



**university of  
 groningen**

**faculty of spatial sciences**

# BOOK OF ABSTRACTS

Graduate Research Day – 24 January 2019



# Programme

---

- 12:30 - 13:15 Walk-in with coffee/tea and Poster Market (*Plaza*)
- 13:15 - 14:05 Plenary Opening Session (*Blauwe Zaal*)  
Welcome  
Keynote by **Wendy Daggenvoorde**  
Keynote by **Wilmar Stigter**
- 14:15 - 15:15 Thematic Presentation Sessions:  
**A. Well-being (5412.0025)**  
Tobi Hoogenboom  
Aafke Stadhouders  
Marina Schweikert  
**B. Housing and Prices (5412.0028)**  
Jaap Gerben Vellinga  
Chiel Verbeek  
Cazimir Boon  
Fleur Raetlie  
**C. Energy and Infrastructure (5412.0031)**  
Sander Visser  
Maurits Cassee  
Corneel van der Wielen  
Arjen Bouma  
**D. Firm and Labour Market Dynamics (5412.0035)**  
Elke Oude Weernink  
Rowan van Houwelingen  
Floris Jan Sander  
Robbert van der Hert  
**E. Spill-overs in the city (5412.0040)**  
Maurits Schilder  
Daniël Slomp  
Maaïke Deterd  
Joren Tijmensens
- 15:15 - 16:00 Poster Market and coffee/tea (*Plaza*)
- 16:00 - 17:00 Plenary Session (*Blauwe Zaal*)  
Keynote by **Elza van der Meer**  
Keynote by **Dion Glastra**  
Award ceremony and closure by Oscar Couwenberg
- 17:00 - 18:00 Festive Closure with drinks (*Plaza*)

# Keynotes | Blauwe zaal

---

## **Wendy Daggenvoorde**

*Where do we draw the line? Towards the creation of transition zones between natural and agricultural areas.*

In the south-west of Drenthe, sharp borders exist between natural and agricultural areas. To optimally utilize both economic activities, the Province of Drenthe has the policy intention to smooth out these borders with transition zones. This policy intention will be defined in this research by exploring the problems that occur at the current borders and the solutions that can be established. The concept of a transition zone is analysed in the context of south-west Drenthe through interviews and focus groups, to make a first move towards improving the borders between natural and agricultural areas.

## **Wilmar Stigter**

*Time for a system jump! A research about the transition towards a mobility system to Ameland that fits the morphodynamics of the Dutch Wadden Sea.*

The current mobility system to Ameland is reaching its limits due to morphological developments. These developments cause continued sedimentation in the navigation channel. This puts the connectivity under pressure. The morphological developments lead to an increase in dredging volumes. This is discordant with sustainability ambitions. It is expected that problems will aggravate due to continued sedimentation in the future. A long-term solution is thus required. Main objective of the study is to gain more insight in the conditions that are important to realize this system jump.

## **Elza van der Meer**

*Working towards the circular economy: An analysis of the drivers, barriers and challenges experienced by circular entrepreneurs.*

The transition to a Circular Economy (CE) depends on entrepreneurs implementing innovative business models. Limited information exists on their motivations to do so and the barriers they face in this process. Important motives mentioned by entrepreneurs were their intrinsic motivation and the opportunity to enter new markets. Market demand, difficulty in obtaining financial capital, institutional-, and societal context were mentioned as main barriers impeding the transition to a CE. This information can be used to improve policies that contribute to the national goal of having a CE in 2050.

## **Dion Glastra**

*Upscaling hydrogen energy applications in the energy transition for the built environment.*

Hydrogen energy applications are a sustainable alternative in the Dutch transition towards a sustainable built environment. A wide range of opportunities and challenges of hydrogen energy have been identified in an extensive document and interview analysis. By using the planned neighbourhood of Nijstad-Oost/Erflanden in Hogeveen as a case study, it is shown that hydrogen energy applications could be facilitated by the regime level of the energy transition if stakeholders employ an explorative attitude, whereby a simultaneously coordinative and decentralized approach is proposed.

# Thematic presentation sessions

---

## **A. Well-being** **5412.0025, 14:15-15:15**

### **Tobi Hoogenboom**

*The contribution of lifestyle factors - smoking, obesity and alcohol - to state mortality differences in the United States.*

Already in 1980 introduced the American government the initiative Healthy People for increasing the span of health life among Americans by ultimately eliminating health disparities. But reasons for the health disparities across the United States are still poorly understood. Therefore aims this study to reveal to what extent state differences in all-cause mortality in the United States could be due to lifestyle factors smoking, obesity and alcohol. Results showed smoking has the highest contribution (males 26%; females 18%) to all-cause mortality differences, obesity comes second (males 6%; females 8%) and alcohol has the lowest contribution (males 1.9%; females 0.2%).

### **Aafke Stadhouders**

*Living in the earthquake area of Groningen: how about the wellbeing of social renters?*

I try to find an answer to the question how earthquakes, and the processes they cause, have an influence on wellbeing of social renters in Groningen. Earthquakes in Groningen are defined as human-made and chronic disaster. How does this affect the position of renters? Right now renters feel like they lose control and are left out of participation. Some stakeholders plead for an integral approach with involvement of municipalities, housing corporations, renters organizations and the renters themselves. My aim is to give recommendations for an approach that keeps social renters in mind.

### **Marina Schweikert**

*Building local environmental and social synergies by employing circular economy in waste management. A case study on the Dutch island of Terschelling.*

A problem for the circular economy to get established are unsuitable governance structures. Therefore, this thesis had for objective to identify the barriers and enablers for circular initiatives in local governance structures. These have been researched, using a case study approach and employing the theories of area-orientation and circular economy in the context of two initiatives that operate within organic residual waste streams on the Dutch island of Terschelling. Major findings revolve around a lack of external integration in formal frameworks and organizational structures.

## **B. Housing and Prices**

### **5412.0028, 14:15-15:15**

#### **Jaap Gerben Vellinga**

*Cheaper housing: Let's migrate or not?! Evidence from California, USA.*

California's knowledge-based economy is still expected to grow, and more than ever its counties are expected to rely on internal migrants coming from other states. However, houses in the state get less affordable and there is evidence that this drives out-migration of people from the state. The aim of this paper was to estimate the influence of housing affordability on internal migration within and into California counties. Multinomial logit models show significant increased risks of internal migration (compared to no migration) into California counties when the housing affordability of counties increase. These results apply to different age-groups and education levels. Understanding the way housing affordability works on internal migration into California, and counteracting on the individual decisions made because of that, could be vital for the state's future economic prosperity.

#### **Chiel Verbeek**

*The Marketdynamics of the free rental housingsector.*

An investigation into the development of market dynamics in the free rental housingsector of the 4 largest Dutch cities. The current strong price development of housing in the free housing market is seen as one of the most important themes in Dutch urban housing markets. Developments in the free rental sector require a sharp analysis of the influences on market dynamics. Main influences on market dynamics (supply and demand development) are; income, short-term interest, price of the house in the previous period, imbalance and delay effects.

#### **Cazimir Boon**

*The Effect of Uncertainty of Land Lease Payments on the Transaction Price of Residential Properties - a Hedonic Analysis.*

How potential homebuyers incorporate uncertainty about the land lease and its payments in their bidding process and how this varies over the real estate cycle, is yet unknown. This study aims to describe which part of the transaction price of a residential property is explained by the land lease situation. This is done by making use of a large dataset of Amsterdam, which includes transaction prices, land lease data and other property characteristics. It is expected that homebuyers will be willing to pay less for a property when a higher uncertainty concerning the land lease is involved.

#### **Fleur Ragetlie**

*The effect of leasehold on house prices in the four largest Dutch cities.*

Leasehold, privately owned houses on leased land, is common in the Dutch housing market. Although several studies have estimated the effect of leasehold on house prices, a study which compares the leasehold policies of different cities is missing. This study tries to close the gap by using a mixed method. No effect is found using a dataset from 1993-2018 including smaller cities in the agglomeration area of Amsterdam and Rotterdam. However, a small, negative effect is found in a dataset with only the four cities. Also, several interviews have been conducted.

## **C. Energy and Infrastructure**

### **5412.0031, 14:15 – 15:15**

#### **Sander Visser**

*A framework for the application of geothermal energy in energy-spacevisions.*

In this study geothermal energy in the Netherlands has been described from a spatial, functional and exergetic perspective. Geothermal energy can be classified into three groups: GSHP, shallow and deep geothermal. The three groups each have their own characteristics in terms of use of space, functions, exergy and possible applications. The findings from this research have been summarized in a framework that can be used in the drafting of energy-spacevisions. Energy-spacevisions prove to be a suitable tool to realistically map the actual potential of geothermal energy on a regional scale.

#### **Maurits Cassee**

*Has the value of residential energy labels increased? A quantitative approach to the change in value of energy labels between 2008-2018 for dwellings in the province of Noord-Holland, The Netherlands.*

This thesis studies the Dutch energy label for dwellings which are introduced in 2008 and enforced since 2015. The data that is used is provided by the Dutch Association of Realtors (NVM) for the transactions and the Netherlands Enterprise Agency (RVO) for the energy labels. By using hedonic modelling the value of the energy labels is determined for the different years and regions. The valuation differs greatly among the different regions, in the regions with less transactions the energy label had more impact (either positive or negative) than in highly popular regions.

#### **Corneel van der Wielen**

*Forward-looking characteristics in long-term infrastructure investments: A criteria based assessment of the expansion and renovation project of the Eefde navigation lock.*

A considerable part of the current infrastructure assets is beginning to deteriorate after many decades of use. Therefore, strategic thinking is necessary to ensure that these large-scale infrastructure assets remain functional on the long-term. This single-case study uses multiple criteria to investigate if the decisions in the case of the expansion and renovation of the Eefde navigation lock are forward-looking by investigation the performance of the decision-making process. Making infrastructure investments forward-looking could improve future performance and functionality.

#### **Arjen Bouma**

*Non-highway road infrastructure projects.*

This thesis explores how solar energy initiatives can be combined with regional infrastructure projects. By maintaining an area-oriented approach, value in projects can be increased through the combination of functions. Market parties possess knowledge and creativity, which are not always optimized in projects. Levels of innovation can be stimulated by constructing dialogues, recognizing the influence that key stakeholders can have on a project, aiming to discover matching opportunities in the earliest phase of a project and reward sustainability in project bids.

## **D. Firm and Labour Market Dynamics**

**5412.0035, 14:15 – 15:15**

### **Elke Oude Weernink**

*The importance of entrepreneurship policy on start-up rates: evidence from municipalities in the Netherlands.*

This research assesses the importance of entrepreneurship policy of municipalities on the start-up rates in the region. Using comprehensive data on start-up rates and entrepreneurship policy from 59 municipalities in the Netherlands, the paper tries to find out which policy instruments are potentially able to affect start-up rates significantly in a region while controlling for sticky and durable variables identified by past literature. The added value of the research is the identification of those policy measures that are worthy to pursue for policy makers, and those that are not.

### **Rowan van Houwelingen**

*Out of business: a quantitative approach to determine the effects caused by the disappearing of business areas on nearby housing.*

This research investigated the price effects caused by the disappearance of business areas on residential property prices. The data came from IBIS, NVM and CBS and contained the years 2006 and 2017. Their effect was measured by applying two difference-in-difference models. Model 1 had a treatment zone of 1000m and a control area of 1000m until 2500m from a disappeared business area. Model 2 was separated into steps of 250m, with the control area 2250-2500m. The results were significant lower property prices appeared within 1000m. Model 2 showed significant lower values nearby, mixed results intermediate and insignificant difference above 2000m.

### **Floris Jan Sander**

*Labor Accessibility in Phoenix Metropolitan Area.*

This research is about the labor accessibility in the Phoenix Metropolitan Area. The Spatial Mismatch Hypothesis – a phenomenon in labor accessibility research – will be tested for Phoenix with an over time analysis to see if this phenomenon is visible in Phoenix, and how it develops. Phoenix is a typical example of a sprawled U.S. city which gained a lot of new residents over the last decades. Furthermore, new data which is small scale and available over time opens research opportunities for researching this phenomenon.

### **Robbert van der Hert**

*The Geography of University-Industry Technology Transfer.*

This research will investigate the factors affecting the performance of Tech Transfer Offices in the US. The main variable of interest will be the number of spin-offs created. The study will put emphasis on the regional characteristics of universities in relation to their output.

## **E. Spill-overs in the city**

**5412.0040, 14:15 – 15:15**

### **Maurits Schilder**

*To what extent do Airbnb listings and hotel accommodations differ in terms of price and geographical price determinants?*

Airbnb tries to promote itself as a philanthropic company, rather than a commercial organization. They try to differentiate themselves from the traditional hotel industry. However, research showed that the two don't differ that much and compete with each other. This research tries to contribute to this debate by examining whether Airbnb and the hotel industry differ with regards to price determinants, like distance to the city center. This is tested by constructing a hedonic price regression model. Early results show that the variables influencing the roomrate do not differ that much.

### **Daniël Slomp**

*Negative micro externalities of Purpose-Built Student Accommodations.*

The Dutch market for student housing has recently experienced a rise of Purpose-Built Student Accommodations (PBSA's). PBSA's correspond to the arrival of a few hundred students, exerting their influence on the neighbourhood. This paper provides insights into the external economic effects of PBSA's on residential property prices, by applying a difference-in-difference specification of the hedonic pricing model. The results indicate a 25.95% discount for properties directly adjacent to it, decaying concavely to near zero over a distance of 71 meters. These effects also decay over time.

### **Maaïke Deterd**

*The impact of the Markthal Rotterdam on nearby property prices.*

The Markthal is a covered market and shopping centre and is build in 2014 near the city centre of Rotterdam. This building has an extraordinary architecture, and this architecture is widely appreciated. This research examines whether there is a measurable price effect on nearby property prices caused by the Markthal. A hedonic price method is executed. After running the model there is found a significant and positive impact of the Markthal on nearby property prices.

### **Joren Tijmensen**

*Emission free urban freight transport by means of urban consolidation centers.*

Freight transport affects the livability in urban areas and contributes to the worldwide temperature rise. This study informs under which conditions urban consolidation centers (UCCs) enable emission free urban freight transport in Groningen. Literature, interviews with stakeholders of UCCs and a qualitative comparative analysis of twenty cases, show that four conditions are relevant. Namely, administrative capacities, actor interaction, private ownership and regime powers. In practice, municipalities and the vehicle industry are key, for example to harmonize regulations such as time windows.

# Poster presentations | Plaza

---

## Energy Transition and Climate Change

### **Paul Hartman**

#### *Institutional barriers to climate change adaptation in Groningen.*

This thesis wishes to gain insight in institutional barriers that constrain adaptation policy and measures. The Netherlands have implemented the National Adaptation Strategy and incorporated spatial adaptation into the delta programme. This top-down approach has created expectations and deadlines for the lower governments levels, such as the province and municipality, in creating adaptation policy and measures. However, adaptation is not a straightforward process and it is often met with barriers. How such (institutional) barriers develop and persist is the key in removing them.

### **Jense van der Veen**

#### *The consequences for the electricity distribution when implementing a smart grid system. A case study: municipality of Groningen.*

Electricity is one of the most important types of energy and it continues to be one the fast-growing form of end-use energy consumption. There is a need for a smart(er) grid to reduce the disadvantages of the increasing demand for electricity. There will be more peak moments and this might cause problems for the current electricity grid. A solution is to implement a so-called smart grid system, using smart meters. Disadvantage of this is the privacy regulation. So, how and what can contribute to reduce those peak-moments?

### **Ewoud Lammers**

#### *Heat transition Groningen.*

Due to increasing concerns about fossil fuels use and because of the closing down of the Groningen gasfield, our energy system requires a transition away from the natural gas use. By 2050, the gas demand used for cooking, space heating or water heating will have to be substituted by alternatives. Substitutes like renewable gasses, heat networks, and electrical heating will play a big role in fulfilling future heat demands. In this study challenges of this heat transition will be discussed. The province of Groningen will be taken as a case to implement more sustainable ways of heat production.

### **Herman Bouma**

#### *The blockchain-based smart grid.*

This research aims at identifying the requirements for and consequences of a smart grid that can facilitate a distributed, peer-to-peer electricity trading system. This is required as the amount of distributed electricity prosumers is growing and large-scale electricity storage can likely not be implemented before green electricity goals have to be reached. It implies a changing role for prosumers and grid operators. The potential of blockchain technology is investigated to solve security and privacy issues and to reduce the need of a trusted third party.

## The Inclusive Society

### Esra van der Zaag

*The influence of place characteristics on Integrated Service Areas and the elderly living in these areas.*

In 2012, a research was done by George de Kam et al. on the effects of Integrated Service Area's on the elderly living in these areas. This study is a sort of snapshot of the effects of the ISAs. Time has passed and national policies have changed which makes it interesting to see how the ISAs have evolved and developed since then. This research aims at getting a better understanding on the effects of ISAs on the residents and how this has evolved over the past five years. This research also tries to identify if this varies between ISAs in rural areas and ISAs in urban areas.

### Rick Oostendorp

*Attitudes towards immigration in Germany and the United Kingdom: differences and the role of immigration policy.*

I will study the extent to which level of education is related to a negative opinion on immigration based on an economic interpretation or a cultural interpretation, and whether this differs depending on the policy context of a country.

### Freek Lier

*Income inequality is everyone's problem.*

This research focuses on the consequences of income inequality in the context of the United States, California and Orange County. This research shows that income inequality matters for people from all income groups.

### Samuel Briones

*The capability to live at home using everyday technology: experiences of older adults with subjective and mild cognitive impairment in Barcelona.*

The use of everyday technology at home can play an important role on how older adults with cognitive impairment maintain a sense of autonomy and wellbeing. This qualitative study explores the experiences of 16 older adults living at home in Barcelona. Participants were asked to describe how they relate to devices present in their daily lives and what is important (or not) in everyday technology for them. Results show that older adults value the use of technology in different ways and develop strategies to cope with cognitive impairment using a wide range of devices.

### Charlotte Puister

*The influence of the social and physical school environment on the quality of school life of secondary school students in the Netherlands.*

In this thesis the quality of school life of secondary school children in the Netherlands is measured by a mixed method of a questionnaire and walk-along interviews. The results show that students are generally satisfied with their school environment. The concepts of ownership and accessibility of place, both physically and socially, can have a negative influence on their school experience. The experiences students have in school shape them since students spend a lot of their formative years in school. Knowing how the school environment is experienced can improve their overall experiences.

### Niels Gersonius

*The need for family-housing in Dutch city centres.*

This study is about why, how and which type of families would prefer to live in the city centre or city districts closely located to the city centre in the Netherlands. It will create more knowledge about the demand for multi-family homes in the city centre and what type of multi-family housing is needed and preferred, and it could take away the stereotype among urban policymakers, architects and developers

that the city centre is only suitable for small apartments and that it is the perfect habitat for singles or couples without children.

**Koen de Groot**

*Make students aware of the limited accessibility of disabled people in the city centre of Groningen.*

Within the UN, equal rights is an important topic. So, everyone has to be able to make use of the public space, also disabled people. For these people it's important to move, because it makes them more happy and healthy. In Groningen, they experience a lot of struggles by going to the city centre, which are created by students. Because it's unconscious behaviour of these students, the municipality wants a research to make the students more aware of the struggles they create for disabled people.

**Anouk Kruizinga**

*A safe space?; The experiences and perceptions of domestic and international Lesbian, Gay, Bisexual, Transgender and Questioning (LGBTQ) students of the faculty climate of the Faculty of Economics and Business (FEB) of the University of Groningen.*

This thesis is a faculty wide study exploring the university climate, based on survey data and focus group sessions collected from LGBTQ students from the Faculty of Economics and Business of the University of Groningen. Findings show that despite the general view of The Netherlands as being progressive towards the LGBTQ community, homophobia on campus remains a significant problem. Both international and domestic LGBTQ students do not perceive nor experience the faculty as a 'safe space' which is open about sexual orientation/gender identity. The implications for the faculty are also explored.

## Assessing Value in Real Estate

### Jurgen Jaakke

#### *The impact of prisons on house prices.*

Ordered by the Dutch government, between 2012 and 2018, 14 penitentiary institutions (prisons) were closed. As prisons are seen as an undesirable facility in relation to residential areas (Schively, 2007), in this thesis the effect of a prison on house prices in the proximity will be tested using a hedonic model with difference-in-difference modification. According to model house prices are worth around 11% less if there is an operating prison with a radius of 750 meter.

### Nick Witte

#### *More homes, less offices.*

An empirical research on the effect of inner city office transformation on surrounding house prices. Many office buildings in The Netherlands became obsolete during the GFC. These empty offices are believed to affect nearby property prices by being a disamenity. At the same time the housing market is experiencing a shortage, because too little homes were built during the crisis to be able to meet current demand. A solution to both problems could be to transform vacant office buildings into housing. This research aims to measure the effect of such transformations on surrounding house prices.

### Antonie Elbers

#### *The foreclosure of an auction platform? A research into the influence of various auction platforms on the price reduction of Dutch foreclosure auctions.*

This research will examine the effect of the choice for a certain auction platform on the level of the price reduction on Dutch foreclosures. The research used a self-assembled dataset consisting of 188 observations which were sold via a Dutch bank in the period between January 2015 and December 2017. The results of the regression analysis show that the choice for a particular auction platform has no significant effect on the level of the price discount.

### Dave Langkamp

#### *Domestic and foreign investors in the residential real estate market - a quantitative approach.*

Real estate is becoming more and more internationally orientated. This process is reflected in the Dutch real estate market with record breaking investment volumes and high shares of foreign investment. Given the importance of international real estate, it is likely to have a pricing effect. This study addresses the relationship between the nationality of investors and prices within the residential real estate market. The results of the multiple regressions show that the nationality of investor have an impact on the transaction price per m<sup>2</sup>, indicating a price premium for foreign investors.

