

W.F.G. van Rooijen
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Born: June 11th, 1977
in Haarlem, The Netherlands
Nationality: Dutch

Curriculum Vitae

Professional Experience

- 2009 - ...
- Joint appointment: Special researcher at University of Fukui Research Institute of Nuclear Energy, and Researcher, Japan Atomic Energy Agency, FBR Plant Engineering Center, Reactor Physics and Fuel Technology Group
- 2007 - 2009
- Assistant Professor in Nuclear & Radiological Engineering, Georgia Institute of Technology, Atlanta, GA, USA. Research focus: sustainable nuclear energy, focusing on fast reactors (breeders, transmuters), fuel cycle physics, scenario studies, etc
- 2002 - 2006
- Employee of Delft University of Technology as Ph.D. student, Dept. Physics of Nuclear Reactors, specialism: Gas Cooled Fast Reactor within Generation IV.

Internships

- 2004
- Internship at CEA, Cadarache, France. Design of the primary helium - water heat exchanger for ETDR, and transient analysis of ETDR's primary circuit with heat exchanger using thermo-hydraulics code CATHARE (4 months)
- 2002
- Internship at AIST, Tsukuba, Japan. Optimization of automatic speech recognition for a mobile office robot using a Support Vector Machine. Implementation of SVM in a simulation (Matlab) and actual DSPs (7 months)
- 2000
- Internship at Volkswagen AG, Wolfsburg, Germany. Optimization of piston geometry for a direct injection turbo diesel engine (4 months)

Teaching experience (and related)

- 2009
- Teacher at Frédéric Joliot Otto Hahn Summer School, "Heat removal from high power density systems"
- 2008 - 2009
- Developed and taught a new Fast Reactor Physics Course, Graduate level, at Georgia Institute of Technology
- 2008 - 2009
- Undergraduate Reactor Physics (senior year) at Georgia Institute of Technology
- 2007 - 2009
- Capstone Nuclear & Radiological Engineering Design Class (senior year) at Georgia Institute of Technology
- 2007 - 2008
- Awarded "Class of '69 Teaching Fellowship" by the Centre of Enhanced Teaching and Learning (CETL) at Georgia Institute of Technology

Teaching experience (and related) (cont.)

- 2004 - 2006 • Supervisor, laboratory exercises for Radiation Hygiene Course at Utrecht University, The Netherlands (in scope of Ph.D. contract)

Education

- 2002 - 2006 • Ph.D., Nuclear Reactor Physics. Specialization: Gas Cooled Fast Reactor, fuel cycle and safety. Delft University of Technology, The Netherlands.
- 2001 - 2002 • Post-graduate study of Japanese Business and Culture, Leiden University (The Netherlands), Japan-Netherlands Institute and AIST (Japan). Title: Master of Japanese business and Culture
- 1995 - 2001 • M.Sc., Applied Physics, specialization: electro-acoustics and wave field synthesis. Delft University of Technology, The Netherlands.
- 1989 - 1995 • Preparatory Scientific Education (VWO) at Stedelijk Gymnasium Haarlem, The Netherlands

Research related educational courses

- 2006 • Course Reactor Physics: Physics of Fast Reactors at Delft University of Technology
- 2005 • Course Reactor Physics: Kinetics of Nuclear Reactors at Delft University through ENEN (European Nuclear Education Network)
- 2004 • Course Reactor Physics: Dynamics of Nuclear Reactors at Delft University
- 2003 • Expert course in basic reactor physics with practical work in Mol, Belgium (ENEN)
- 2003 • Course Reactor Physics Special Topics at Delft University

Extra-curricular

- 2005 - 2007 • Test reader for 日本語多読研究所, a Japanese institute developing reading courses for non-native speakers of Japanese
- 2002 • Radiation Protection and Hygiene Expert level III
- 2002 • JETRO Business Japanese Language Proficiency level III

Miscellaneous

Human Languages

- Dutch (native), English (fluent), Japanese (quite good), French (good), German (good)

Publications

Thesis

- W.F.G. van Rooijen, Improving fuel cycle design and safety characteristics of a Gas Cooled Fast Reactor, Ph.D. thesis, Delft University of Technology (IOS Press, 2006)
- W.F.G. van Rooijen, Distributed Mode Loudspeakers for Wave Field Synthesis, M.Sc. thesis, Delft University of Technology, sup. Ir. W.P.J. de Bruijn and Dr. Ir. R. Boone, Delft (2001)

Journals, peer-reviewed, first author

- W.F.G. van Rooijen, J.L. Kloosterman, Closed fuel cycle and minor actinide multi-recycling in a gas cooled fast reactor, Science and Technology of Nuclear Installations, doi:10.1155/2009/282365 (2009)
- W.F.G. van Rooijen, Gas Cooled Fast Reactor: a historical overview and future outlook, Science and Technology of Nuclear Installations, doi:10.1155/2009/965757 (2009)
- W.F.G. van Rooijen, Some notes on the definition of performance parameters for reactors and fuel cycles, Nuclear Science and Engineering, 162, pp. 299 - 306 (2009)
- W.F.G. van Rooijen and D. Lathouwers, Sensitivity analysis for delayed neutron data, Annals of Nuclear Energy 35, pp. 2186 - 2194 (2008)
- W.F.G. van Rooijen, J.L. Kloosterman, T.H.J.J. van der Hagen and H. van Dam, Definition of breeding gain for the closed fuel cycle and application to a Gas Cooled Fast Reactor, Nuclear Science and Engineering 157, pp. 185 - 199 (2007)
- W.F.G. van Rooijen, J.L. Kloosterman, T.H.J.J. van der Hagen and H. van Dam, Lithium-6-based passive reactivity control devices for a Gas Cooled Fast Reactor, Nuclear Technology 159, pp. 119 - 133 (2007)
- W.F.G. van Rooijen, J.L. Kloosterman, H. van Dam, T.H.J.J. van der Hagen, Fuel design and core layout for a Gas Cooled Fast Reactor, Nuclear Technology 151-3, pp. 221 - 238 (2005)

Journals, peer-reviewed, non-first author

- E. Bubelis, D. Castelliti, P. Coddington, I. Dor, C. Fouillet, E. de Geus, T.D. Marshall, W.F.G. van Rooijen, M. Schikorr, R. Stainsby, A GFR benchmark: comparison of transient analysis codes based on the ETDR concept, Progress in Nuclear Energy, 50, pp. 37 - 51 (2008)
- W.M. Stacey, W.F.G. van Rooijen, T. Bates, E. Colvin, J. Dion, J. Feener, E. Gayton, D. Gibbs, C. Grennor, J. Head, F. Hope, J. Ireland, A. Johnson, B. Jones, N. Mejias, C. Myers, A. Schmitz, C. Sommer, T. Sumner, L. Tschaeppe, A TRU-Zr fuel, sodium cooled, fast subcritical advanced burner reactor, Nuclear Technology 162, pp. 53 - 79 (2008)
- A.M. Ougouag, J.L. Kloosterman, W.F.G. van Rooijen, H.D. Gougar, W.K. Terry, Investigations of bounds on particle packing in Pebble-Bed High Temperature Reactors, Nuclear Engineering and Design, 236, pp. 669 - 676 (2006)

Publications (cont.)

Conference proceedings, peer-reviewed

- Tyler Sumner, W.F.G. van Rooijen, W.M. Stacey, Effects of new fuel cycles on low-level, transuranic, and high-level waste repositories safety and dynamics analysis of SABR - Subcritical advanced burner reactor, Proc. Int. Conf. ANS Summer Meeting, Anaheim CA, USA, June 8 - 12 2008
- Chris Sommer, W.F.G. van Rooijen, W.M. Stacey, Fuel cycle design and analysis of a sub-critical advanced burner reactor, Proc. Int. Conf. ANS Summer Meeting, Anaheim CA, USA, June 8 - 12 2008
- W.F.G. van Rooijen, D. Lathouwers, Sensitivity analysis of delayed neutron data for a gas cooled fast reactor, Proc. Int. Conf. ARWIF 2008, Fukui, Japan, Feb 20 - 22 (2008)
- W.F.G. van Rooijen, W.M. Stacey, E.A. Colvin, J.A. Dion, J.S. Feener, J.W. Head, C.M. Grennor, A.A. Johnson, B.L. Jones, A.E. Schmitz, C.M. Sommer, T.S. Sumner, Reactor Physics of the fast, subcritical advanced burner reactor, Proc. Int. Conf. ANS Winter Meeting, Washington DC, November 2007
- E.F. Gayton, W.M. Stacey, W.F.G. van Rooijen, T.L. Bates, E.A. Colvin, J.A. Dion, J.S. Feener, D.G. Gibbs, C.M. Grennor, J.W. Head, F.W. Hope, J.A. Ireland, A.A. Johnson, B.L. Jones, N.A. Mejias, C.M. Myers, A.E. Schmitz, C.M. Sommer, T.S. Sumner, L.P. Tschaepe, Design overview of a fast, subcritical advanced burner reactor, Proc. Int. Conf. ANS Winter Meeting, Washington DC, November 2007
- N.A. Mejias, T.L. Bates, J.A. Dion, D.G. Gibbs, W.M. Stacey, L.P. Tschaepe, W.F.G. van Rooijen, Thermal analysis of a fast, subcritical advanced burner reactor, Proc. Int. Conf. ANS Winter Meeting, Washington DC, November 2007
- W.F.G. van Rooijen, G.J. van Gendt, D.I. van der Stok, J.L. Kloosterman, Multi-recycling minor actinides in a Gas-Cooled Fast Reactor, Proc. Int. Conf. GLOBAL 2007 (ANS), Boise, ID, September 2007
- E. Bubelis, D. Castelliti, P. Coddington, I. Dor, C. Fouillet, E. de Geus, T.D. Marshall, W.F.G. van Rooijen, M. Schikorr, R. Stainsby, A GFR benchmark comparison of transient analysis codes based on the ETDR concept, Proc. Int. Conf. ICAPP 2007, Nice, France, May 2007
- W.F.G. van Rooijen and D. Lathouwers, Sensitivity analysis of the kinetic behavior of a Gas Cooled Fast Reactor to variations of delayed neutron parameters, Proc. Int. Conf. M&C-SNA 2007 (ANS), Monterey, CA, April 2007
- W.F.G. van Rooijen, J.L. Kloosterman, T.H.J.J. van der Hagen and H. van Dam, Definition of breeding gain for the closed fuel cycle and application to a Gas Cooled Fast Reactor, PHYSOR-2006, Vancouver, Canada, September 2006
- W.F.G. van Rooijen, J.L. Kloosterman, T.H.J.J. van der Hagen and H. van Dam, Passive shutdown device for Gas Cooled Fast Reactor: Lithium Injection Module, PHYSOR-2006, Vancouver, Canada, September 2006
- J.-Y. Malo, C. Bassi, A. Conti, P. Dumaz, J.-C. Garnier, F. Morin, W.F.G. van Rooijen, The thermalhydraulic design of the experimental and technology demonstration reactor (ETDR), NURETH-11 (paper 434), France 2005
- W.F.G. van Rooijen, J.L. Kloosterman, H. van Dam, T.H.J.J. van der Hagen, Fuel design and core layout for a Gas Cooled Fast Reactor, PHYSOR-2004, Chicago, Ill., USA (2004)

Publications (cont.)

- W.F.G. van Rooijen, J.L. Kloosterman, H. van Dam, T.H.J.J. van der Hagen, Design of a spherical fuel element for a Gas Cooled Fast Reactor, Third information exchange meeting on basic studies in the field of high temperature engineering, Oarai, Japan September 2003
- K. Yamamoto, F. Asano, W.F.G. van Rooijen, E.Y. Ling, T. Yamada, N. Kitawaki, Estimation of the Number of Sound Sources Using Support Vector Machines And Its Application To Sound Source Separation, ICASSP03, Hong Kong, China (2003)

Conference proceedings, non peer-reviewed

- W.F.G. van Rooijen, E.Y.L. Ling, Futoshi Asano, Kiyoshi Yamamoto, Nobuhiko Kitawaki, Acoustic source number estimation using Support Vector Machine and its application to source localization / separation system, Technical Report of IEICE EA2002-41 (2002-07), Vol. 102 No. 249, ISSN 0913-5685 (2002)

Reports, etc

- W.F.G. van Rooijen, J.L. Kloosterman, G.J. van Gendt, D.I. van der Stok, N. Cerullo, G. Lomonaco, E. Bomboni, Safety assessment of actinide transmutation in GFR, Deliverable D23 GCFR-STREP, European Commission (2007)
- W.F.G. van Rooijen, J.L. Kloosterman, G.J. van Gendt, D.I. van der Stok, N. Cerullo, G. Lomonaco, E. Bomboni, Actinide transmutation in GFR, Deliverable D31 GCFR-STREP, European Commission (2007)
- W.F.G. van Rooijen, Modelisation and preliminary transient analysis of the ETDR start-up core using CATHARE, Memo CEA, France (2004)
- W.F.G. van Rooijen, Introductory study of heat exchanger design and application to a conceptual design of a primary heat exchanger for ETDR, Note Technique CEA, France (2004)
- W.F.G. van Rooijen, J.L. Kloosterman, T.H.J.J. van der Hagen, A prospective HTR study, IRI report IRI-131-2004-003
- W.F.G. van Rooijen, E.Y. Ling, F. Asano, K. Yamamoto, N. Kitawaki, Acoustic source number estimation using support vector machine and its application to source localization/separation system, Tech. rep. IEICE EA2002-41 (2002)
- W.F.G. van Rooijen, Kolbenmüldenoptimierung für VW 4V-TDI Motor, report of internship at Volkswagen A.G., supervisor: Dipl.-Ing. T. Buchholz, Wolfsburg, Germany (2000)

Miscellaneous

- W.F.G. van Rooijen, Typesetting CJK and other exotic characters using LaTeX and XeTeX, MAPS, Spring 2008
- W.F.G. van Rooijen, Eindpunt Mt. Fuji, article in Dutch motorcycle magazine Promotor (2002)

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