

**UNIVERZITA KARLOVA**  
**FAKULTA SOCIÁLNÍCH VĚD**

**individuální studijní plán**  
**studenta doktorského studijního programu**

**ID plánu 17081**

**Student**

Jméno	<b>Mgr. Lukáš Petrásek</b>
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Fakulta	<b>Fakulta sociálních věd</b>
Studijní program	<b>Ekonomie a finance (P0311D050001)</b>
Standardní délka studia (počet let)	<b>4</b>
Forma studia	<b>prezenční</b>
Datum zahájení doktorského studia	<b>23.09.2019</b>

**Garant studijního programu**  
**a předseda oborové rady**

Jméno	<b>prof. Ing. Evžen Kočenda, M.A., Ph.D., DSc.</b>
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**Školitel**

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Katedra / ústav	<b>Institut ekonomických studií (23-IES)</b>

**Disertační práce**

<b>Název práce</b>
Analysis of the impacts of news on asset prices

## Postup v přípravě disertační práce

### Synopsis:

In recent years, we have seen considerable advancement in computer science and machine learning, which allows us to collect, store, and analyze large amounts of data with an ever-increasing speed and efficiency. The progress in these fields has been accompanied by the rise of Internet which caused the extent of information availability to grow significantly, access to information of almost any kind is now easier than ever, and information which affect financial markets is not an exception. Financial news articles, macroeconomic data and company statements releases, political statements, opinions of financial experts, war coverage, and much more is available almost instantly anywhere in the world. These new pieces of information which can now be consumed virtually in real time, can substantially alter the investor sentiment and thus affect prices of financial assets. The effects of news arrival vary across countries, types of securities, and they have various distributions in time as the information does not always arrive at the same time to all actors. It is also important to study international and cross-market spillovers of the impacts of newly arriving information. For example, shocks that affect commodity markets may in turn affect the stock market as well, and e.g. surprising information about the US inflation rate may influence volatility in emerging markets. Better understanding of the market behavior that follows after the arrival of news is crucial for all market participants as well as regulators. All parties are involved in managing risks associated with undertaking actions in financial markets. And the advancement in the exploration of the underlying mechanisms that govern market reactions to news is becoming increasingly important, as technologies evolve rapidly and information travel faster than before.

The evolution of new machine learning methods, abilities to manage large datasets, and increasing speed of computations gives us a great opportunity to explore financial asset pricing. This branch of science is relatively unmapped, but it has begun to receive much attention lately. The objective of this research project will be to apply the recently developed methods in sentiment analysis and language-processing in combination with other advanced econometric and machine learning approaches to analyze the impacts of new information on the prices of financial assets. Research in the branch of information perception and the related impacts has been booming in the recent years as the associated fields of computer science, artificial intelligence and information engineering have received increased attention as well. But while the research in the field of impact of news to asset prices has been gaining larger and larger popularity lately, its origins go back to influential works of Engle and Ng (1993) and Goh and Ederington (1993) who began to conduct a solid analysis in this field.

We can distinguish between two important strands of literature which differ in the nature of the underlying news variable. The first strand of literature examines the effects of surprise components of regular releases of new information, often concerning macroeconomic data. These surprise components are easily obtainable as the differences between the real observed value of a given variable and its market expectation, usually proxied by a median of expectations from a group of analysts.

Among the most influential works in this strand are Baltuzzi et al. (2001), or Gürkaynak et al. (2005). Lately, surprise components were used e.g. in Allen et al. (2019) who augmented the notoriously known Fama-French three-factor model to contain the investor sentiment and studied its effects, or Stotz (2019) who used a similar technique to analyze the impact of surprises in FOMC meeting outputs. The second important strand of literature focuses on analyzing the market sentiment in general, mostly by extracting valuable information from news articles, headlines, central bank minutes, or statements in social media, classifying the information, and using it to investigate how does it influence financial markets. Chew et al. (2017) divide news into several categories and analyze the impact of each category on equity prices, Iwasaki and Chen (2018) use neural networks to evaluate the overall sentiment of full analysts' reports on companies. Applications of this approach can also be found e.g. in Schumaker et al. (2012), Jones et al. (1998). These two areas of research, of course, do not complete the whole field and there is no clear division between them as well, and they are often combined when analyzing market reactions to news. The works of Rigobon and Sack (2004) or Azar and Lo (2016) have also their place in the relevant finance literature.

The goal of this research project will be to provide satisfactory explanations of financial market reactions to surprising or new information. For example, the potential asymmetry in responses to positive and negative news will be explored. The author will also attempt to provide answers to whether the market responses are state-dependent or whether detailed figures in the announcements are important or it is just the headline numbers which drive the decisions of market participants.

Reactions of foreign markets to US domestic news will be covered as well and lastly, the research will focus on how do the market reactions typically evolve in time, utilizing high-frequency market data. The results will be beneficial for policymakers, central bankers, financial institutions, as well as for funds, and other entities that trade financial instruments, because it will enable them to properly manage risks associated with engaging in market transactions. When doing the research, the author of this proposal plans to use up-to-date methods like gradient boosted regression trees or neural networks to analyze the impact newly arrived pieces of information have on financial markets, focusing especially on US equities. Various categories of news will be covered, ranging from releases of macroeconomic numbers, financial statements of companies, or central bank communication, to announcements made on social media. The project will utilize modern machine learning techniques in sentiment analysis, e.g. natural language processing, and statistical modelling, among else regression trees or neural networks to uncover nonlinear dependencies between news and prices. The expected asymmetric nature of the relationships between positive and negative news and prices will be given substantial treatment as well. An integral part of the research will be the usage of the results to construct forecasts of asset prices and the subsequent evaluation of the performance of these forecasts.

### Selective list of references:

- Allen, D. E., McAleer, M., & Singh, A. K. (2019). Daily market news sentiment and stock prices. *Applied Economics*, 1-24.
- Azar, P. D., & Lo, A. W. (2016). The wisdom of Twitter crowds: Predicting stock market reactions to FOMC meetings via Twitter feeds. *The Journal of Portfolio Management*, 42(5), 123-134.
- Balduzzi, P., Elton, E. J., & Green, T. C. (2001). Economic news and bond prices: Evidence from the US Treasury market. *Journal of Financial and Quantitative Analysis*, 36(4), 523-543.
- Chew, M., Puri, S., Sood, A., & Wearne, A. (2017). Using Natural Language Processing Techniques for Stock Return Predictions. Available at SSRN 2940564.
- Engle, R. F., & Ng, V. K. (1993). Measuring and testing the impact of news on volatility. *The Journal of Finance*, 48(5), 1749-1778.
- Engelberg, J. E., Reed, A. V., & Ringgenberg, M. C. (2012). How are shorts informed?: Short sellers, news, and information processing. *Journal of Financial Economics*, 105(2), 260-278.
- Fernandez-Perez, A., Frijns, B., & Tourani-Rad, A. (2017). When no news is good news—The decrease in investor fear after the FOMC announcement. *Journal of Empirical Finance*, 41, 187-199.
- Gilbert, T., Scotti, C., Strasser, G., & Vega, C. (2017). Is the intrinsic value of a macroeconomic news announcement related to its asset price impact?. *Journal of Monetary Economics*, 92, 78-95.
- Goh, J. C., & Ederington, L. H. (1993). Is a bond rating downgrade bad news, good news, or no news for stockholders?. *The Journal of Finance*, 48(5), 2001-2008.
- Green, T. C. (2004). Economic news and the impact of trading on bond prices. *The Journal of Finance*, 59(3), 1201-1233.
- Gürkaynak, R. S., Kısacıköglü, B., & Wright, J. H. (2018). Missing events in event studies: Identifying the effects of partially-measured news surprises (No. w25016). National Bureau of Economic Research.
- Gürkaynak, R. S., Sack, B., & Swanson, E. (2005). The sensitivity of long-term interest rates to economic news: Evidence and implications for macroeconomic models. *American Economic Review*, 95(1), 425-436.
- Houlihan, P., & Creamer, G. G. (2017). Can Sentiment Analysis and Options Volume Anticipate Future Returns?. *Computational Economics*, 50(4), 669-685.
- Iwasaki, H., & Chen, Y. (2018). Topic Sentiment Asset Pricing with DNN Supervised Learning.
- Jones, C. M., Lamont, O., & Lumsdaine, R. L. (1998). Macroeconomic news and bond market volatility. *Journal of Financial Economics*, 47(3), 315-337.
- Omrane, W. B., & Savaşer, T. (2016). The sign switch effect of macroeconomic news in foreign exchange markets. *Journal of International Financial Markets, Institutions and Money*, 45, 96-114.
- Rigobon, R., & Sack, B. (2004). The impact of monetary policy on asset prices. *Journal of Monetary Economics*, 51(8), 1553-1575.
- Schumaker, R. P., Zhang, Y., Huang, C. N., & Chen, H. (2012). Evaluating sentiment in financial news articles. *Decision Support Systems*, 53(3), 458-464.
- Scotti, C. (2016). Surprise and uncertainty indexes: Real-time aggregation of real-activity macro-surprises. *Journal of Monetary Economics*, 82, 1-19.
- Smales, L. A. (2015). Time-variation in the impact of news sentiment. *International Review of Financial Analysis*, 37, 40-50.
- Stotz, O. (2019). The response of equity prices to monetary policy announcements: Decomposing the announcement day return into cash-flow news, interest rate news, and risk premium news. *Journal of International Money and Finance*, 102069.

### Form and scope of the dissertation:

The dissertation will have between 100 and 200 standard pages.

### Time schedule of progress of the dissertation:

#### 1st year of studies:

Work on the first dissertation article with an expected title 'US Stock Market Reaction to Surprises in Macroeconomic Data Announcements'. The article will develop a framework for analyzing the impact of surprise components of macroeconomic data releases on financial markets, critically compare different methods that were used in the existing literature (such as regressing excess returns of an asset on the surprise components alone or with several control variables, utilizing the two-stage Fama-Macbeth regressions or some regularization techniques) and propose a suitable methodology to use surprise components of macroeconomic data announcements to forecast stock returns utilizing a large predictive factor model combining the surprise components with the most pronounced factors in the economic literature. Several hypotheses will be tested. First, similarly as in Stotz (2019), state-dependency of the market reaction to new information is expected to be tested via inclusion of state (recession, boom) variables into the model. Second, the surprise components can be split into positive and negative elements to allow uncovering potential asymmetries in the relationship between surprising information and returns, this is done e.g. in Engelberg et al. (2012). This can be modeled using regression techniques, or e.g. tree-based methods. Third, additional data from the macroeconomic news releases, such as update on the past figures, or detailed numbers can be exploited as well to break up the total effect into parts. Such modeling task can be solved by utilizing penalized regression techniques such as elastic net, or e.g. a highly regularized neural network. Then, as proposed by Omrane and Savaşer (2016), we can test the eagerness of the market, i.e. evaluate its reactions according to how much time has passed since the latest data release of the respective figure or in the respective category of news. Lastly, conditional on the availability of data on the variability of market consensus estimates, it can be tested whether the market reacts more chaotically when its expectations are less centered.

Teaching activities in subjects related to econometrics or finance.

#### 2nd year of studies:

Work on the second dissertation article with an expected title 'Local and International Impacts of US News-Based Investor Sentiment on Asset Prices'. In this article,

which should be build on a solid formal ground developed in the first article, similar framework will be constructed to allow a proper sentiment analysis of news headlines and their impact on stock prices. International spillovers of the reaction to US-related news headlines will be examined, as the recent studies have found evidence for these spillovers in the case of macroeconomic surprise components, but they have received little or no attention in the context of sentiment analysis.

Teaching activities in subjects related to econometrics or finance.

3rd year of studies:

Work on the third dissertation article with an expected title 'Understanding the Timing of the Impact of News Arrival on Financial Markets'. The third article will be focused on the distribution of market reaction in time following the new information arrival. High-frequency price data from stock, commodity, bond, or foreign exchange markets will be used to analyze the speed with which highly influential news is received, interpreted, and priced into the market.

Teaching activities in subjects related to econometrics or finance.

4th year of studies:

Finishing, Pre-defence and Defense of the dissertation.

Teaching activities in subjects related to econometrics or finance.

## Státní doktorská zkouška a obhajoba disertační práce

Typ	Kód	Název, podrobnosti	Ak. rok
Obhajoba disertační práce	JOBEE1	Obhajoba disertační práce	2022/2023
Státní doktorská zkouška	JSZEE1	Státní doktorská zkouška	2021/2022

## Průběh studia

Scheduled date of the state doctoral examination: November 2021

Scheduled date of the pre-defence: November 2022

Scheduled date of the defence of the dissertation: May 2023

## Povinnosti - studijní plán

Typ	Kód	Název, podrobnosti	Ak. rok
Předmět	JED412	Advanced Financial Econometrics I	2019/2020
Předmět	JED413	Advanced Financial Econometrics II	2019/2020
Předmět	JED412	Advanced Financial Econometrics I	2020/2021
Předmět	JED413	Advanced Financial Econometrics II	2020/2021
Předmět	JED412	Advanced Financial Econometrics I	2021/2022
Předmět	JED413	Advanced Financial Econometrics II	2021/2022
Předmět	JED412	Advanced Financial Econometrics I	2022/2023
Předmět	JED413	Advanced Financial Econometrics II	2022/2023
Předmět	JED511	Teaching Assistantship (Full) A	2019/2020
Předmět	JED621	Teaching Assistantship (Half) B	2019/2020
Předmět	JED511	Teaching Assistantship (Full) A	2020/2021
Předmět	JED621	Teaching Assistantship (Half) B	2020/2021
Předmět	JED511	Teaching Assistantship (Full) A	2020/2021
Předmět	JED511	Teaching Assistantship (Full) A	2021/2022
Předmět	JED511	Teaching Assistantship (Full) A	2021/2022
Předmět	JED511	Teaching Assistantship (Full) A	2022/2023
Předmět	JED511	Teaching Assistantship (Full) A	2022/2023
Publikace	---	US Stock Market Reaction to Surprises in Macroeconomic Data Announcements Till May 31, I will submit an article with an expected title 'US Stock Market Reaction to Surprises in Macroeconomic Data Announcements' to IES WP. If the submission to IES WP is accepted, I will submit it immediately to an impacted journal.	2019/2020
Publikace	---	US Stock Market Reaction to Surprises in Macroeconomic Data Announcements If the previous submission to IES WP is accepted, I will immediately submit the article with an expected title 'US Stock Market Reaction to Surprises in Macroeconomic Data Announcements' to one of the following impacted journals sorted by their AIS: 1) Journal of International Financial Markets, Institutions & Money, 2) Applied Economics, 3) Journal of Portfolio Management.	2020/2021
Publikace	---	Local and International Impacts of US News-Based Investor Sentiment on Asset Prices Till May 31, I will submit an article with an expected title 'Local and International Impacts of US News-Based Investor Sentiment on Asset Prices' to IES WP. If the submission to IES WP is accepted, I will submit it immediately to an impacted journal.	2020/2021
Publikace	---	Local and International Impacts of US News-Based Investor Sentiment on Asset Prices If the previous submission to IES WP is accepted, I will immediately submit the article with an expected title 'Local and International Impacts of US News-Based Investor Sentiment on Asset Prices' to one of the following impacted journals sorted by their AIS: 1) Journal of International Money and Finance, 2) Journal of Empirical Finance, 3) Computational Economics.	2021/2022
Publikace	---	Understanding the Timing of the Impact of News Arrival on Financial Markets Till May 31, I will submit an article with an expected title 'Understanding the Timing of the Impact of News Arrival on Financial Markets' to IES WP. If the submission to IES WP is accepted, I will submit it immediately to an impacted journal.	2021/2022
Publikace	---	Understanding the Timing of the Impact of News Arrival on Financial Markets If the previous submission to IES WP is accepted, I will immediately submit the article with an expected title 'Understanding the Timing of the Impact of News Arrival on Financial Markets' to one of the following impacted journals sorted by their AIS: 1) Financial Analysts Journal, 2) Journal of Empirical Finance, 3) International Review of Financial Analysis.	2022/2023
Konference	---	Conditional on funding, I will participate at scientific conferences related to financial markets or econometrics.	2020/2021
Konference	---	Conditional on funding, I will participate at scientific conferences related to financial markets or econometrics.	2021/2022
Konference	---	Conditional on funding, I will participate at scientific conferences related to financial markets or econometrics.	2022/2023
Jiné	---	Grant activity I will submit an application to the Grant Agency of UK with an expected topic 'Machine learning-based analysis of the impacts of news on asset prices'. In case my project will not be accepted for financing, I will submit new application in the subsequent year of studies.	2019/2020

Typ	Kód	Název, podrobnosti	Ak. rok
Jiné	---	Grant activity I will either work on an approved grant project or submit a new application to the Grant Agency of UK with an expected topic 'Machine learning-based analysis of the impacts of news on asset prices'. In case my project will not be accepted for financing, I will submit new application in the subsequent year of studies.	2020/2021
Jiné	---	Grant activity I will either work on an approved grant project or submit a new application to the Grant Agency of UK with an expected topic 'Machine learning-based analysis of the impacts of news on asset prices'.	2021/2022
Jiné	---	Defenses I will attend at least 50% of dissertation defenses held at IES FSV UK.	2019/2020
Jiné	---	Defenses I will attend at least 50% of dissertation defenses held at IES FSV UK.	2020/2021
Jiné	---	Defenses I will attend at least 50% of dissertation defenses held at IES FSV UK.	2021/2022
Jiné	---	Defenses I will attend at least 50% of dissertation defenses held at IES FSV UK.	2022/2023
Jiné	---	BT and MT refereeing I will serve as an opponent of Bachelor's and Master's theses.	2019/2020
Jiné	---	BT and MT refereeing I will serve as an opponent of Bachelor's and Master's theses.	2020/2021
Jiné	---	BT and MT refereeing I will serve as an opponent of Bachelor's and Master's theses.	2021/2022
Jiné	---	BT and MT refereeing I will serve as an opponent of Bachelor's and Master's theses.	2022/2023
Jiné	---	Methodology seminar for PhD students In the 1st year of study, I will attend the methodology seminar for teaching.	2019/2020
Jiné	---	Study documents Till May 31 of this academic year, I will deliver my "Annual assessment of fulfilling the ISP" + "Supplement" in which I further specify the intended course of my doctoral studies over the next academic year. In case of termination of my study interruption, I will fill in the requested documents ("Annual assessment of fulfilling the ISP" + "Supplement" for the next academic year) within a month from the end of my study interruption period.	2019/2020
Jiné	---	Study documents Till May 31 of this academic year, I will deliver my "Annual assessment of fulfilling the ISP" + "Supplement" in which I further specify the intended course of my doctoral studies over the next academic year. In case of termination of my study interruption, I will fill in the requested documents ("Annual assessment of fulfilling the ISP" + "Supplement" for the next academic year) within a month from the end of my study interruption period.	2020/2021
Jiné	---	Study documents Till May 31 of this academic year, I will deliver my "Annual assessment of fulfilling the ISP" + "Supplement" in which I further specify the intended course of my doctoral studies over the next academic year. In case of termination of my study interruption, I will fill in the requested documents ("Annual assessment of fulfilling the ISP" + "Supplement" for the next academic year) within a month from the end of my study interruption period.	2021/2022
Jiné	---	Study documents Till May 31 of this academic year, I will deliver my "Annual assessment of fulfilling the ISP" + "Supplement" in which I further specify the intended course of my doctoral studies over the next academic year. In case of termination of my study interruption, I will fill in the requested documents ("Annual assessment of fulfilling the ISP" + "Supplement" for the next academic year) within a month from the end of my study interruption period.	2022/2023
Jiné	---	I will attend all classes suggested by the advisor.	2019/2020
Jiné	---	I will attend all classes suggested by the advisor.	2020/2021
Jiné	---	I will attend all classes suggested by the advisor.	2021/2022
Jiné	---	I will attend all classes suggested by the advisor.	2022/2023
Konference	---	Conditional on funding, I will participate at scientific conferences related to financial markets or econometrics, e.g. the 26th International Conference Computing in Economics and Finance (Warsaw, Poland, June 2020), the 4th International Conference on Econometrics and Statistics (Seoul, South Korea, July 2020), or the 14th International Conference on Computational and Financial Econometrics (not announced yet, 2020).	2019/2020

## Povinnosti specifické pro obor

Publikační výstupy a ostatní studijní povinnosti nutné pro přistoupení ke státní doktorské zkoušce:

Do konce 3. ročníku se přihlásím ke státní doktorské zkoušce (SDZ) tak, abych nejdéle do konce 4. ročníku SDZ složil/a. Současně nejdéle dva měsíce před termínem SDZ dodám všechny materiály prokazující splnění podmínek přípuštění k SDZ. Těmito podmínkami jsou:

- Jeden výzkumný článek publikovaný či přijatý k publikaci (v takovém případě dodám postprint nebo dobře ověřitelné potvrzení o přijetí k publikaci) ve vědeckém časopise s nenulovým impakt faktorem z databázi SSCI či SCI, nebo ve vědeckém časopise zařazeném v databázi Scopus, a jeden vědecký článek publikovaný v sérii IES Working Papers Series či v jiné sérii na úrovni IES Working Papers Series (v takovém případě podám žádost o uznání tohoto vědeckého článku na předsedu Oborové rady, která bude posouzena). Alternativní podmínkou publikačního výstupu je jeden výzkumný článek publikovaný či přijatý k publikaci ve vědeckém časopise s hodnocením nejméně „B“ dle interní metodologie měření kvality vědeckých časopisů na IES FSV UK (viz Opatření ředitele 1/2016 „Výzkum“ a dokument Hodnocení žurnálů na IES FSV UK). Pouze články přijaté k publikaci v době, kdy student studuje doktorát na IES, splní tyto podmínky. Všechny články musí být afiliovány k IES FSV UK. Pouze články v odvětvích Economics, Finance a úzce souvisejících budou uznány.

- Jedna úspěšná grantová aktivita jako hlavní řešitel či dvě neúspěšné grantové aktivity v rámci grantové soutěže GA UK (tj. dle pravidel stanovených Oborovou radou).

- Čtyři semestry splněných doktorských seminářů.

- Čtyři „Teaching Assistantships“ (TAs) v rámci alespoň dvou rozdílných předmětů.

- Absolvování metodického semináře výuky pro doktorandy.

- Splnění speciálních požadavků, které byly určeny Oborovou radou (pokud tak bylo učiněno).

Publikační výstupy a studijní povinnosti nutné pro přistoupení k obhajobě: V době podání přihlášky k malé i velké obhajobě se zavazují mít:

- Splněnu státní doktorskou zkoušku.

- Jeden výzkumný článek publikovaný či přijatý k publikaci ve vědeckém časopise s hodnocením nejméně „B“ dle interní metodologie měření kvality vědeckých časopisů na IES FSV UK (viz Opatření ředitele 1/2016 „Výzkum“ a dokument Hodnocení žurnálů na IES FSV UK). Alternativní podmínkou jsou publikované či přijaté k publikování alespoň dva články ve vědeckých časopisech zařazených v databázi Scopus, či ve vědeckých časopisech s nenulovým impakt faktorem z databázi SSCI a SCI. Tyto články nemusí být součástí dizertační práce. Pouze články přijaté k publikaci v době, kdy student studuje doktorát na IES, splní tyto podmínky. Všechny články musí být afiliovány k IES FSV UK. Pouze články v odvětvích Economics, Finance a úzce souvisejících budou uznány.

- Osm „Teaching Assistantships“ (TAs) v rámci alespoň dvou rozdílných předmětů.

V době podání přihlášky k malé obhajobě se zavazují mít dizertaci minimálně v následující podobě:

- Alespoň jeden dizertační článek je plně hotov (školitel odsouhlasil finální verzi jako kapitolu do dizertace), druhý článek je téměř hotov (student zpracoval poslední školitelovi připomínky a čeká na jeho odsouhlasení) a třetí článek rozpracován. Rozpracovaný třetí článek má minimálně jasnou strukturu, metodologii a cíl a signifikantní práce je na něm již odvedena. Oponentury BP a DP:

Po celou dobu studia se budu podílet na oponování bakalářských a diplomových prací.

Metodický seminář výuky pro doktorandy:

Během prvního ročníku studia se zúčastním metodického semináře výuky pro doktorandy. Pokud seminář neabsolvuji během prvního ročníku studia, splním tuto povinnost nejpozději během druhého ročníku.

Obhajoby: V rámci celé délky studia se zavazují k docházce na doktorské obhajoby v minimální průměrné účasti 50 % obhajob. V každém akademické roce navštívím minimálně 50 % konaných obhajob. Jsem si vědom, že účast na obhajobách nižší než 50 % může vést ke snížení hodnocení Oborovou radou na konci každého akademického roku.

Studijní dokumenty: Do 31. 5. každého akademického roku odevzdám vyplněný a školitelem schválený formulář „Roční hodnocení plnění ISP“, ve kterém současně upřesním průběh doktorského studia v následujícím akademickém roce. V případě ukončení přerušení studia a návratu do studia vyplním všechny potřebné dokumenty do jednoho měsíce od data ukončení přerušení („Roční hodnocení plnění ISP“ a aktualizaci na další akademický rok).

Povinnosti v případě studijního pobytu: V případě studijního pobytu se předem omluvím koordinátorovi obhajob z neúčasti na obhajobách doktorských studentů, aby má neúčast mohla být omluvena.

Současně v předstihu zažádám Oborovou radu o případné uznání studijních povinností, které plánuji během pobytu splnit.

## Souhlas s plánem

### Školitel/ka

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27.10.2019

### Student/ka

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27.10.2019

Schváleno za CDS.

Schváleno oborovou radou doktorského studijního programu (oboru) dne: 28.10.2019

### Předseda oborové rady

prof. Ing. Evžen Kočenda, M.A., Ph.D., DSc.

28.10.2019

### Garant studijního programu

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28.10.2019