

Podpora personálního a odborného rozvoje studentů doktorských studijních programů

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Cíl projektu

Cílem projektu byla realizace aktivit, které vedly k dalšímu odbornému a osobnostnímu růstu studentů doktorského studia. Cílem bylo zvýšení odborné úrovně doktorandů, zvýšení kvality jejich publikačních výstupů a osobnostní rozvoj

V rámci projektu byly realizovány kurzy a semináře zaměřené především na:

- Ochranu duševního vlastnictví
- Akademické psaní
- Zdokonalení anglického jazyka. studentů.



Realizované semináře

- Scientific writing for doctoral students - Part I Abstract
- Scientific writing for doctoral students - Part II Introduction to a research article
- Scientific writing for doctoral students - Part III Conclusions/ Discussion sections

Lektorka Mgr. Kamila Etchegoyen Rosolová, Ph.D. (Centrum akademického psaní, AV ČR, v.v.i.)

Academic Writing in English: Writing for the Reader
Gavin Hastings, University of York

Activity 8: Sentence cohesion
Read the following passage. Note there is a missing sentence in the middle of the passage. Read the two suggested sentences below the passage and decide which one links better to the previous and to the next sentence.

Some interesting questions about the nature of the universe have been raised by scientists exploring the nature of black holes in space (.....) at or (.....) to such extent compressed into so little volume changes the fabric of space around it in passing ways.

- The collapse of a dead star into a giant package no larger than a marble creates a black hole.
- A black hole is caused by the collapse of a dead star into a giant package no larger than a marble.

Activity 9: Cohesion and coherence
Read the following paragraph. Is it cohesive? Do you understand it?

Seneca, Wisconsin, is the state's capital of the world. The housing of astronomical engines fills the air, and these turbo-like tracks untrace the score. The score remains one of Man's reached pattern, covered with frames. I would stare with my lock. The marked pattern usually make me sick - that's why I play with them. I like to make a hole in the middle of the potatoes and see it with melted butter. This behavior has been the subject of long chats between me and my cousin.

Academic Writing in English: Writing for the Reader
Gavin Hastings, University of York

Activity Sheet: Discussions/conclusions and elements of style

Activity 1: Discussion do's and don'ts
Look at the advice below for writing Discussion sections. Decide whether the pieces of advice should go under 'Do' or 'Don't'.

State whether you consider it a 'do' or 'don't'	Classify significance for your work	Mention previous research
Apologise for your study's limitations	Include unexpected findings	Write mainly in the 3rd person and use the passive form frequently
Make sure you cover all the results of your study	Use the same sentence as you used in the Introduction	Present raw data, which hasn't mentioned in the Results section

Activity 2: Match and order a discussion section
Order the paragraph discussion by matching its parts with the rhetorical moves in a given sequence (sequence sheet).

Activity 3: Analyze end sections in an article from your field
What do end sections look like in texts published in your discipline? Examine the article you brought in class and answer the following questions:

Academic Writing in English: Writing for the Reader
Gavin Hastings, University of York

Activity sheet

Activity 1 & 2: Feedback on Abstracts

Heat exchangers remain the most relied device for energy transfer between two media in industrial systems. This paper is focused on the theoretical evaluation of pressure drop and effectiveness as a function of mass flow rate for counter flow compact plate heat exchanger utilized in district heating system. The selected working fluids used in the refrigeration cycle were HC-180a, HFO-1234ze(E), CO₂, R134a and HFO-1234ze(E). The HFO-1234ze(E) fluid was used as the cooling and heating media. During the analysis, three different configurations were used based on refrigerant geometry, number of plates and flow regimes. The values obtained were then compared with analysis from ABC software. Local analysis approach for two phase flow was also considered by dividing the heat exchanger into three segments of control volumes. The results demonstrated that HFO-1234ze(E) and HFO-1234ze(E) have lower than CO₂ total pressure drop when mass flow rate increased to 0.25 kg/s at the evaporator and 0.025 kg/s at the condenser. In contrast, HC-180a and HFO-1234ze(E) recorded the highest values of ΔT_{eff} at similar mass flow rates, which however is not recommended. The refrigerant comparison revealed that the effectiveness decreased exponentially with increasing mass flow rate. HC-180a and HFO-1234ze(E) practically obtained the best effectiveness with 8% to 15% among other refrigerants.

This paper aims at the experimental and numerical analysis of the flow within a secondary air ejector with a reusable nozzle nozzle. The ejector under investigation in this study has already been analyzed both numerically and experimentally in the previous work by [1] and [2]. However, this current ejector geometry has been slightly modified. Moreover, this paper investigates two nozzle geometries with a different value of the Bejan number. The nozzles are designed for the same value of jet Mach number. By changing the position of the nozzle exit plane (NEP) it is possible to influence the division of the secondary stream, and hence, to address a different working regime. The performance lines of a particular ejector geometry with flow boundary conditions are shown. Furthermore, static pressure distributions on the ejector wall are presented. Color-coded surface maps were used for the measurement of mass flow rate during the experiment. The experimental data are compared to the numerical data, and further recommendations are introduced.

Academic Writing in English: Writing for the Reader
Gavin Hastings, University of York

Activity 5: Disruptive vs. representative results and predictive statements from your abstract

The paper presents an experimental study on the influence of the variable geometry ejector to the performance of a subcritical refrigeration system at real life working conditions. The environmental conditions such as inlet radiation, ambient temperature vary significantly from time to time, which influence directly on the system performance. Accordingly, different configurations should be applied to obtain the optimum performance. In this work, we study impacts of these most important factors: the nozzle exit position (NEP), nozzle position (NP) and the back pressure of the ejector. Our results showed that the system performance was a complex function of the primary pressure, NP, NEP, and back pressure, in which the nozzle position and the primary pressure seemed to be dominant over the two others. The study also confirmed the necessity of using variable-speed (frequency inverter) pumps in the ejector cycle.

Activity 6: Disruptive vs. representative results and predictive statements from your abstract

(A) Which sentence is descriptive, which one is argumentative, and what makes the difference?

(B) We aimed to develop an accurate method for automatic determination of the size of elliptical nanoparticles from atomic force microscopy (AFM) images that would yield results consistent with results of manual measurements by experts.

(C) Which of the following problem purpose statements could be stronger and how would you modify them?

This paper is focused on the theoretical evaluation of pressure drop and effectiveness as a function of mass flow rate for counter flow compact plate heat exchanger utilized in district heating system.

This paper aims at the experimental and numerical analysis of the flow within a secondary air ejector with a reusable nozzle nozzle.

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Activity 10: Consistent view in a paragraph I

Which sentence shifts the point of view?

1 These findings suggest that patients returning from tropical countries who show very itchy linear or serpiginous tracked skin eruptions should be tested for larvae or animal hookworms. 2 Typical treatments with an antiparasitic drug such as ivermectin should be used to treat patients with the disease, known as cutaneous larva migrans. 3 These patients often also suffer from complications of the disease such as serpingitis and allergic reactions.

Activity 11: Consistent view in a paragraph II

Underline the subject in each sentence. Does the text 'flow' well from one sentence to the next? Why or why not?

Colorectal cancer (CRC) is one of the most frequently diagnosed cancers in the world and causes about 7% of cancer-related deaths. The Czech Republic registers the 6th country in the world with the highest incidence rate of CRC. The survival rate of patients diagnosed with CRC remains, unfortunately, very low because standard treatment is insufficient. Intensive research into the molecular basis of CRC development might bring new perspectives for therapeutic intervention. The canonical Wnt signaling pathway plays a major role in the homeostasis of the intestine in the adult organism, but it may also initiate the transformation of epithelia upon deregulation.

Now, underline the second sentence so that it begins with the known information from the end of the first sentence.

Colorectal cancer (CRC) is one of the most frequently diagnosed cancers in the world and causes about 7% of cancer-related deaths.

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Activity 7: Disruptive vs. representative results and predictive statements from your abstract

Common ground (What is known? "They say...")

Unknown/Problem (What needs to be resolved and why? "I say...")

Research question/Hypothesis (What do you need to know to resolve the problem? What's your answer to the problem? "I say...")

So what? What does your study add to the knowledge in the field?



Realizované semináře

- Průmyslová práva a rešerše v databázích

Lektorka Ing. Eva Křováková (Úřad průmyslového vlastnictví)

Průmyslová práva - v ČR i v zahraničí
a průmyslověprávní informace

TUL, Liberec, 7. 11. 2018 Ing. Eva Křováková

Duševní vlastnictví

Autorské právo a související práva + Průmyslová práva

Vytvoření díla (v objektivně vnímatelné podobě) Žádost, průzkum zápis, udělení

Instituce v oboru

www.upv.cz

ÚŘAD PRŮMYSLUVÉHO VLASTNICTVÍ
ČESKÁ REPUBLIKA

Ministerstvo kultury www.mkcr.cz
(a ochranné svazy)

Evropský patentový úřad
www.epo.org

Úřad Evropské unie pro duševní
vlastnictví – EUIPO www.euiipo.europa.eu

Světová organizace duševního vlastnictví –
WIPO www.wipo.int

Evropský patent – rozsah ochrany

Map showing the geographic coverage of European patents as of 1 March 2018

Úřad průmyslového vlastnictví

Národní databáze – nové rozhraní

- Databáze patentů a užitných vzorů * ochranných známek * průmyslových vzorů * zeměpisná označení / označených původů * souhrnná rešerše
- Do konce roku 2018 poběží nové rozhraní souběžně se stávajícími
- Vaše připomínky, náměty, dotazy - helpdesk@upv.cz



Realizované semináře

- Pokročilé vyhledávání a analýza patentů
Lektor doc. ing. Petr Lepšík, Ph.D. (TUL)



Realizované semináře

Úvod do technické angličtiny pro doktorandy Lektorka Mgr. Dagmar Grzinčíč (TUL)

Activity sheet: Writing an abstract

Activity 1: The first draft
Read the following abstract for a journal article and answer the questions

- 1) Is it easy to read?
- 2) Is it easy to understand?
- 3) What is the study about?
- 4) How effective is the writer in introducing the project's aims, methods, and results? Why/why not?

Direction of Elliptical Particles in Atomic Force Microscopy Image

The aim of this paper is to describe a method for detection and measurement of elliptical particles in atomic force microscopy (AFM) images. AFM imaging is an efficient tool for measuring properties of material surfaces in physics. The value of a pixel in the acquired image reflects the height of the surface at corresponding coordinates. We assume that particles in the scanned sample are of principally the same size and approximately elliptical. Their size can thus be represented by the average length and width of the most salient particles. The proposed method is based on segmentation of such particles and their approximation by ellipses; their major and minor axes are robust estimations of the lengths and widths of the particles, respectively. Distortions caused by the scanning device have to be considered in the method. The results are demonstrated on AFM images of pyrolytes. (143 words)

Activity 2: Comparing the first and the last draft
Now read the final version of the abstract (2 on the right) and compare it with its first draft.

- 1) What are the most striking differences you notice in the content of the abstracts?
- 2) What are the most striking differences you notice in the use of language (style/register)?
- 3) Which abstract indicates that the work addresses a problem or an existing question that is under discussion?

Abstract 1
Direction of Elliptical Particles in Atomic Force Microscopy Image

The aim of this paper is to describe a method for detection and measurement of elliptical particles in atomic force microscopy (AFM) images. AFM imaging is an efficient tool for measuring properties of material surfaces in physics. The value of a pixel in the acquired image reflects the height of the surface at corresponding coordinates. We assume that particles in the scanned sample are of principally the same size and approximately elliptical. Their size can thus be represented by the average length and width of the most salient particles. The proposed method is based on segmentation of such particles and their approximation by ellipses; their major and minor axes are robust estimations of the lengths and widths of the particles, respectively. Distortions caused by the scanning device have to be considered in the method. The results are demonstrated on AFM images of pyrolytes. (143 words)

Abstract 2
Automatic determination of the size of elliptical nanoparticles from AFM images

The objective of this work was to develop an accurate method for automatic determination of the size of elliptical nanoparticles from atomic force microscopy (AFM) images that would yield results consistent with results of manual measurements by experts. The proposed method was applied on polyethylenebiphenylpyrene diimide (PPD) - a polymer pigment named with a wide range of application and higher economic particularity properties. PPD particles (as randomly sized elliptical particles) 100 nm x 30 nm and its properties are investigated from the average length and width of the particles. The developed method is based on segmenting salient particles by the watershed transform and approximating their shapes by ellipses computed by image moments. Evaluation that length and width of the particles by the major and minor axes, respectively, of the corresponding ellipses. The results proved to be consistent with results of manual measurements by a trained expert. Our comparison showed that the developed method could be used in practice for precise automatic measurement of PPD particles in AFM images. (172 words)

Abstract 3
Automatic determination of the size of elliptical nanoparticles from AFM images

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Activity 3: Observing preferable patterns/rhetorical moves

Activity 4: Examining styles

Compare the style of the two abstracts. What makes the difference? Direction of Elliptical Particles in Atomic Force Microscopy Image

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Activity 5: Concise writing (empty "there is" form)

Answer the questions below, working with the two abstracts (problems) and a text, see how to create a stronger, more effective sentence.

Example: There are many variations of cultural segments of our manufacturing network's activities.
1) Strong there is... 2) The first one is subject first... 3) Put a verb for the first one and change it to present, future or past tense that is appropriate to the situation.

4) There were four key points which programmes had to keep in mind.

5) There are likely to be any obstacles concerning our methods.

6) There are at least five PhD students who are competing for the grant.

Activity 6: Concise writing (using modal verbs)

Use appropriate modal verbs to replace the longer expressions underlined below. You will need to change the word order, too, to cover gaps.

a) It is crucial for technicians to check the machine daily.
b) It is likely to happen that there will be a negative result from this test.
c) It is not necessary for the data to be analysed for statistical analysis.

1) In spite of the fact that I had intended for several years to make several films, the will kept about it.

2) I regret that I did not do it.

3) I regret that I did not do it.

4) I regret that I did not do it.

Activity 8: Challenge

What is the minimum number of words in which you can reduce the following sentence? Underline the words which are essential for the meaning of the sentence. Do not use any other words in your laboratory unless you produce the results, which have the latest progress.

Activity 9: Concise writing (using up activity)

The director before takes from a high top position, has been adapted to his new role, needs to be re-evaluated, and does not have work.

1) Study places where you think the reading could be more concise.

2) Underline everything that is not applicable for an abstract.

3) Underline everything that is likely to be unclear to readers.

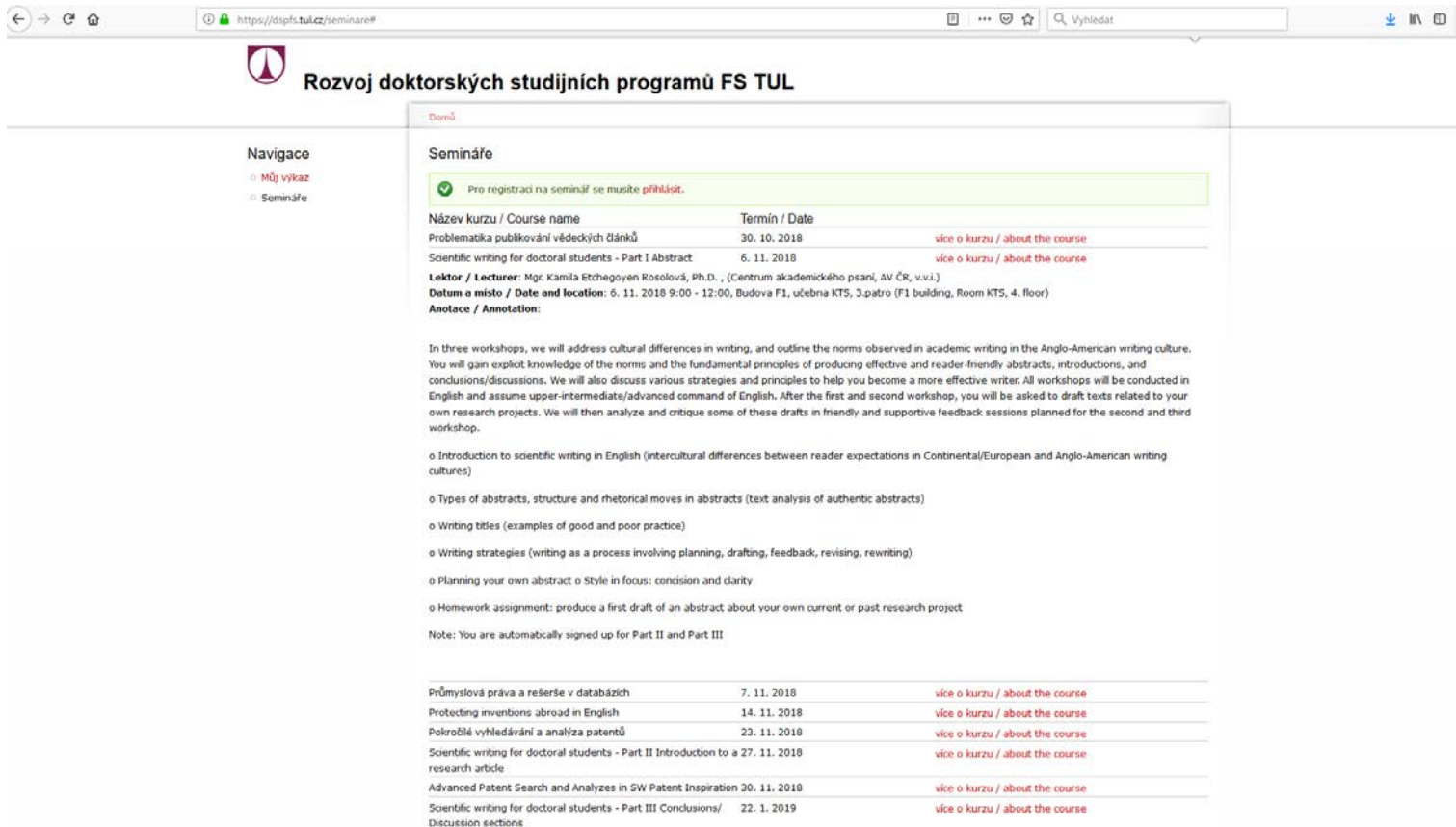
4) Remove extra words that add nothing to the meaning.

5) Replace, change the structure, change the word order, combine sentences as appropriate. Keep the arrows order within the paragraph.

Choose a set of the important gases that are in the atmosphere today. It is a huge gas with the ability of absorption of some electromagnetic radiation coming from the sun and also infrared radiation going out from the Earth's surface. After that discovery of the greenhouse effect, the requirement to carry out an accurate assessment of the long term trend of various in different regions of the globe. Nevertheless, there is a definite sign of research. Transition to the total state climate over the Balkan subcontinent in South with the present study with the use of satellite and limited ground observations. The satellite shows rise for linear regression technique, and it was applied to the EC-CMOR data to study the trends during the six-year period from 1997 to 2003. Unfortunately, our findings show that there has been declining trend slightly in most areas over the southern parts of Balkan, covering the area of the border of the Dnieper and the Carpathian ranges, compared with other parts of Balkan.



Portál pro přihlašování studentů na semináře



[Domů](#)

Semináře

Pro registraci na seminář se musíte **přihlásit**.

Název kurzu / Course name	Termín / Date	
Problematika publikování vědeckých článků	30. 10. 2018	více o kurzu / about the course
Scientific writing for doctoral students - Part I Abstract	6. 11. 2018	více o kurzu / about the course

Lektor / Lecturer: Mgr. Kamila Etchegoyen Rosolová, Ph.D., (Centrum akademického psaní, AV ČR, v.v.i.)
Datum a místo / Date and location: 6. 11. 2018 9:00 - 12:00, Budova F1, učebna KTS, 3.patro (F1 building, Room KTS, 4. floor)
Anotace / Annotation:

In three workshops, we will address cultural differences in writing, and outline the norms observed in academic writing in the Anglo-American writing culture. You will gain explicit knowledge of the norms and the fundamental principles of producing effective and reader-friendly abstracts, introductions, and conclusions/discussions. We will also discuss various strategies and principles to help you become a more effective writer. All workshops will be conducted in English and assume upper-intermediate/advanced command of English. After the first and second workshop, you will be asked to draft texts related to your own research projects. We will then analyze and critique some of these drafts in friendly and supportive feedback sessions planned for the second and third workshop.

- o Introduction to scientific writing in English (intercultural differences between reader expectations in Continental/European and Anglo-American writing cultures)
- o Types of abstracts, structure and rhetorical moves in abstracts (text analysis of authentic abstracts)
- o Writing titles (examples of good and poor practice)
- o Writing strategies (writing as a process involving planning, drafting, feedback, revising, rewriting)
- o Planning your own abstract o Style in focus: concision and clarity
- o Homework assignment: produce a first draft of an abstract about your own current or past research project

Note: You are automatically signed up for Part II and Part III

Průmyslová práva a řešení v databázích	7. 11. 2018	více o kurzu / about the course
Protecting inventions abroad in English	14. 11. 2018	více o kurzu / about the course
Pokročilé vyhledávání a analýza patentů	23. 11. 2018	více o kurzu / about the course
Scientific writing for doctoral students - Part II Introduction to a research article	27. 11. 2018	více o kurzu / about the course
Advanced Patent Search and Analyses in SW Patent Inspiration	30. 11. 2018	více o kurzu / about the course
Scientific writing for doctoral students - Part III Conclusions/ Discussion sections	22. 1. 2019	více o kurzu / about the course



Indikátor(y)	Počáteční stav	Předpokládaný konečný stav	Konečný stav
Počet seminářů/kurzů	0	4	4

Příspěvek	Celkem	V tom běžné finanční prostředky (NIV)	V tom kapitálové finanční prostředky (INV)
Požadavek	75 tis. Kč	75 tis. Kč	0
Čerpáno	52,985 tis. Kč	52,985 tis. Kč	0

Děkuji za pozornost

