

CURRICULUM VITAE

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Dr. Jarmo Juga

Birth date: 9.10.1958, Tyrvää

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Current job:

Adjunct professor, University lecturer
Dept. of Agricultural Sciences, University of Helsinki
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Family status: Married, four children, born 1989, -91, -93, -99

Military service: 1978-79 Karjalan Jääkäripataljoona, Kontioranta, Rank: Sergeant

EDUCATION

Grades: **Matriculation**, Päiviönsaaren lukio, Varkaus, 1977
Farming school in Mustiala 1980-81
MSc in animal breeding, University of Helsinki, 1985
Doctor in Agriculture and Forestry in animal breeding, University of Helsinki, 1993
Thesis: Estimation of variance and covariance components in livestock populations under selection, eximia cum laude abrobatur, December 1992
Adjunct professor (Docent) of animal breeding, University of Helsinki, July 1996

OTHER STUDIES AND COURSES:

- Studies (chemistry and mathematics) at the faculty of Sciences at the University of Helsinki 1977-81
- Nordic post-graduate course in animal breeding and genetics, Linear models, by Professor L.R. Schaefer, 15-26.4.1985, Norway
- Nordic post-graduate course in quantitative genetics in animal breeding, Quantitative genetics by Professor Bill Hill, 23.6-4.7.1986, Helsinki, Finland
- Rural development, 1-25.9.1986, Institute for Applied Language Studies, University of Edinburgh, Scotland
- Lectures in statistics and animal breeding at the University of Edinburgh, Scotland, 1986-87
- Nordic post-graduate course in prediction of breeding values using animal models, by Professor Brian Kennedy, 18-20.8.1987, Sweden
- Internordic post-graduate course in animal breeding, 15.26.8.1988, by Professor L.G. Christensen, Denmark
- Nordic post-graduate course in Bayesian techniques in animal breeding by Professor Daniel Gianola, 29.5.-2.6.1989, Sweden
- Nordic post-graduate course in major genes in animal breeding, methods of detection and statistical analysis by Professor J.M. Elsen, 11-15.5.1992, Iceland
- ISO 2000 quality management systems, Rastor, 2001
- Basics of ACCESS databases, Edupoli, 2001
- FAO Budget Holder Course, 2006
- UN Basic Security in the Field, 2006
- UN Advanced Security in the Field, 2007

MAIN WORK EXPERIENCE

Head of Department, Dept. of Agricultural Sciences, University of Helsinki, 2010-2013.

Professor of animal breeding at the University of Helsinki, from 1.1.2009 to 31.12.2011.

University lecturer in animal breeding at the University of Helsinki, 1.9.2008, permanent position from 1.8.2010.

Administrator (Selvitysmies, Utredningsman) on Finnish Animal Science, the Ministry of Agriculture and Forestry, 19.11.2007 - 31.8.2008.

Project Coordinator, FAO, ESWD, Rome, 1.7.2006 – 16.11.2007

Managing Director, Faba Breeding (Faba Jalostus osk) 1.7.2004 – 30.6.2006

Managing Director, Nordic Cattle Genetic Evaluation (Nordisk Avelsvärdering, NAV), 1.1.2002 – 30.6.2004

Director, Cattle breeding, The Finnish Animal breeding Association (Suomen Kotieläinjalostusosuuskunta, SKJO), 1.2.2000 – 31.12.2001

Professor of animal breeding, University of Helsinki, 1.8.1995-31.7.1996

Head of research, The Finnish Animal Breeding Association 1.1.1992 – 31.1.2000, on study leave for research for PhD-thesis, AFRC Institute for Animal Physiology and Genetics Research, Roslyn, Scotland, 1.3.1991-30.9.1991

Head of cattle breeding dept., The Finnish Animal Breeding Association, 1.10.1988-31.12.1991

Researcher, Agricultural Research Centre, Dept. of Animal Breeding, Jokioinen, 1.2.85-30.9.1988. On study leave for research for PhD-thesis, AFRC Institute for Animal Physiology and Genetics Research, Edinburgh, Scotland, 1.9.1986-31.8.1987

Researcher, State Horse Breeding Centre, Ypäjä, 1.10-31.12.1984

BOARD POSITIONS and SECONDARY OCCUPATION

- Part time lecturer in animal breeding, University of Helsinki, 1988-1995 and Veterinary College, Helsinki, 1989-1995
- A **member of the board** of directors in EmbryoCenter Ltd 1997 - 2001
- An **independent scientific expert** for evaluation of proposals in European Community Programme on the conservation, characterisation, collection and utilisation of genetic resources in agriculture, Third Call for proposals No 98/C 111/12.
<http://europa.eu.int/comm/agriculture/res/gen/index.htm>).
- FAO **consultant** in **State of the World of Animal Genetic Resources** in 2001. Consultant trainer in two courses: Addis Ababa for Anglo African countries (June 23 – July 11, 2001), and Budapest for Eastern European countries (October 20 – 24.2001) ([http://dad.fao.org/cgi-dad/\\$cgi_dad.dll/SoW?Eng](http://dad.fao.org/cgi-dad/$cgi_dad.dll/SoW?Eng))
- Other short consultancies:
 - Latvian State domestic animal pedigree information data processing centre, July 2003
 - Milk Development Council, UK, September 2003
 - A member of the **Steering Committee** of **INTERBULL**, 1999 - 2004
(<http://www-interbull.slu.se/>)

- Member in the **ICAR board** since 2002 and a **vice president of ICAR** and a member of the executive board since 2003, **the president of ICAR** 2004 - 2006 (<http://www.icar.org>)
- **Managing Director** of the Finnish Pig Breeding Ltd, 2004-2006.
- A **board member** in Agricultural Data Processing Centre Ltd. 2004-2006.
- A **board member** in Nordic Cattle Genetic Evaluation (NAV) , 2004-2006 (<http://www.nordicebv.info/Forside.htm>).
- A member in the Scientific Advisory Committee for Nordic Cattle Genetic Evaluation (NAV) <http://www.nordicebv.info/Forside.htm> from 2009.
- A Member of the Scientific Council of Bio-Competence Centre of Healthy Dairy Products, Tartu, Estonia, from June 2010. http://www.tptak.ee/english/index.php?BIO-COMPETENCE_CENTRE_OF_HEALTHY_DAIRY_PRODUCTS
- Member of the board of the Finnish Pig Breeding Ltd, 2011.

INTERNATIONAL AND NATIONAL WORKING GROUPS

- Finnish representative in INTERBULL from 1988-2006
- A member in Nordic progeny testing expert group from 1988-2004
- A member in the Steering Committee in Finnish-Egyptian sheep breeding project 1994
- A member in COPA/COGECA animal breeding group 1995-1997
- A member in the scientific board of agricultural research in the ministry of agriculture 1996-2002
- A member in the breeding committee for rainbow trout in RKTL from 1998
- Ad hoc working group in World Federation of Ayrshire Breeders from 1998
- A convenor for the MACE for type traits in Ayrshire breeds in the World Federation of Ayrshire Breeders 2000 - 2001
- Chairman of the **ICAR** (International Committee for Animal Recording) Quality Assurance working group from 2000 (<http://www.icar.org>)
- A member in the Finnish Animal Genetic Resources group in the ministry of agriculture from 2000 to 2003.
- A mentor in 'Interbull Strategic Planning - January 2013' workshop in Uppsala, January 6-8.2013

CONFIDENTIAL POSTS IN FINNISH ASSOCIATIONS

- The Environmental Association in the University of Helsinki, the member of the board, the chairman of the board, 1978-80
- Savolainen Osakunta, club master, 1980
- The Association of the Agronomist and Forest Students, the member of the board, the chairman of the board, 1983-1984
- A delegate in the Student Union of The University of Helsinki, 1.12.1983-30.11.1985
- Agro-Food ry., a member of the board, starting from 1993 – 1998
- Finnish Association of Agricultural Science, the chairman of livestock commission 1993-1995
- A member in Finnish commission of EAAP, 1988-2002

RECEIVED EXTERNAL RESEARCH FUNDING

Use of High Performance Computing in Solving Large Mixed Model Equations in Animal Breeding – HPBREEDING, EU demonstration program FINNOVA in HPCN TTN Network, 1997-1999, Co-ordinator of the demonstration project. (<http://www.csc.fi/ttn/hpbreeding.html>). Collaborative applicant and the coordinator.

A database data management system for improvement of international genetic evaluation of beef and dairy cattle 2008-2009, Swedish University of Agricultural Sciences-SLU, 27,000 € The main applicant

and coordinator.

Claw and foot health (SORJAT) - Early diagnostics and prevention of foot lesions in dairy cattle 2009-2011, MAKERA, 300,000 € the main coordinator of the project. The main applicant and coordinator.

Suomen Naudanjalostussäätiö, Optimization of dairy cattle breeding program utilizing genomic information, 2009: 45,000 € 2010: 45,000 € and 2011: 45,000 € The main applicant and coordinator.

The Finnish Funding Agency for Technology and Innovation – TEKES business R&D funds/ Faba Breeding/MTT/HY, 2009-2012. The use of genomic information in cattle breeding, 120,000 € Collaborative applicant, coordinator of HU-part.

Riista- ja kalatalouden tutkimuslaitos (RKTL), DNA microsatellite analyses of fish samples, 2010: 56260 € 2011: 62530 € and 2012: 67394 €

Savonia , Kilpailukykyä ja ympäristötehokkuutta pohjoissavolaisille maito- ja lihanautatiloille ja naudanlihantuotantoketjulle (MAILI-hanke) 2011-2013: 33 000 € Collaborative applicant, coordinator of HU-part.

FoodAfrica, MTT coordinated project for improving food security in West and East Africa through capacity building in research and information dissemination funded by the Ministry for Foreign Affairs of Finland, WP 2: Improved food and nutritional security from better utilization of dairy cattle breed/cross-breed types in Senegal, 2012 - 2015, HU funding from MAF 201898 € Collaborative applicant, coordinator of HU-part.

Teagasc Walsh Fellowships Ireland, ref 2012037, level of Award 4 years 21 000 €/year. The main applicant and coordinator.

MTT/AnGR-NordicNET (Nordic research network on animal genetic resources in the adaptation to climate change) contract 2012: 18 975 € and 2013: 18975 € Collaborative applicant, coordinator of HU-part.

MTT/HU Towards genetic improvement of feed efficiency in dairy cattle 2013-2015. Finnish contribution to the Nordic Feed Efficiency project. Funded by MAKERA, Valio, Viking Genetics, Faba, Rasio oyj. Animal breeding module 45000 € in 2014. € Collaborative applicant and coordinator at HU. A Nordic dairy cattle R&D collaboration project.

Russian Dairy Cattle Genetic Evaluation (RUDGE), a joint research project with Russian Research Institute of Farm Animal Genetics and Breeding (RRIFAGB) and LUKE in 2015-2018, in total 37000 € the main applicant and coordinator at HU.

Suomen Naudanjalostussäätiö, Suomalaisen ayshire-rodun hedelmällisyyden parantaminen genomitiedon avulla, 2015: 50,000 € Collaborative applicant, the main applicant prof. Pekka Uimari. The project is part of a larger Nordic R&D project Improving Nordic dairy cow fertility through genetics approved by Nordic Dairy Cattle R&D in 2015 in which I am the main applicant from HU.

LUKE/HU. Improving Nordic dairy cow fertility through genetics 2016-2018. Main coordinator prof. Esa Mäntysaari, Luke. Funded by MAKERA, Valio, Viking Genetics, Faba. Collaborative applicant, HU coordinator. Total HU budget 330 € A Nordic dairy cattle R&D collaboration project.

RECEIVED EXTERNAL FUNDING FOR HIGHER EDUCATION

NOVA University network, funding for a PhD course in 2011 “Quantitative genetics with integration of

genomic selection”, max. 47066 € The main applicant and coordinator.

Nordplus Higher Education 2013, Nova-Bova funding for an intensive course on master level “Genomic selection in livestock populations” in spring 2014, 10000 € The main applicant and coordinator.

AWARDS

ICAR Distinguished Service Award 2006 (<http://www.icar.org/pages/awards.htm>)

STUDY AND TRAVEL SCHOLARSHIPS

The British Council, 1986-87. Post graduate studies in Edinburgh.

Tiura Foundation, 1986-87. Post graduate studies in Edinburgh.

The Scientific Foundation of Academic Agromist, 1986-87. Post graduate studies in Edinburgh.

Finnish Academy of Sciences, 1991. Post graduate studies in Edinburgh.

Agricultural University of Norway, 1996

Several travel scholarships to conferences et al. from different foundations

EXAMINER

- External evaluator to licenciat thesis by Ismo Stranden to University of Turku, 1994
- In evaluation committee to PhD-thesis by Agust Sigurdssonin to Swedish University of Agricultural Sciences, 1995
- External evaluator to PhD-thesis by Markku Saastamoinen to University of Helsinki, 1997
- Member of evaluation committee and external opponent to Björg Heringstad’s PhD-thesis at NLH, Norje on October 15.1999.
- In evaluation committee to PhD-thesis by Freddy Fikse’s at Swedish University of Agricultural Sciences, 2002.
- Opponent and member of the evaluation committee to Sofia Malm’s PhD thesis at Swedish Univeristy of Agricultural Sciences, 9.12.2010
- Member of evaluation committee and external opponent to Line Buch’s PhD thesis at Aarhus University, Denmark, 2.3.2011
- Member of evaluation committee and external opponent to Hanne Olsen’s PhD thesis at Norwegian University of Life Sciences, 17.6.2011
- Member of evaluation committee and external opponent to Jörn Rind Thomassen’s PhD thesis at Aarhus University, Denmark, 17.5.2013
- Opponent and member of the evaluation committee to Helen Hansen Axelsson’s PhD thesis at Swedish University of Agricultural Sciences, 11.6.2013
- Member of the evaluation committee to Caroline Carlström’s PhD thesis at Swedish University of Agricultural Sciences, 11.4.2014
- Member of the evaluation committee to Anne Loberg’s licentiate thesis at Swedish University of Agricultural Sciences, 12.6.2015
- Member of evaluation committee and external opponent to Cecilie Ødegård’s PhD thesis at Norwegian University of Life Sciences, 2.10.2015.

Several MSc-thesis’s to University of Helsinki

Reviewer to scientific journals in animal breeding.

SUPERVISOR ACTIVITIES

Supervisor of following PhD students in animal breeding

Mari Suontama, co-supervisor, received her PhD in 2012

Johanna Häggman, main supervisor, received her PhD in 2014

Hanni Kärkkäinen, co-supervisor, received her PhD in 2013

Mahlako Makgahlela, co-supervisor, received her PhD in 2014

Kirsi Muuttoranta, in supervising team, received her PhD in 2014

Pauliina Hietala, main supervisor, received her PhD in 2017

Jessica Coyne, co-supervisor, received her PhD in 2017

Andrei Kudinov, co-supervisor since 2015

Elina Paakala, main supervisor since June 2015

Patrick J. Ngoni Ema, co-supervisor for PhD at University of Dakar, Senegal, since 2012

EVALUATIONS OF NATIONAL AND INTERNATIONAL ORGANIZATIONS

A member in a panel of experts for evaluation of Finnish Food Safety Authority Evira in 2010.

A chairman in a panel of experts for re-accreditation of Faculty of Agriculture in Osijek, "Josip Juraj Strossmayer" University of Osijek in academic year 2012/2013. Dates of visit 22-23 April 2013.

A member in a panel of experts for re-accreditation of Faculty of Food Technology in Osijek, "Josip Juraj Strossmayer" University of Osijek in academic year 2012/2013. Dates of visit 24-25 April 2013.

RECENT INVITED TALKS

NJF Seminar 439 Dairy production in modern loose housing cowsheds – practical implications and future challenges. May 2-4, 2012 Tartu, Estonia. Title of the talk: Juga, J.: "Prospects of animal breeding in modern dairy production".

Tieteen päivät (Science days), January 9-13. 2013. Helsinki. Title of the talk: Juga, J.: "Kotieläintalouden rooli ja mahdollisuudet ruokaturvan edistämässä (The role and possibilities of animal production in improving the food security)".

Valtakunnallinen emolehmäseminaari (National seminar in suckler cow production). February 5-6. 2013. Title of the talk: Opening speech.

XVI Baltic animal breeders and genetic conference September 11-12. 2013. Riga, Latvia. Title of the talk: Juga, J.: "Animal breeding in modern dairy production in Finland".

Juga, J.: "Dairy cattle breeding in Finland utilizing genomic selection". Tohoku University, Japan, April 20, 2015.

Juga, J.: "Total merit index – why and how and examples". May 20, 2015. Pushkin Institute of Animal Breeding, St. Petersburg, Russia

Juga, J.: “Simultaneous selection on multiple traits – Successful experiences from dairy cattle”. NJF genetic workshop 2016: Effective use of animal breeding tools in fur animal breeding, 23 August 2016, Vantaa, Finland

Juga, J.: “The use of AI bulls in genomic dairy cattle breeding”. March 17, 2017, Pushkin Institute of Animal Breeding, St. Petersburg, Russia.