...) It's a very nice feeling, it's great. And it makes you somewhat a fuller human being – and that's success.*

39\_WCh\_1976\_M

### **The ability to impact one's environment**

Another component of WUT graduates' definition of success was the ability to have a positive impact on one's environment. This can involve the immediate environment – the team or younger associates, with whom the respondents shared their knowledge, students, as well as society at large, through their contributions to technological advancements.

## URSZULA KARZMARCZYK, PhD

### GRADUATE

Faculty of Chemical and Process Engineering  
field of study: biotechnology (1997)



### researcher

National Centre for Nuclear Research POLATOM  
laboratory work - a place that focuses on young people, trips abroad, grants (2001)

### obtaining PhD

Warsaw University of Technology (2003)

### specialist

National Medicines Institute  
supervision of products on the Polish market  
gaining knowledge of legal regulations (2004)

### adjunct

Narodowe Centrum Badań Jądrowych, Ośrodek Radioizotopów POLATOM (2011)

### DIRECTOR

National Centre for Nuclear Research POLATOM  
Radioisotope Centre (2020)

## GREATEST ACCOMPLISHMENTS

- obtaining two patents
- launch of a formulation for the diagnosis of non-specific inflammatory conditions in just 8 years of development

## ADVICE FOR STUDENTS

- "Don't be worry to take up challenges."
- "Always set your goals high."
- "Never be average, aim high."
- "Don't stop fighting, if it doesn't work - try again."

## THOUGHTS ON THE CAREER

**"I am at this point of my career because...**  
of my own work and ability to adapt to changing realities."

**"What I appreciate most in my career is...**  
the opportunity to work with people."



"Success for me is having a job that gives satisfaction and pleasure".

## MEMORIES FROM WUT

"Working in the lab related to writing my master's thesis. The processes studied were very long, which involved staying in the lab in the evening and at night. It was a time in which friendships were formed for years."

## TIME AT WUT - KEY ASSETS

- process analysis skills
- problem solving skills
- ethics and integrity in the conduct of research

*To be successful is to know that you have helped others to improve professionally, that you have made a contribution, in the sense of a lasting contribution to human development, rather than one in the form of physical objects, which are transient.*

48\_WE\_1986\_M

*There is also a group of young people who are interested in working with me. I have also managed to educate quite a number of students, and I expect that they will find much of what I taught them useful in their professional lives.*

51\_WEITI\_1982\_M

*It means doing something useful, it's not only about being well-paid, but also about doing something that has an actual – positive – impact on the world.*

52\_WA\_2014\_M

*Success means taking your research to the level where it not only becomes useful as another work to boost your statistics, but also has the potential to actually help patients in the long term.*

90\_WM\_2014\_M

### **Freedom, autonomy, self-direction**

Being able to make an autonomous decision about one's fate, acting in accord with one's values and preferences, and having a deep-seated sense of self-direction are three further phrases found in WUT graduates' definitions of success. This aspect was particularly prominent among respondents who owned or managed a business.

*It's a form of independence in decisions across a range of aspects – in business, life. It's when you managed to get to a position where you can make most of these decision on your own.*

32\_WBMIP\_1987\_M

*Above all, however, it's about being true to yourself, taking on challenges that actually matter to you.*

84\_WE\_1970\_F

*It's about knowing that I am largely responsible for what happens in my life.*

95\_WM\_2000\_M

### **Professionalism and its social recognition**

An important aspect of the definition of success was the social recognition of the level of competence attained during the professional career. Those respondents who emphasised this element placed value on having a certain set of skills and on the social perception of these skills. An employee's value has nothing to do with their position on the career ladder or connections. Rather, it stems from the specific knowledge, competencies, and skills they have.

*To me, success is when you can get self-preoccupied people to listen to you, granted that they are not your subordinates. To get them to listen only because you have something to say. And to have them listen to what you are saying not because they are afraid of you or think that they can get something out of it, financially or job-wise. That's success in my book.*

103\_WT\_1976\_M

*I would say that one of the objective measures of success is whether you have gained some sort of recognition, national and international, and here I would be cautious about all the parameters. In a sense, it's obviously a matter of your recognisability.*

70\_WMiNI\_1989\_M

### **3.2.4 DEFINITIONS FORMULATED BY SCIENTISTS/ACADEMICS**

The group of respondents who had the most difficulties providing a clear definition of success were those classified under the "scientific/academic success" category. These definitions were more detailed, with respondents giving specific examples. Possibly, this can be explained by the fact that

delayed gratification associated with success featured prominently in their definitions of success. The achievements that came in the fore in these definitions were recognisability and appreciation from peers in the scientific/academic community.

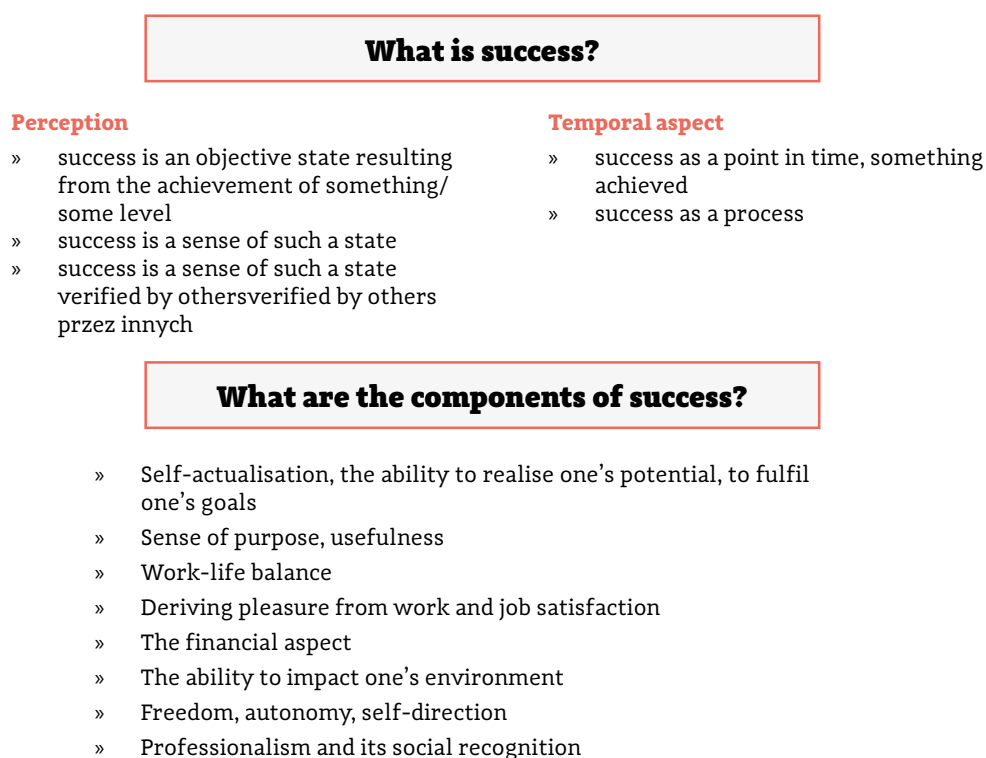
*Scientific career is a road. In most cases a single achievement is not enough to be considered success permanently. As far as everyday work goes, getting published in a good journal or receiving a positive review is a success.*

90\_WM\_2014\_M

*In a sense success is being recognised by the community in a given field, being recognisable, although more in the sense of being appreciated, which is key here. What matters at the end of the day is how you came to be appreciated and recognised.*

91\_WE\_1997\_M

Figure 1. Summary of definitions



Source: by DBA CZłITT PW.

### 3.3 Achievements of WUT graduates

The study identified WUT graduates' outstanding achievements in three areas: commercial, scientific/academic, and social. "Outstanding achievement" is defined here as a significant outcome of the graduate's work in the sense of having done or obtained/attained something significant.

#### 3.3.1 IDENTIFICATION OF WUT GRADUATES' OUTSTANDING ACHIEVEMENTS

##### Achievements in the "commercial" area

The most notable professional achievements of WUT graduates included:

preventing an industrial plant from being shut down	establishing an innovation centre	establishing a company that sells equipment for nuclear power plants and maintains security, automation and reactor core security systems in nuclear power plants	
securing a patent for a chassis dynamometer for multi-axle vehicles	creating a combustion-engine laboratory	monopolising the IT application market of a Middle Eastern country	deploying a technology in a major branch of the transport industry
involvement in constructing a mechanism for American space mission equipment	finalising organisation of one of the largest tendering processes in the transport industry	creating one of Poland's first online banking systems	creating a document archiving system for major energy companies
creating the IT infrastructure of a visa system before Poland's entry into the EU	creating a proprietary poll automation system	creating an analytics tool for petrol stations	deploying a system for continuing airworthiness management

##### Achievements in the "scientific/academic" area

The most notable scientific/academic achievements of WUT graduates included:

- » creating and commercialising the EnviroMix® technology
- » creating and marketing a preparation for the diagnosis of non-specific inflammation (Techimun)
- » earning a scholarship from the Foundation for Polish Science
- » top position in the Mazovian-innovation contest
- » designing a device for the European Space Agency
- » being a member of a Polish science agency
- » leading a research group in an international scientific experiment



### **Achievements in the “social” area**

The most notable social achievements of WUT graduates included:

- » organising high-level work placements at the Municipal Bus Company
- » causing the establishment of cooperation between the WUT and a major chemical company
- » establishing a foundation to support technology transfer
- » organising the “Hacking for Humanity” hackathon
- » writing articles on computer programming for children and teenagers
- » involvement in the activities of the “Architekci bez granic” organisation

### **3.3.2. ACHIEVEMENTS OF WUT GRADUATES AND THEIR DEFINITION OF SUCCESS**

In addition to identifying the individual components of success, the study compiled and aggregated all the achievements mentioned during interviews, and the corresponding definitions of success were ascribed to these achievements.

An important element of the definition of success involves **meeting goals**, achieving something. Success is measured by the achievement of the milestones underlying success. In turn, an achievement is a milestone that can be a determinant of success. The aggregated achievements of WUT graduates are organised into three groups – private, professional, and social.

The compiled achievements of WUT graduates are reflected in the elements that constitute their definitions of success. A single achievement can involve multiple elements of the definition of success. For instance, earning a degree can provide the self-actualisation element of the definition of success – fulfilling the need to complete education at a specific level and, at the same time, meeting the prerequisite of having a specific level of knowledge, skills and/or competencies.

A detailed response analysis was performed to investigate the degree of relationship between achievements and definition of success. Since a specific achievement can involve more than one element of the definition of success, it is impossible to determine such relationship with sufficient reliability. Those respondents whose definition of success was based on the self-actualisation element mentioned their achievements related to professional status, competencies, skills, social contributions, and financial status. The aggregated elements of the definition of success still have a broader meaning than the aggregated achievements. Only one group revealed consistency between the achievements and the formulated definition of success, and it was the group of respondents who considered living a happy life to be their achievement. Work-life balance was a fundamental element of the definition of success for all respondents.

**Table 1.** Types of achievements of WUT graduates and the corresponding elements of the definition of success

Area	Achievement	Description of achievement	Elements of the definition of success
Private sphere	Happy family life and work-life balance	Happy family life, combining family roles with professional self-actualisation.	<ul style="list-style-type: none"> <li>» Work-life balance</li> <li>» Deriving pleasure from work and job satisfaction</li> </ul>
	Graduating from the WUT	Satisfaction from completing a challenging course of study, having a sense of membership with the exclusive group of WUT graduates.	<ul style="list-style-type: none"> <li>» Self-actualisation, the ability to realise one's potential, to fulfil one's goals</li> <li>» Deriving pleasure from work and job satisfaction</li> </ul>
	Having a certain range of competencies, being able to apply skills	Self-actualisation in the sphere of self-education and personal development, satisfaction from having knowledge, skills, and competencies, and from knowing that these elements are used.	<ul style="list-style-type: none"> <li>» Self-actualisation, the ability to use one's knowledge</li> <li>» Deriving pleasure from work and job satisfaction</li> </ul>
	Development opportunities	Satisfaction from being in the position to pursue development.	<ul style="list-style-type: none"> <li>» Deriving pleasure from work and job satisfaction</li> </ul>
	Attaining the state of self-actualisation	Fulfilling the higher-level need of fully reaching one's potential, realising dreams, and/or pursuing a calling.	<ul style="list-style-type: none"> <li>» Pursuing one's goals</li> <li>» Self-actualisation, the ability to realise one's potential, to fulfil one's goals</li> </ul>
	Attaining the state of safety	Fulfilling the need of safety, mainly financial safety, affording decision-making autonomy, among others.	<ul style="list-style-type: none"> <li>» Financial security, good financial situation</li> <li>» Freedom, independence, self-direction</li> </ul>
	Finding a job or successful retraining	Finding a job aligned with one's experience and aspirations. Satisfaction from the effort involved in retraining.	<ul style="list-style-type: none"> <li>» Self-actualisation, the ability to realise one's potential, to fulfil one's goals</li> <li>» Professionalism and its social recognition</li> <li>» Financial security, good financial situation</li> </ul>
	Professionalism	A sense of satisfaction from being reliable in discharging one's professional duties.	<ul style="list-style-type: none"> <li>» Deriving pleasure from work and job satisfaction</li> </ul>
Professional sphere, including education	Business successes	Satisfaction from making the business successful	<ul style="list-style-type: none"> <li>» Self-actualisation, the ability to realise one's potential, to fulfil one's goals</li> </ul>
	that are also personal successes	Satisfaction from making the business successful	<ul style="list-style-type: none"> <li>» The ability to impact one's environment</li> </ul>

## WHAT IS SUCCESS FOR WARSAW UNIVERSITY OF TECHNOLOGY GRADUATES?

Area	Achievement	Description of achievement	Corresponding elements of success
Professional sphere, including education	Professional status	Achieving a formal or non-formal professional status, and earning the social recognition that goes with it.	<ul style="list-style-type: none"> <li>» Professionalism and its social recognition</li> <li>» Self-actualisation, the ability to realise one's potential, to fulfil one's goals</li> </ul>
	Socially significant creation	Developing a socially useful and qualitatively new product (method, institution, technology, system, upgrade)	<ul style="list-style-type: none"> <li>» Self-actualisation, the ability to realise one's potential, to fulfil one's goals</li> <li>» Being able to influence the environment</li> <li>» Sense of purpose, usefulness</li> </ul>
	Participating in something significant	Having a sense of satisfaction from being involved in a socially significant effort (developing a new technology, implementing transformative projects, participating in meetings of an important body)	<ul style="list-style-type: none"> <li>» Financial security, good financial situation</li> <li>» Freedom, autonomy, self-direction</li> </ul>
	Performed duties	Happy family life, conciliating family roles with professional self-actualisation.	<ul style="list-style-type: none"> <li>» Work-life balance</li> <li>» Deriving pleasure from work and job satisfaction</li> </ul>
	Financial situation	Satisfaction from completing a challenging course of study, having a sense of membership with the exclusive group of WUT graduates.	<ul style="list-style-type: none"> <li>» Self-actualisation, the ability to realise one's potential, to fulfil one's goals</li> <li>» Deriving pleasure from work and job satisfaction</li> </ul>
	Social contribution	Self-actualisation in the sphere of self-education and professional development, satisfaction from having knowledge, skills, and competencies, and from knowing that these elements are used.	<ul style="list-style-type: none"> <li>» Self-actualisation, being able to use one's knowledge</li> <li>» Deriving pleasure from work and job satisfaction</li> </ul>
	Working in a reputable company	Satisfaction from being in the position to pursue development.	<ul style="list-style-type: none"> <li>» Deriving pleasure from work and job satisfaction</li> </ul>

## CZYM JEST SUKCES DLA ABSOLWENTÓW POLITECHNIKI WARSZAWSKIEJ?

Area	Achievement	Description of achievement	Corresponding elements of success
Sfera zawodowa w tym w zakresie nauki	Earning a degree	Fulfilling the higher-level need of fully reaching one's potential, realising dreams, and/ or pursuing a calling.	<ul style="list-style-type: none"> <li>» Pursuing one's goals</li> <li>» Self-actualisation, the ability to realise one's potential, to fulfil one's goals</li> </ul>
	Scholarship	Fulfilling the need of safety, mainly financial safety, affording decision-making autonomy, among others.	<ul style="list-style-type: none"> <li>» Financial security, good financial situation</li> <li>» Freedom, autonomy, self-direction</li> </ul>
	Sharing research outcomes	Producing research outcomes (publications, monographs, papers, articles, conference lectures) and the social recognition of one's research.	<ul style="list-style-type: none"> <li>» Professionalism and its social recognition</li> <li>» Self-actualisation, the ability to realise one's potential, to fulfil one's goals</li> <li>» The ability to impact one's environment</li> </ul>
	Professional status	Attaining a formal or non-formal status in the scientific/academic community.	<ul style="list-style-type: none"> <li>» Professionalism and its social recognition</li> </ul>
	Social contribution	Having a sense of satisfaction from the social impacts of one's research work (supervising doctoral students, developing a new method).	<ul style="list-style-type: none"> <li>» Being able to influence the environment</li> <li>» Professionalism and its social recognition</li> </ul>
Social sphere	Social contribution	Having a sense of satisfaction from the social impacts of one's work (popularization of science, activity in the organization).	<ul style="list-style-type: none"> <li>» Self-actualisation, the ability to realise one's potential, to fulfil one's goals</li> <li>» Professionalism and its social recognition</li> </ul>

Source: by DBA CZłITT PW.

## PIOTR SZEWCZYK, PhD

### GRADUATE

Faculty of Electrical Engineering  
Institute of Control and Industrial  
Electronics (1992)



### DAAD scholarship in Aachen

### co-founding APS Modern Power Systems

(APS Nowoczesne Systemy Zasilania)  
first contract - power supplies  
for plasma technologies (1995)

### obtaining a PhD

(1998)

### CHAIRMAN OF THE BOARD

APS Energia (2001)

### MEMBER OF THE UNIVERSITY COUNCIL

at WUT (2019)

## GREATEST ACCOMPLISHMENTS

- listing of APS Energia on the Warsaw Stock Exchange (GPW - Giełda Papierów Wartościowych) (2013)
- using the company's products as elements of safety systems of the nuclear power plants cores and life-saving systems

## ADVICE FOR STUDENTS

- "Dream and try to make those dreams come true by various means."
- "Learn, travel, have an open mind. Widen your perspective and broaden your perception."

## THOUGHTS ON THE CAREER

"I am at this point of my career because...  
of my dreams and luck."

"What I appreciate most about my career...  
is that I met professor Antoni Dmowski."



"For me, success is making my  
dreams come true."

## MEMORIES FROM WUT

"I have really warm memories  
of living in the dormitory and  
my friends from university. Some  
of them stayed at WUT, others  
work in different places. I had  
a chance to work with many of  
them. We create an informal  
group of the Warsaw University of  
Technology - the best technical  
university in Poland."

## TIME AT WUT - KEY ASSETS

"10% of knowledge is particularly  
useful in professional life. But  
we never know which company  
we will work for or what we will  
do after graduation. Therefore,  
we should exercise our minds  
with different subjects, different  
issues."

## 4. CONCLUSIONS

**There is no universal definition of success** due to the diverse cultural and social considerations underlying this term. Examples or measures defining success vary by the group that defines it – the historic moment and/or the geographical place, and the socio-cultural situation in which this group finds itself.

According to graduates of the Warsaw University of Technology, the definition of success comprises the following core elements:

- » **self-actualisation** – understood as the ability to realise one’s potential, to fulfil one’s goals, and satisfy highest-level needs
- » **comfortable life situation** – deriving pleasure from work combined with job satisfaction
- » **professionalism and its social recognition** – having the knowledge, skills, and competencies that represent the basic reference point for evaluating an individual
- » **work-life balance** – maintaining a healthy balance between family life and occupational work
- » **good financial situation** – understood primarily as an important factor for affording a sense of security and self-direction, or simply as a social-status determinant
- » knowing that **one’s actions are meaningful and useful**
- » **being able to pursue one’s passions** as part of occupational work
- » **being able to influence the environment** through one’s work and/or contributions to the development of a technology
- » **sense of freedom, independence, and self-direction** at a given stage in life

Warsaw University of Technology graduates form a coherent group in terms of their social and cultural backgrounds. Accordingly, there are no significant differences in how success is defined, between WUT graduates who are successful in individual spheres of life (commercial, scientific/academic/social), as well as between graduates of respective WUT faculties. The very slight differences that do exist are attributable mainly to the current life situation of the respondents.

The analysis of WUT graduates’ responses was not conclusive as to the extent to which WUT graduate’s definitions of success reflected their actual achievements. This can be explained by the multidimensional meanings of the individual elements of their definitions of success. Each single element of the definition can be interpreted differently. While respondents can define success on the basis of the self-actualisation element, each of them can still provide a different definition of the goals that they need to attain in order to meet their highest-level needs.

**As an addition to the reports, we included information about organisations bringing together WUT graduates and publications focusing on WUT graduates. The list has been compiled based on online sources. WUT Faculties are welcome to expand this list.**

Table 2. List of information about graduates published by WUT Faculties

Faculty	Association/ Organisation	Publications/ Websites
Warsaw University of Technology - general	Association of Warsaw University of Technology Graduates WUT Seniors Club	WUT Golden Book WUT Golden Diplomas online: <a href="http://www.placpolitechniki1.wordpress.com">www.placpolitechniki1.wordpress.com</a> <a href="http://www.wutsquare.wordpress.com">www.wutsquare.wordpress.com</a>
Faculty of Architecture	Academic Association of the Faculty of Architecture at the Warsaw University of Technology	W. Karczmarczyk (2018), <i>Wydział Architektury Politechniki Warszawskiej: wspomnienia, 1950-2015</i> W. Karczmarczyk (2019), <i>A'51: absolwenci WA PW rocznik'51</i>
Faculty of Automotive and Construction Machinery Engineering	WUT Faculty of Automotive and Construction Machinery Engineering Graduates Club	online: <a href="http://www.simr.pw.edu.pl/Strona-glowna-wydzialu-SiMR/Cooperation/graduates">www.simr.pw.edu.pl/Strona-glowna-wydzialu-SiMR/Cooperation/graduates</a>
Faculty of Building Services, Hydro and Environmental Engineering	Association of the Graduates of Hydraulic Engineering and Water Management at WUT Association of the Graduates of Sanitary Engineering Graduates Club of the Institute of Environmental Engineering Systems at WUT	A. Kulig, K. Wojdyga (red.) (2016), <i>Od Inżynierii wodnej przez technikę sanitarną do inżynierii środowiska w 100-letniej tradycji Politechniki Warszawskiej</i> M. Degles (1997), <i>Zjazd Absolwentów Instytutu Systemów Inżynierii Środowiska Politechniki Warszawskiej: [13/14.06.1997]</i> Faculty of Environmental Engineering (presently: Faculty of Building Services, Hydro and Environmental Engineering) (2011), <i>60-lecie Wydziału Inżynierii Środowiska Politechniki Warszawskiej. 1915/-2011</i> The „100-tu Absolwentów na 100-lecie Wydziału” (“100 graduates for the 100th Anniversary of the Faculty”) campaign – results published online on the Faculty’s Library FB account online: <a href="https://is.pw.edu.pl/absolwent">https://is.pw.edu.pl/absolwent</a>
Faculty of Chemical and Process Engineering	Association of Graduates and friends of Faculty of Chemical and Process Engineering at WUT	
Faculty of Chemistry	”Klatrat” – Association of Students and Graduates of the Faculty of Chemistry at WUT	
Faculty of Civil Engineering		W. Przychoda (2014), <i>Wspomnienia zatrzymane w kadrze: absolwenci Wydziału Inżynierii Lądowej Politechniki Warszawskiej: rok rozpoczęcia studiów 1964</i> G. Jemielita (2005), <i>Jubileusz 90-lecia Wydziału Inżynierii Lądowej Politechniki Warszawskiej</i> G. Borończyk-Płaska, H. Zobel (2015), <i>100-lecie odnowienia tradycji Wydziału Inżynierii Lądowej</i>
Faculty of Civil Engineering, Mechanics and Petrochemistry in Płock		(1997), 30 lat Politechniki Warszawskiej w Płocku: zjazd absolwentów (Płock 04.X.1997 r.) (1987), Absolwenci Ośrodka Naukowo-Dydaktycznego Filii Politechniki Warszawskiej w Płocku A. Kowalski (1977), <i>Absolwenci Filii Politechniki Warszawskiej</i> M. Rutkowska (2012), <i>45 lat Politechniki Warszawskiej w Płocku, spis absolwentów 1971-2011</i> online: <a href="http://www.pw.plock.pl/Absolwenci">www.pw.plock.pl/Absolwenci</a>

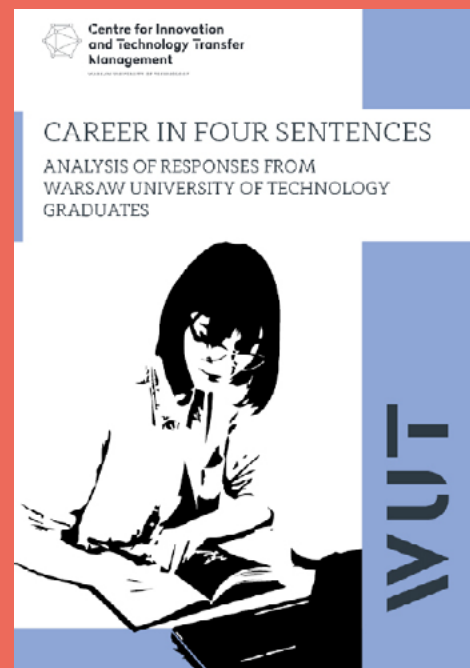
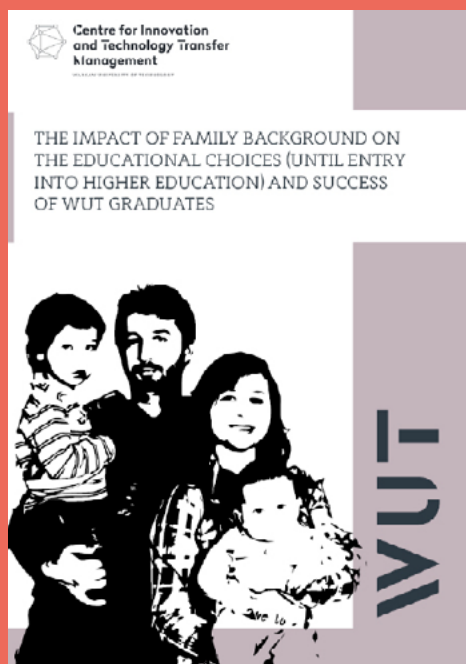
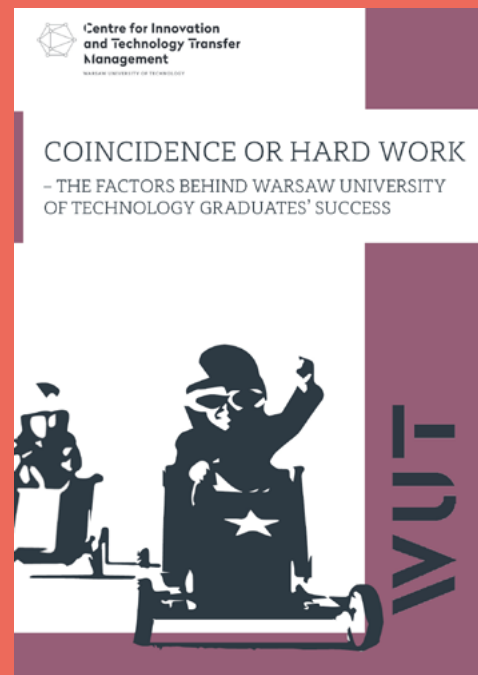
## WHAT IS SUCCESS FOR WARSAW UNIVERSITY OF TECHNOLOGY GRADUATES?

Faculty	Association/ Organisation	Publications/ Websites
Faculty of Electrical Engineering	Association of the Graduates of the Faculty of Electrical Engineering at the Warsaw University of Technology	Z. Grunwald (1983), <i>Zarys Historii Wydziału Elektrycznego 1921-1981</i> J. Dąbrowski et al. (2015), <i>Okruchy wspomnień absolwentów Wydziału Elektrycznego Politechniki Warszawskiej rocznik 1953-58</i> online: <a href="http://www.ee.pw.edu.pl/main/strefa-absolwenta/">www.ee.pw.edu.pl/main/strefa-absolwenta/</a>
Faculty of Electronics and Information Technology	Associations of Graduates of Electronics at the Warsaw University of Technology @ELKApw	R. Morawski (2001), <i>Wczoraj, dziś i jutro Wydziału Elektroniki i Technik Informacyjnych Politechniki Warszawskiej</i> J. Modelski, K. Zaremba (2005), <i>Instytut Radioelektroniki - wczoraj, dziś, jutro</i> online: <a href="http://www.elka.pw.edu.pl/Spolecznosc/Absolwenci">www.elka.pw.edu.pl/Spolecznosc/Absolwenci</a>
Faculty of Management		D. Niziałek (2001), <i>Absolwenci studiów inżyniersko- ekonomicznych, organizacji zarządzania, zarządzania i marketingu od 1955 do 2001 roku</i> D. Niziałek (2003), <i>Absolwenci studiów inżyniersko- ekonomicznych, organizacji zarządzania, zarządzania i marketingu od 2001 do 2003 roku</i> online: <a href="http://www.wz.pw.edu.pl/Kandydat/Opinie-absolwentow">www.wz.pw.edu.pl/Kandydat/Opinie-absolwentow</a>
Faculty of Materials Science and Engineering	Association of Materials Engineering Graduates at WUT	Association of Institute of Printing Technology Graduates at WUT (2013) Institute of Typography at WUT 1968-2013 online: <a href="http://www.wim.pw.edu.pl/Absolwenci">www.wim.pw.edu.pl/Absolwenci</a>
Faculty of Mathematics and Information Science		online: <a href="http://ww2.mini.pw.edu.pl/studia/inzynierskie-i-licencjackie/rekrutacja/opinia-absolwentow/">ww2.mini.pw.edu.pl/studia/inzynierskie-i-licencjackie/rekrutacja/opinia-absolwentow/</a>
Faculty of Mechatronics		<i>F. Szafrąński, D. Holeyko (2017), Księga wspomnień 1953-2017. T. 1</i> <i>F. Szafrąński, D. Holeyko (2018), Księga wspomnień 1953-2018. T. 2</i> <i>S. Hawrat, E. Makowska (1997), Absolwenci: 35-lecie Wydziału Mechatroniki</i> <i>S. Hawrat(1977), Wydział Mechaniki Precyzyjnej 1962-1977: absolwenci 1955-1977</i> <i>I. Trendak, M. Stachura (2016), Zarys historii i osiągnięć Instytutu Automatyki i Robotyki Politechniki Warszawskiej (1957-2015)</i> <i>A. Szwendowski (2012), Od Katedry Optyki do Zakładu Inżynierii Fotonicznej Politechniki Warszawskiej 1953-2008</i> online: <a href="https://www.facebook.com/HenrykTREBERT/">www.facebook.com/HenrykTREBERT/</a>
Faculty of Physics		online: <a href="https://absolwenci.fizyka.pw.edu.pl/lista">https://absolwenci.fizyka.pw.edu.pl/lista</a>
Faculty of Power and Aeronautical Engineering		C. Rzymkowski, K. Kędzior (2015), <i>60-lecie Katedry/Zakładu Teorii Maszyn i Mechanizmów/Robotów</i> (2000), <i>IV Zjazd Wychowanków Wydziału Mechanicznego Energetyki i Lotnictwa Politechniki Warszawskiej z okazji 40-lecia Wydziału MEiL i 175 lat kształcenia technicznego na Politechnice Warszawskiej</i> (2002), <i>V Zjazd Absolwentów Wydziału Mechanicznego Politechniki Warszawskiej immatrykulowanych w latach 1945 i 1946</i>
Faculty of Mechanical and Industrial Engineering	Association of Institute of Printing Technology Graduates	online: <a href="http://www.wip.pw.edu.pl/poligrafia/O-nas/Absolwenci">www.wip.pw.edu.pl/poligrafia/O-nas/Absolwenci</a>
Faculty of Transport		online: <a href="http://www.wt.pw.edu.pl/Absolwenci">www.wt.pw.edu.pl/Absolwenci</a>

Source: by DBA CZiITT PW, 2020



## Read other reports



Project entitled “NERW 2 PW. Nauka – Edukacja – Rozwój – Współpraca” (“NERW 2 PW. Science – Education – Development – Cooperation”), co-funded by the European Union under the European Social Fund’s Operational Programme Knowledge Education Development 2014-2020, Priority Axis III, Higher Education for the Economy and Development, Measure 3.5 Comprehensive university programmes