CURRICULUM VITAE

Name	: VRIJLING, Johannes, Kornelis
Year of birth	: 1947
Nationality	: Dutch
Education	: MSc. C.E. Delft Univ.of Technology MSc. Economics Erasmus Univ. R'dam
Affiliations	: Royal Institute of Engineers
Languages	: Dutch, English, French, German
Overseas Exper.	: Saudi Arabia, Canada, Bangladesh, India
Employer	: Delft University of Technology
Position	: Professor of Hydraulic Engineering and Probabilistic Design at Delft University of Technology Advisor of the Construction Division Ministry of Transport and Public Works

Overview

Vrijling finished his masters study at Delft University of Technology in 1974 with a thesis on prefabricated office buildings. In 1980 he received his masters degree in Economics at the Erasmus University.
After a short period at the engineering office of the Adriaan Volker Group he was sent to the Jubail harbour project as site-engineer, supervising the construction of ancillary structures and the opening of a quarry.
In 1976 he was seconded to the Easternscheldt storm surge barrier project. In this project mr. Vrijling developed the probabilistic approach to the design of the barrier. During the project he moved through the ranks to become the member of the projectmanagement team responsible for the research.
After the completion of the barrier in 1986 he became deputy-head of the Hydraulic engineering branch of the Civil Engineering Division of Rijkswaterstaat. Since 1989 he is responsible for the research and computer activities of the

Civil Engineering Division.
In 1989 he became part time professor of Probabilistic Design in Hydraulic Engineering in Delft. Since 1995 he is full time professor of Hydraulic Engineering and Probabilistic Design

Employment Record

1972 - 1974	: Delft Technical University Teacher Applied Mechanics
1974 - 1980	: Royal Adriaan Volker Group Project engineer Design Construction Manager (Saudi Arabia)
1980 - 1987	: Manager of Research Storm Surge Barrier Oosterschelde Ministry of Transport and Public Works
1986 - 1990	: Deputy Head, Hydraulic Engineering Branch of the Locks and Weirs Division Ministry of Transport and Public Works
1987 - 1988	: Interim Head of the Planning, Economics and Costing Section, Hydraulic Engineering Branch of the Locks and Weirs Division Ministry of Transport and Public Works
1990 - 1995	: Head of Structural Research Branch of the Civil Engineering Division Ministry of Transport and Public Works
1980 - 1989	: Delft University of Technology Scientific Officer Hydraulic & Coastal Engineering
1989 - 1995	: Delft University of Technology Professor of Probabilistic Design Hydraulic & Coastal Engineering
1995 -	: Delft University of Technology Professor of Hydraulic Engineering and

Probabilistic Design
Hydraulic & Coastal Engineering

Assignments

1974 - 1975 : Design of coastal structures, harbour facilities and shipyards

1975 - 1976 : Earthmoving, harbour- and railroad construction (Al Khobar, Saudi Arabia)

1976- 1982 : Design of the Storm Surge Barrier Oosterschelde
The Barrier is the last part of the Delta Plan protecting Holland against storm surges on the North Sea

- o Probabilistic approach of hydraulic loading
- o Risk analysis of the total system of the Barrier and probabilistic design calculations
- o Hydraulic model tests on elements of the Barrier consisting of large rocks (sill, bottomprotection)
- o Research on heavy floating equipment designed to assemble the heavy prefabricated concrete elements of the Barrier in full sea
- o Prediction of current velocities during the construction of the Barrier with mathematical tidal models
- o Research on and design of the breakwaters connecting the Barrier with the mainland

1980 : Design and risk analysis of an oil exploration island in the Beaufort Sea, Dome Petroleum, Calgary
The main structure of the island was formed by an wave breaking rectangular caisson wall.

1981 : Expert witness in the Whitstable Sea wall Enquiry, Canterbury City Council
The Sea Wall consisted of a wave breaking and sea retaining wall with a pebble beach in front

1985 : Design of the closure of a tidal estuary in Germany, Vordeichung Hattstedter Marsch

1982 - 1987 : Research and hydraulic engineering manager of the Storm Surge Barrier Oosterschelde

1985 - 1987 : Member of the managent team of the Pump storage scheme (P.A.C) project.
- o Economic feasibility study of the pump storage scheme, investment analysis, cashflow analysis
- o Economic optimization of the design
- o Risk analysis of the design
- o Probabilistic calculations

1987 : Member of a committee of the Ministry of Housing, Planning and Environment (VROM) on Quality Assurance in the Building Industry (Report: Kwaliteitszorg in de bouw, Den Haag 1987)

1987 : Design of the River Training works for the Jamuna Bridge in Bangladesh Risk analysis and probabilistic design of the total bridge (approaches, steel structure, river training works and river embankments)

1987 : Chairman of a Central Research Committee (CUR) establishing a handbook on erosion protection against waves and currents on large rivers

1987 : Member of a Central Research Committee (CUR) studiing the behaviour of concrete armour elements of breakwaters under the attack of waves and currents

1987 : Chairman of a Central Research Committee (CUR) studiing the opportunities of using alternative materials (rubble and industrial waste materials) in hydraulic engineering

1988 : Member of a Central Research Committee (CUR) establishing a handbook on Breakwaters constructed of loose rocks

1988	: Study on the closure and the development of the Bay of Cambay, India
1989	: Design of a breakwater for a naval port in India
1989	: Member of the Technical Advisory Committee on Waterdefence on
1992	: Member of the Venice Barrier Appraisal Committee
1992	: Risk analysis of technical and financial aspects of the Erasmus bridge over de river Rhine for the City of Rotterdam
1993	: Risk analysis of the design, the construction, the financing and the exploitation of the tunnel under the Westernscheldt for the Provincial gouvernment of Zeeland
1993	: Member of the Safety Panel for the Schiphol Airport Safety Study
1993	: Preliminary design of structures to improve the waterquality of Lake Maracaibo
1995	: Chairman of a Central Research Committee (CUR) establishing a handbook on Probabilistic Design
1995	: Vice-chairman of a Central Research Council (CUR/COB) on Sub-soil Building
1995-1999	: Member of the management team of the MAST III/PROVERBS European Research project (Probabilistic design of Vertical Breakwaters)
1997	: Chairman of the Civil Eigineering Division of the Royal Institute of Engineers (KIVI) of the Netherlands
1998	: Chairman of the Foundation for Post-academic Teaching in Civil Engineering (PAO-CT)

1980 - .... : Lectures Technical Univ. Delft
- o Dike design
- o Flexible hydraulic structures
- o Probabilistic safety theory
- o Quality assurance

1980 - .... : Lectures Post Academic Courses Delft
- o Dike design
- o Breakwater design
- o Bottom and embankent protection
- o Probabilistic safety theory
- o Quality assurance
- o Computer Aided Design and Manufacturing

1998 :Member of the HSL Safety Committee
:Member of the Board of Arbitrage

Publications

1. Ch.J. Vos, B.J.G. Van der Pot, J.K. Vrijling, Future Safety Considerations. A matter of Scarcity and Probabilistic Approach, Proceedings of the 2' BOSS conference, London, 1979 ,p. 557-570

2. Th. Mulder and J.K. Vrijling, Probabilistic Load Determination, Hydraulic Aspects of Coastal Structures, Delft University Press, 1980, Vol.1 p.91-108

3. J.K. Vrijling and J. Bruinsma, Hydraulic Boundary Conditions, Hydraulic Aspects of Coastal Structures, Delft University Press, 1980, Vol.1 p.109-133

4. J.P.S. Schellekens, J.K. Vrijling and J. Wouters, Transitional Structures between Barrier and Dikes, Hydraulic Aspects of Coastal Structures, Delft University Press, 1980, Vol. 2 p.121-140

5. W.T. Bakker and J.K. Vrijling, Probabilistic Design of Sea Defences, Proceedings of the International Conference on Coastal Engineering, Sydney, 1980, p.2040-2059

6. J.K. Vrijling, Probability design method, Eastern Scheldt

Storm Surge Barrier, Proceedings of the Delta Barrier Symposium, Rotterdam, 1982, p.44-49

7. J.K. Vrijling, J.P.F.M. Janssen and J. Bruinsma, A Practical Method to Obtain Wave and Storm Surge Conditions for Predictions and Probabilistic Calculations, North Sea Dynamics, Springer Verlag, Hamburg, 1983, p.233-247, ISBN 3-540-12013-0

8. Brockhoff,H.S.T.,Hakkaart,Ch.J.A.,Vrijling,J.K.,On the use of one to one simulators for floating equipment during the construction period of the Eastern Scheldt Storm Surge Barrier, Proceedings of the Marsim symposium, June 1984, p.985-997

9. J.K. Vrijling, J. Oosting, Probabilistic Design of Flexible Dolphins, Dock and Harbour Authority, september 1985, p.95-98

10. J.K.Vrijling et alt. , Computer Aided Evaluation of a Breakwater Design, C.I.A.D. , 1985

11. J.K. Vrijling, Probabilistic design of waterretaining structures, Engineering Reliability and risk in water ressources, L. Duckstein and E.J. Plate, Eds. Nijhoff, Dordrecht,1986, p.115-134
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12. J.K. Vrijling, K. Pilarczyk , Integrated Approach of Bank Protection, Proceedings of the Water Transport '87 Conference, Beijing, 1987, p.88-101

13. J.K. Vrijling, De levensduur van de stormvloedkering Oosterschelde, Mededelingenblad S.M.O.Z. Jaargang 14, nr2, 1988, p.23-34

14. J.K. Vrijling, Are models of any use for the designer of civil structures ?, Modelling Soil- Water-Structure Interactions SOWAS-88 Eds, Kolkman et al. Balkema, Rotterdam, 1988 p.7-15
ISBN 90 6191 8154

15. J.K. Vrijling, Een nieuwe methode om de onzekerheid in het rendement van investeringsprojekten te bepalen, Financiering en Belegging, Eds. Kemna et al. ,Rotterdam, 1988, p.211-228

16. J.K. Vrijling, Kwaliteitsborging, Beton in de waterbouw, Vereniging Nederlandse Cement, 's Hertogenbosch, 1988, p.VII-1-10

17. J.K. Vrijling, Probabilistische methode toegepast bij stormvloedkering, Bouwkunde en Civiele Techniek no 6/7 juni/juli 1988, p.35-39

18. J.K. Vrijling, J.A. van Beurden, Sealevel rise: a probabilistic design problem, Proceedings of the International Conference on Coastal Engineering Delft. 1990, p.1160-1171.

19. J.K. Vrijling, Sealevel rise; a threat to low lying countries, Proceedings of the International symposium on Natural Disaster Reduction and Civil Engineering, Osaka, 1991, p.II-1-15.

20. J.K. Vrijling et alt., Involvement of ecology in the decision process, Journal of IAHR, Vol 29,1991, p.20-23.

21. J.K. Vrijling et alt. Bermbreakwater design the longshore transport case: a probabilistic approach, Proceedings of Coastal Structures and Breakwaters, London, 1991, p.403-415.

22. J.K. Vrijling, An economic model for the succesful recycling of the waste materials, Proc. of WASCON, Maastricht, 1991.

23 J.K.Vrijling , G.J.Meyer, Probabilistic coastline position computations, Coastal Engineering, 17 (1992) 1-23.

24 J.K.Vrijling et alt.,Maintenance of hydraulic structures, Proceedings of the International Conference on Coastal Engineering Venice, 1992, p.1693-1705

25 J.K.Vrijling, F.R.Redeker, The risks involved in major infrastructural projects, Proceedings of the Options for Tunneling Conference, Elsevier Science Publ.,1993, p.37-49

26 J.K.Vrijling et alt.,Prediction of the deposition-mound of dumped rubble, Proceedings of COPEDEC IV, Rio de Janeiro, 1995

27 J.K.Vrijling et alt., A framework for risk evaluation, Journ. of Hazardous Materials 43 (1995) p. 245-261

28 J.K.Vrijling et alt., Engineering Probabilistic design and Maintenance for Flood protection, Kluwer Ac. Publ., Dordrecht 1997

30 J.K.Vrijling et alt.The application of the concept of Societal risk to Various Activities in the Netherlands,Proc.ESREL'96, Kreta,1996,p.960

31 J.K.Vrijling et alt.A Decisionmaking approach in Assessing failure rates of Movable Water Barriers,Proc.ESREL'96, Kreta,1996, p.870

32 J.K.Vrijling et alt.The problem of the Valuation of a Human Life,Proc.ESREL'96, Kreta,1996,p.2129

33 J.K.Vrijling et alt., RISMAN, a Method for Risk management of Large Infrastructure Projects ,Proc.ESREL'97, Lisbon,1996,p.265

34 J.K.Vrijling et alt.,Societal Risk and the Concept of Risk Aversion,Proc.ESREL'97, Lisbon,1997,p.45

35 J.K.Vrijling et alt.,Probabilistic optimisation of the Ennore coal port, Coastline, structures and breakwaters,ed. N.W.H.Allsop, Thomas Telford, London,1998

36 J.K.Vrijling et alt, Acceptable risk as a basis for design, Journ. Rel. Engin. & Syst. Saf. 59, 1998