

PIET RIETVELD (1952 – 2013)



A versatile scholar with great social impact

Biography of Piet Rietveld (1952–2013)

In the many reactions that the Department of Spatial Economics received following the sad news of Piet's death on 1 November 2013, a number of words came to the fore again and again. They are words which capture the character of Piet Rietveld: engaging, dedicated, modest, an inquiring mind with broad interests, responsible and efficient. In this biography, we want to express what Piet meant and still means to the academic world and to his colleagues. Piet had his own unique way of combining his innate interest in socially relevant themes with a strong urge to help his fellow man. We hope that this biography will provide colleagues, family and friends with a lasting account of Piet's impressive scientific legacy.

It is not our ambition to give a comprehensive account but instead to offer an impression of the nature of Piet's research and of Piet's own characteristic approach to his work. We begin with an overview of Piet's many achievements in the world of science and at the Department of Spatial Economics at VU University Amsterdam. We will then outline his research contributions to the field of transport economics, regional economics and evaluation studies, the three central themes that run through his work. We will conclude with a personal reflection on what it was like to have the privilege to work with Piet. While such an account is bound to be subjective, we hope that it will strike a chord with many of you.

Piet's career in a nutshell

As the youngest member of the Rietveld family, Piet – presumably a smart and independent spirit even then – went off to study Econometrics in Rotterdam in 1970. After graduating *cum laude* in 1975, he continued his studies at VU University Amsterdam, where in 1980 he successfully defended the PhD dissertation he had written under the supervision of Peter Nijkamp. During this period, Piet laid the foundations for a highly successful and impressive career; a career that is characterized by a prolific output, a major impact on social issues and a huge influence on the development of the young students and scientists he guided in his own distinctive and inspiring way.

In his dissertation, Piet succeeded in bridging the gap between his econometrics background, with its strong emphasis on complex mathematical methods and techniques, and issues that are relevant to day-to-day practice. Spatial planning issues were very much the order of the day in the 1970s. However, mapping the effects of spatial planning was still in its infancy. Cost-benefit analysis, nowadays an almost self-evident part of Dutch policymaking, barely even existed. His research in the field of multi-criteria analysis paved the way for a rational and objective approach to evaluating policy proposals. Piet's interest in this area represents a central theme that runs through all of his scientific work. The econometrist in Piet was never far from the surface, and time and time again he sought out the challenge of making quantitative methods and techniques applicable to the major spatial-economic issues of the day. To him it did not matter whether the issue at hand was spatial planning, organizing a

public transport system, promoting bicycle use, the demand for water, sustainability, congestion problems, commuter behaviour, real-estate valuation or international trade.

When it came to methodology, Piet was very creative. Where many of his colleagues saw an insurmountable technical or data-related problem, he saw a challenge to find creative solutions. Piet also had a very keen eye for opportunities to apply relevant research techniques from adjacent disciplines to economic issues. Noteworthy examples include his contributions using the gravity model and meta-analysis.

There is no doubt that Piet's time in Indonesia in the early 1980s was a defining period in his life. It was something of a life-changing experience, not only for Piet himself but also for his entire family. For over two years, Piet worked at the Universitas Kristen Satya Wacana in central Java. The emphasis that this university placed on Christian values meant a great deal to Piet. In less than two years, he became so fluent in Indonesian that he was asked to lead the congregation in prayer during church services. Piet helped the Economics Faculty in Salatiga to strengthen its research culture: identifying themes, drawing up a research plan, doing fieldwork, and collecting and processing data. Piet introduced the first computers to the faculty and his syllabus *Almost Everyone's Guide to Regression Analysis* remains a bestseller to this day. As a sign of great respect and appreciation, his Indonesian colleagues dubbed him "Pak Piet", not only due to his specialist knowledge, but more importantly for his dedicated approach to sharing knowledge and investing his expertise to promote socioeconomic development in Indonesia. Piet also travelled to work by bike in Salatiga, giving an extra twist to his nickname "Pak Piet", since "Piet" means "bike" in Indonesian... Piet returned to the Netherlands at the start of 1986 but he continued to visit Indonesia, and Salatiga in particular, on many occasions for work and recreation. The last time was in the summer of 2013. The network that Piet set up during his relatively short time in Indonesia is still clearly recognizable in the department to this day.

Although research was Piet's main motivation, administration and education also occupied a very important place in his work. Piet was a major contributor to the Faculty Board in his capacity as Director of Research. This was at a time when the faculty was undergoing a transition whereby research funding was becoming more strongly linked to performance. In fulfilling this role, Piet laid the foundation for the current system of research funding at the faculty. In 2002, Piet took over as head of the Department of Spatial Economics. In the years leading up to his appointment, the department had grown considerably, due in particular to a major influx of PhD candidates (AIOs), postdocs and externally funded researchers. Admirably and entirely in his own style, Piet was able to accommodate this growth, combining this challenge with his own research and ongoing success in raising funds to maintain the size of the department (which relies on a relatively large proportion of funding from indirect and contract sources). In doing so, he assured the department's status up to the present day as one of the larger research groups in the field of spatial economics, both nationally and internationally,

taking in not only regional, urban, transport and environmental economics but also geographic information systems.

Another proud achievement was the development and successful introduction of STREEM, a Master's programme in the field of spatial, transport and environmental economics. It was officially launched in 2007 and is currently one of the most international Master's programmes at VU University Amsterdam, with an intake of approximately 50% foreign students each year. This demonstrates the uniqueness, not only of the programme but also of the department, which by bringing together three logically related research areas offers a unique programme for students with an interest in regional, urban and environmental economics. Piet especially enjoyed teaching the econometric and transport classes as part of this programme and supervising students in writing their theses.

The significance of Piet's contributions did not go unnoticed outside the university. He was particularly honoured to receive the Hendrik Muller prize in 1999 as a token of appreciation for his lifetime achievement in the field of regional, urban and environmental economics. In 2007–2008 he was University Professor at Vrije Universiteit Brussel (VUB), where he was also awarded an honorary doctorate. In 2009 he became a Fellow of the International Regional Science Association. Membership of the Royal Netherlands Academy of Arts and Sciences (KNAW), which came in 2011, was another important recognition of Piet's major contribution to scientific development in the Netherlands and far beyond in the field of Regional, Urban and Environmental Economics. Another honour he received in 2011 was the EIB-ERSA prize, awarded annually to a leading scientist in Regional, Urban and Environmental Economics at the annual conference of the European Regional Science Association, where Piet was a regular and welcome participant.

Publications

Piet Rietveld was a very prolific scientist. On 1 February 2014, his body of work encompassed 692 publications in the form of scientific articles, book contributions and monographs.¹ To give an impression of Piet's work we will present a range of statistics which are often used to indicate both the scope and the impact of a scientist's significance to the field. We will then highlight a number of publications to give an impression of the content of Piet's scientific work.

Table 1 gives an overview of Piet's body of work. Almost 60% of his publications take the form of articles in scientific journals. English-language journals are classified according to the so-called Article Impact Factor (AIF). The higher the AIF, the greater the impact of the journal (measured by the number of citations of articles from the journal by peers). Piet has 307 publications in English-

¹This does not include research memorandums and conference papers. A number of papers will be published in the coming period in the form of book chapters and journal articles.

language scientific journals to his name, over 25% of which are in the highest quartile of journals and almost 30% of which are in the second quartile.

As regards the chapters that he has contributed to books, a distinction is made between the best 24 publishers (known as A and B publishers) and other publishers. Over 60% of his contributions to English-language books have been published by A and B publishers.

Monographs are books written by Piet – in some cases with one or more co-authors. This category obviously includes his dissertation, dating from 1980 and entitled *Multiple Objective Decision Methods and Regional Planning*, which was published as Part 7 of the series *Studies in Regional Science and Urban Economics* by the renowned publishing house North-Holland. In addition, a few of Piet's monographs have gone on to become standard works in regional economics, which are widely referenced. His 1990 book *Multicriteria Evaluation in Physical Planning*, also published by North-Holland and written with Peter Nijkamp and Henk Voogd, has been cited over 550 times.

Table 1. Overview of publications by type.

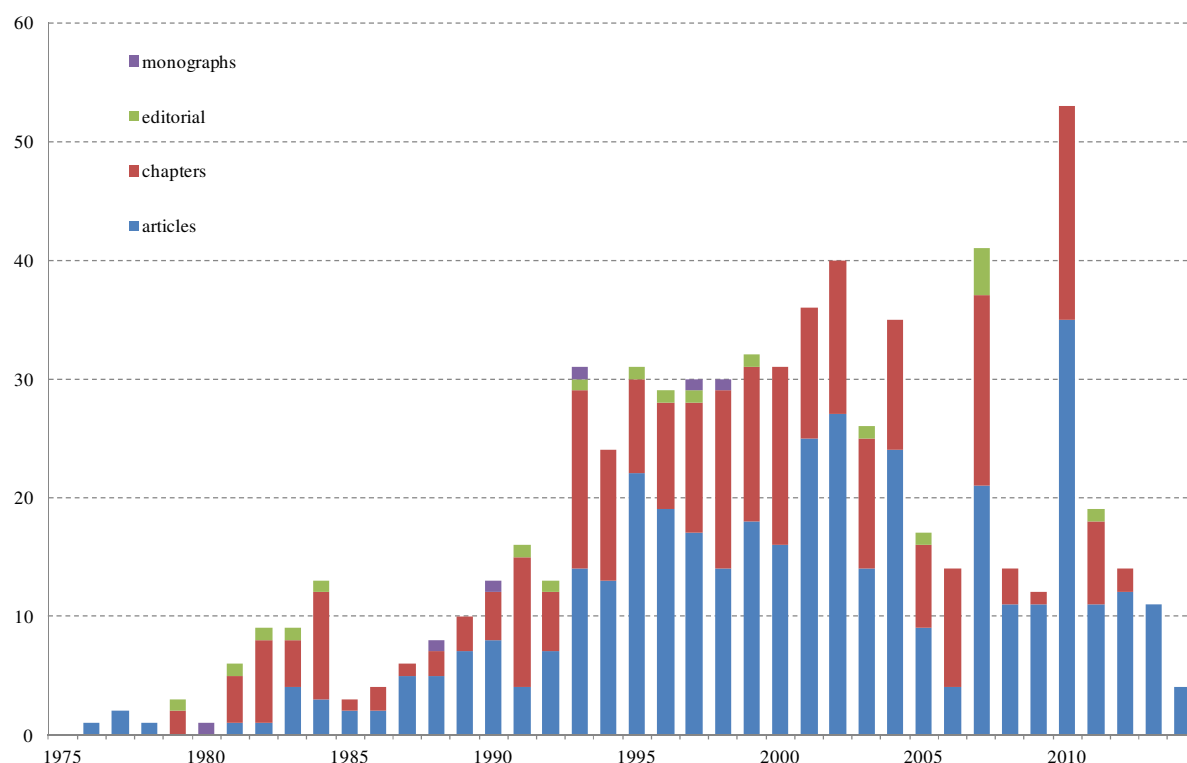
Articles	405	Book contributions	262	Monographs	6
English; highest quartile AIF	79	A-B publishers	101	A-B publishers	3
English; second quartile AIF	91	English; other	61	English; other	1
English; other	137	Dutch	41	Indonesian	1
Spanish	2	Spanish	1	Dutch	1
French	1	Proceedings in English	7		
Indonesian	1	Proceedings in Dutch	48		
Dutch	94				

Note: Piet was also editor or co-editor of three special journal issues and 16 books.

Figure 1 gives an overview of Piet's productivity through the years. His first publication "Multi-objective programming models: new ways in regional decision making", which he wrote with Peter Nijkamp, was published in 1976 in *Regional Science and Urban Economics*. The article proposes a method for choosing between different policy alternatives if there are multiple objectives at stake. The method is illustrated on the basis of regional industry policy in the Netherlands.

That one publication was only the start. Figure 1 shows that Piet really hit his stride in the 1980s and 1990s. He peaked in 2010 with 35 journal publications and 18 book contributions. A number of publications by Piet have already been published in 2014, and new work will continue to be published for some time, since it often takes considerably longer than a year before an article finally appears in print.

Figure 1. Piet's publications over the years by type and number.



Co-authorship

Piet was a team player and networker par excellence. Many of his publications came about through close collaboration with researchers from around the world. This aspect of his work was something that Piet enjoyed immensely. He saw them as a way to share knowledge, to gain new knowledge and to engage in international knowledge transfer. This is evidenced in particular by his cooperation with many Indonesian researchers, partly a result of his time in Indonesia and partly stemming from temporary stays by Indonesian scientists in the Netherlands. Piet supervised the doctorates of several staff members of the Universitas Kristen Satya Wacana. He was aware of the intensive support needed by some of his Indonesian colleagues and he provided the guidance they required with warmth and commitment.

Piet wrote 116 of his 692 publications alone. The other 576 were written with one or more co-authors. For this purpose, Piet built up a large network of researchers. He worked with no less than 202 researchers to achieve this impressive body of published work.

Of course, the majority of his collaborators were colleagues affiliated either briefly or more extensively with the Department of Spatial Economics, but Piet's network extended far beyond this circle and he also published with researchers at other Dutch institutions and abroad.

Table 2. Piet's most frequent co-authors.

Department of Spatial Economics		Dutch researchers	
Peter Nijkamp	220	Bert van Wee	13
Frank Bruinsma	58	Paul Peeters	12
Erik Verhoef	50	Job van Exel	10
Jos van Ommeren	40	Ron Janssen	6
Eric Pels	39	Marina van Geenhuizen	3
Cees Gorter	23	Jacco Hakfoort	3
Jan Rouwendal	20	Henk Meurs	3
Richard Emmerink	19	Hugo Priemus	3
Mark Koetse	18	Theo Schoemaker	3
Youdi Schipper	15	International researchers	
Martijn Brons	13	Daniel Shefer	7
Sytse Rienstra	12	Kenneth Button	6
Daniel van Vuuren	12	Roger Stough	6
Jeroen van den Bergh	11	Kay Axhausen	5
Ghebre Debrezion	11	Folke Snickars	5
Hans Ouwersloot	11	Aura Reggiani	4
Eveline van Leeuwen	10	Marco Alderighi	3
Henk van Gent	9	Bart Jourquin	3
Thomas de Graaff	9	Daniel Kameo	3
Giuseppe Mundo	9	Prapto Yuwono	3

Note: These figures were collated at the start of 2014.

The vast majority of Piet's publications were undertaken with Peter Nijkamp, his co-author (or one of his co-authors) on 220 publications. But his collaboration with others also led to many publications. With some co-authors, the main focus was on the results of fundamental and theoretical research, while with others he mainly recorded the findings of empirical applied research. Piet has also published regularly with students about the results of their dissertations. He took a keen interest in all these types of research and felt it was important to publish both in leading scientific journals and magazines geared towards professional practice. This approach enabled him get his message across in the world of science and at the same time contribute to the public debate. Both were dear to him.

The impact of his work

The importance of scientific publications can be measured in citations or the number of times that other authors refer to a publication. There are a number of ways to keep track of this, including Google Scholar.² On 21 April 2014, the running total for references to one of Piet's publications stood at 13,326: a truly impressive score. In Google Scholar, his figure is broken down by publication. Thirty-two of Piet's publications have been referenced over 100 times and, looking down the list, the 100th publication still manages a score of 35 citations. It is only natural to assume that Piet's work will be referred to often in years to come.

Figure 2. Citations of Piet's work over the years (including five most cited)



Source: Google.Scholar (date: 21 April 2014)

Based on citations according Google Scholar, Piet's five most important publications are to be found in his primary research fields: transport economics, evaluation methodologies and regional economics. The numbers in brackets after the publication details refer to the number of citations listed on 21 April

²Another popular resource – albeit not publicly accessible – is Web of Science. It focuses primarily on scientific articles in a limited number of selected journals. On 21 April 2014, it registered 264 articles for Piet, which had been referred to 3361 times. The *h*-index, based on the number of articles (*h*) which have generated a minimum of *h* references, is 31.

2014 and the ranking of the article in terms of number of citations (the first set is data from Google Scholar and the second, where available, is from Web of Science, which does not include books).

Most cited transport economics publications

- Second-best congestion pricing: the case of an untolled alternative, *Journal of Urban Economics*, 40 (3), 279–302, 1996 (with Peter Nijkamp and Erik Verhoef). [308, 2; 127, 1]
- Is transport infrastructure effective? Transport infrastructure and accessibility: impacts on the space economy, Springer, 1998 (with Frank Bruinsma). [258, 3; –]
- Determinants of bicycle use: do municipal policies matter? *Transportation Research Part A: Policy and Practice*, 38 (7), 531–550, 2004 (with Vanessa Daniel). [221, 7; 69, 4]
- The value of statistical life in road safety: a meta-analysis, *Accident Analysis & Prevention*, 35 (6), 973–986, 2003 (with Arianne de Blaeij, Raymond Florax and Erik Verhoef). [202, 9; 63, 9]
- Inefficiencies and scale economics of European airport operations, *Transportation Research Part E: Logistic and Transportation Review*, 39 (5), 341–361, 2003 (with Eric Pels and Peter Nijkamp). [187, 11; 78, 3]

Most cited evaluation methodology publications

- *Multicriteria evaluation in physical planning*, North-Holland, 1990 (with Peter Nijkamp and Henk Voogd). [558, 1; –]
- Qualitative multicriteria evaluation for environmental management, *Ecological Economics*, 10 (2), 97–112, 1994 (with Giuseppe Munda and Peter Nijkamp). [253, 5; 91, 2]
- *Multiple objective decision methods and regional planning*, North-Holland, 1980. [225, 6; –]
- Multicriteria analysis and geographical information systems: an application to agricultural land use in the Netherlands, in: H.J. Scholten and J.C.H. Stillwell (ed.) *Geographical Information Systems for Urban and Regional Planning*, Kluwer, 129–139, 1990 (with Ron Janssen). [190, 10; –]
- Qualitative discrete multiple criteria choice models in regional planning, *Regional Science and Urban Economics*, 13 (1), 77–102, 1983 (with Edwin Hinloopen and Peter Nijkamp). [94, 36; 31, 31]

Most cited regional economics publications

- The institutional determinants of bilateral trade patterns, *Kyklos*, 57 (1), 103–123, 2004 (with Henri de Groot, Gert-Jan Linders and Uma Subramanian). [254, 4; 64, 8]
- A meta-analysis of the price elasticity of gasoline demand: a SUR approach, *Energy Economics*, 30 (5), 2105–2122, 2008 (with Martijn Brons, Peter Nijkamp and Eric Pels). [155, 22; 50, 17]

- Job moving, residential moving, and commuting: a research perspective, *Journal of Urban Economics*, 46 (2), 230–253, 1999 (with Jos van Ommeren and Peter Nijkamp). [133, 25; 69, 18]
- Land use scanner: an integrated GIS based model for long term projections of land use in urban and rural areas, *Journal of Geographical Systems*, 1 (2), 155–177, 1999 (with Maarten Hilferink). [131, 26; –]
- Regional and multiregional economic models: a survey, in: P. Nijkamp (ed.) *Handbook of Regional and Urban Economics*, North-Holland, 257–294, 1987 (with Peter Nijkamp and Folke Snickars). [84, 41; –]

Social commitment

For scientific publications, it is relatively straightforward to provide an objective rating based on citations of Piet's most important contributions to the world of science. His wider contribution to society is much more difficult to quantify. In addition to his publications in professional journals, Piet made a powerful contribution to the public debate, particularly through his newspaper articles, interviews and appearances on TV and radio.

Indonesia

Piet's involvement with socially relevant issues is perhaps expressed most clearly through his aforementioned involvement with Indonesia and is also represented by a significant proportion of his publications. It is interesting to note that Piet's command of Indonesian is such that he has one article and one monograph to his credit standing in that language. However, approximately twenty of his English-language contributions also relate to Indonesia. In the summer of 2013, Piet was even asked by the *Bulletin for Indonesian Economic Studies* to write an article on transportation and congestion in Indonesian cities. He had already begun collecting the data but was unable to complete this study. Here is a selection of his publications relating to Indonesia and reflecting his involvement with the country:

- Urban development patterns in Indonesia, *Bulletin of Indonesian Economic Studies*, 24 (1), 73–96, 1988.
- Innovation in Indonesian small scale industry: a case study, *International Journal of Development Planning Literature*, 5 (1), 1–19, 1990 (with Cees Gorter).
- Uptrading traditional technologies in small-scale industry clusters: collaboration and innovation adaption in Indonesia, *The Journal of Development Studies*, 37 (4), 150–172, 2001 (with Henry Sandee).
- Migrant entrepreneurs in East Indonesia, in: T.R. Leinbach (ed.), *The Indonesian Rural Economy: Mobility, Work and Enterprise*, Institute of Southeast Asian Studies, Singapore, 182–206, 2003 (with Cees Gorter, Peter Nijkamp and Marten nDoen)

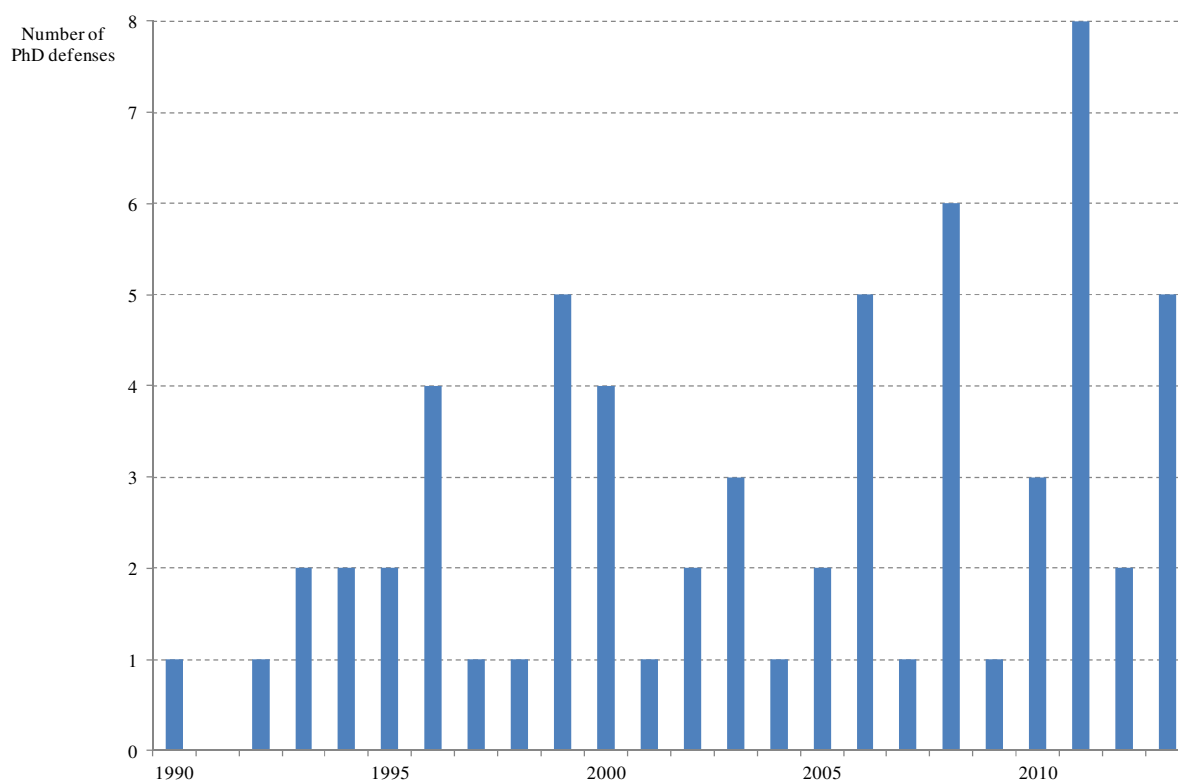
- The Krakatau eruption in 1883, its implications for the spatial distribution of population in Java, *Economic History of Developing Regions*, 28 (2), 27–55, 2013 (with Aloysius Brata, Henri de Groot and Wouter Zant).

PhD students

Piet first fulfilled the role of PhD supervisor on 18 September 1990. The candidate in question was Cees Gorter. Cees's doctoral ceremony would be followed by another 62 such festive occasions. Of the 63 PhD candidates supervised by Piet, as far as we have been able to ascertain, 36 are still employed at a university. Eight of them have since risen to the rank of professor.

To see how expansive the network was from which Piet drew his PhD students, we need look no further than a list of his candidates' countries of origin. As many as 17 of his PhD students came from outside the Netherlands: six from Italy, three from Indonesia and two from Portugal. The other students he supervised came from Colombia, Eritrea, Norway, Pakistan, Spain and Taiwan.

Figure 3. Piet as a PhD supervisor through the years.



At the time of his death, Piet was still supervisor to 19 PhD students. In consultation with Piet, the supervision of these candidates has been taken on by other professors of the Department of Spatial Economics. The first of these, Ruben van Loon, obtained his PhD on 26 February 2014. This last group of candidates also come from far and wide: four are from Indonesia, two from Israel, and one from Afghanistan, Germany, Greece and Mozambique.

Piet as a colleague and supervisor

Everyone regarded it as a privilege to work with Piet. His vast knowledge and analytical acuity, combined with his strong drive to bring out the best in the people he worked with, were characteristic of the man. Without taking a prominent role, Piet took great pleasure in the PhD celebrations of his candidates. The warm conversations he shared with the candidates' parents after the ceremony were typical of his style. He combined this personal touch with an extraordinary efficiency – a particularly desirable trait in an economist – and this enabled him to find time for other kinds of involvement in scientific networks, such as his chairmanship of RSA Netherlands and NECTAR.

This sense of privilege associated with working with Piet was also very much informed by his knowledge of his field. It was hard not to be impressed as Piet extracted large stacks of papers from his battered satchel at a meeting and, referring to a number of notes penned in his characteristic handwriting, would state in typically razor-sharp fashion a number of key elements of commentary which often went on to form the basis of substantial improvements in the quality of the work. In the more exploratory phases of the research, too, Piet's innovative and creative contributions were of inestimable value. Partly for this reason, and because of the speed with which he could assess matters and identify new opportunities, he was also in demand as a sounding board at international conferences for people outside the department: he seldom had the luxury of taking a break between sessions. But his broad interests also ensured that he was not one to limit his conversation to research during these social events.

As a supervisor and a coach, Piet never lost sight of the human aspect. For him it was not all about knowledge and expertise: the personal well-being of the members of the department was always close to his heart. He treated his colleagues equally, while retaining an eye for their differences. However busy Piet was, especially during the last few years of his life, there was always time for a personal chat whenever the need presented itself. This made Piet a vital unifying force in the fabric of the department, and meant that he made an extremely important contribution to the uniqueness of the department and its healthy balance between personal development and the collective interest. It is perhaps Piet's unrivalled talent for bringing people together that we will miss most of all.

Abridged Curriculum Vitae

15 December 1952:	Born in Berkel en Rodenrijs
1965–1970:	HBS-B (secondary education), Gereformeerd Lyceum, Rotterdam
1970–1975:	Econometrics degree, Erasmus University Rotterdam
1972–1975:	Economics Research Assistant, Erasmus University Rotterdam
1975–1983:	Assistant Professor of Regional Economics, VU University Amsterdam
1980:	Doctorate at VU University Amsterdam; dissertation entitled <i>Multiple objective decision methods and regional planning</i>
1980–1981:	Research fellow at the Regional Development Group, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria
1983–1986:	Research Coordinator, Faculty of Economics, Universitas Kristen Satya Wacana (UKSW), Salatiga, Indonesia
1986–1990:	Associate Professor of Regional Economics, VU University Amsterdam
1990–2013:	Professor of Transport Economics, VU University Amsterdam
1998–2003:	Director of Research, Faculty of Economics and Business Administration
2002–2013:	Head of the Regional, Department of Spatial Economics

During his career, Piet was a member of numerous advisory boards. He was also chairman of key network organizations such as RSA Netherlands (the Dutch branch of the Regional Science Association International) and NECTAR (worldwide network of transport researchers, 2003–2007). In addition, he was a fellow of several organizations, most notably the Tinbergen Institute (the graduate school of Erasmus University Rotterdam, the University of Amsterdam and VU University Amsterdam) and NAKE (Dutch Network for General and Quantitative Economics), and member of the Royal Netherlands Academy of Arts and Sciences (KNAW).



This biography was published on the occasion of the symposium on 14 May 2014, held in memory of our beloved and respected colleague Piet Rietveld who passed away on 1 November 2013. We hope that it will provide colleagues, family and friends with a lasting account of Piet's impressive scientific legacy.