

Curriculum Vitae Alex van de Minne

PERSONAL

NAME: Alex van de Minne
DATE OF BIRTH: 14-09-1981
NATIONALITY: Dutch (on H1B visum in US)
EMAIL: avdminne@mit.edu

EDUCATION

PhD	2015	University of Amsterdam Amsterdam Business School
MSc	2009	Delft Institute of Technology
BSc	2007	Delft Institute of Technology

AREA OF EXPERTIZE

- Empirical research in commercial property price dynamics.
- Financial econometrics.
- Spatial econometrics. (Non-Intrinsic Conditional Autoregressive Models and Gaussian Random Fields.)
- Bayesian Structural models (state space models), with Bayesian estimation such as full MCMC procedures (Gibbs and No-U-Turn-Sampler) and Laplace Approximation.
- Time series analysis, including Dynamic Factor modelling, Kalman filter, and forecasting.
- Working with scarce, heterogeneous and unbalanced data.
- Programming (mainly in R), and productizing research for industry.
- Machine Learning. Decision Trees, ANN, SVM and Convolved Neural Networks.

PROFESSIONAL EXPERIENCE

PostDoc/Research Scientist (MIT Center for Real Estate) 2015 – current

- Started as PostDoc in 2015, got promoted to research scientist in 2017.
- Founder and head of the Real Estate Price Dynamics Platform at the MIT Center for Real Estate in 2017.
- Developed multiple real estate pricing products. These include; (1) forecasting, (2) total return indexes, and (3) supply/demand indexes. Started in 2018.
- See: <http://pricedynamicsplatform.mit.edu/analytics.html>

Consultant (Real Capital Analytics) 2015 - current

- Developed the RCA Commercial Property Price Indexes (RCA CPPIs). A Bayesian Structural Time Series Repeat Sales Model, with time varying signal and noise and implied autoregressive returns. (In production; September 2017.)
- Developed Automatic Valuation Model (AVM) and Caprate Model. (In production; TBA.)

- Listed RCA CPPIs on Eurex for derivative purposes. (In production; soon)
- Developed cap rate time series for 100s of cities in the United States. (In production; September 2019.)

Miscellaneous

2004 - current

- Researcher at the Dutch Central Bank (2014 – 2015).
- Lecturer at the Amsterdam School of Real Estate, MRE/MSRED program (2011 – 2014).
- Self-employed researcher. Worked for companies such as Ortec Finance and the largest Dutch housing broker's organization (2010 – 2012).
- Internship at OTB Delft (2009).
- Shareholder family business in real estate development and investment (2004 – current).

PUBLICATIONS

- Land, Structure & Depreciation, with Marc Francke, *Real Estate Economics* (2017).
- Riskiness of Real Estate Development: A Perspective from Urban Economics & Option Value Theory, with Anil Kumar and David Geltner, *Real Estate Economics* (2020).
- Dealing with Unobserved Heterogeneity in Hedonic Price Models, with Marc Francke. *Real Estate Economics* (2021).
- Daily Appraisal of Commercial Real Estate; A New Mixed Frequency Approach, with Marc Francke, *Real Estate Economics* (2022).
- Where is the Opportunity in Opportunity Zones? With Alan Sage, and Mike Langen, *Real Estate Economics* (forthcoming).
- An Application of the Hierarchical Repeat Sales Model on Thin Commercial Real Estate and Residential Markets, with Marc Francke, *Journal of Real Estate Finance and Economics* (2018).
- Using Random Revisions as a Goodness-of-Fit Measure in Repeat Sales Models, with Marc Francke, David Geltner and Bob White. *Journal of Real Estate Finance and Economics* (2020).
- The Dynamics of Liquidity in Commercial Real Estate Markets, with Dorinth van Dijk and David Geltner. *Journal of Real Estate Finance and Economics* (2021).
- Preferences of Institutional Investors in Commercial Real Estate, with Dragana Cvijanovic and Stanimera Milcheva. *Journal of Real Estate Finance and Economics* (2021).
- A Machine Learning Approach to Price Indices: Applications in Real Estate. With Felipe Calainho and Marc Francke, *Journal of Real Estate Finance and Economics* (2022).
- Forecasting US Commercial Property Price Indexes using Dynamic Factor Models, with Marc Francke and David Geltner. *Journal of Real Estate Research* (2021).
- Is There Supernormal Profit in Real Estate Development? With David Geltner and Anil Kumar. *Journal of Real Estate Research* (2022).
- Do Different Price Points Exhibit Different Investment Risk and Return in Commercial Real Estate? With David Geltner, *Journal of Portfolio Management* (2017).
- Does Housing Vintage Matter?, With Lyndsey Rolheiser and Dorinth van Dijk. *Regional Science and Economics* (2020).

WORK RELATED RESEARCH

- Gevolgen corporatieverkoop op woningprijzen [The Effect of Sales by Dutch Housing Corporations on House Prices], with Marc Francke and Johan Conijn. Client: Ortec Finance, 2012.
- Props versus Cherries [Time of Sale on the Dutch Housing Market], with Johan Conijn. Client: the Dutch Association of Real Estate Brokers and Real Estate Experts, 2011.
- Nieuwe betaalbaarheidsindex voor de NVM [New Affordability Index for the Netherlands], with Johan Conijn. Client: the Dutch Association of Real Estate Brokers and Real Estate Experts, 2010.

AWARDS & GRANTS

- 2019. Appointed as a Post Doc at Homer Hoyt.
- 2019. Received \$100,000 research grant from Equity International (a Sam Zell company) to work on estimating the relationship between PurePlay REIT returns and private markets.
- 2016 – 2017. Real Estate Research Institute grant for paper on quantile price indices, with David Geltner.
- 2017 – 2018. Real Estate Research Institute grant for paper on dynamic factor models, with David Geltner and Marc Francke.
- 2016. The European Real Estate Society RICS Award for the Best Paper in Real Estate Valuation. For paper on long-run house price determinants, with Martijn Dröes.
- 2017. Nominated best Dutch Real Estate Research of the Year. Awarded by VOGON and PropertyNL.
- 2013. Best Dutch Real Estate Research of the year. Awarded by VOGON and PropertyNL for his work on price indices.
- 2011. Best European Doctoral Paper. Awarded by the ERES for his work on demand and supply in housing markets.

SELECTION OF CONFERENCES (PRESENTATIONS)

- **De Nederlandsche Bank 2019**, Amsterdam: How to Estimate Implicit Land Values Using Real Estate Transaction Data.
- **Pension Real Estate Association (PREA) 2018**, Boston: Presented the luncheon for the research affiliates at PREA meeting.
- **Department of Land and Economics of Japan 2018**, Tokyo: Workshop about the most recent developments in research on commercial real estate.
- **European Central Bank 2018**, Frankfurt: Price Indexing in Real Estate. Challenges and solutions.
- **AREUEA Conference 2017**, Amsterdam: Revisions of Real Estate Indexes in Thin Markets.
- **MIT 2014**, Boston: Mortgage Market Design, what works and what doesn't? Seminar in the leaders of industry series.
- **De Nederlandsche Bank 2014**, Amsterdam: The Effect of Credit Conditions on the Dutch Housing Market.
- **AREUEA Conference 2012**, Singapore: Land, Structure & Depreciation.

- **De Woningmarkt in beweging 2013**, Ministry of the Interior and Kingdom Relations [the Netherlands]: Depreciation of existing Housing Stock.
- **European Real Estate Association 2011**, Eindhoven: The Effect of Demographics and Supply Constraints on Dutch House Prices.

COURSE WORK

- **Thesis Supervision** (2010 – current). Starting with undergraduates in 2010 on the University of Amsterdam. Subsequently supervised thesis of graduate students in 2012 at the University of Amsterdam and starting in 2016 at MIT.
- **Machine Learning Course** (2019 - current). Applied course (in R) on how to do mass valuation of real estate using different machine learning techniques, like Regression Trees (CART).
- **Statistics Course** (2016 - current). Introduction to statistics for MSRED students on MIT. Focus on applications of econometric modeling in real estate. Developed own reader for this course.
- **Principles of Real Estate** (2010 – 2015). Introduction course in urban economics and real estate finance. Third year elective course for undergraduate students at university of Amsterdam (Amsterdam Business School) who are interested in majoring in real estate. Has been one the most appreciated undergraduate courses (by student satisfaction) of the entire Amsterdam Business School.
- **Principles in Finance** (2012 - 2015). First year (required) course on the Amsterdam Business School for undergraduates (approximately 1,000 students). Course gets students acquainted to some of the principles of finance, like time value of money, accounting and CAPM. Awarded with highest grade in terms of student satisfaction of anyone contributing to this course.
- **Housing Economics** (2012 - 2014). Explaining house prices over time and analyzing risks for underwriters. Course given on the Amsterdam School of Real Estate (for MRE/MSRED students).

OTHER SKILLS

- Language skills: Dutch (Native), English, German (High school level), French (High school level).
- Main Computer languages: Stan, INLA, JAGS, WinBUGS, R-project and LaTeX.
- Other Computer languages: Ox Metrics, SPSS, Eviews, Matlab and Office.
- Some experience in: STATA (hazard models), Python, Photoshop and AutoCAD.