

CURRICULUM VITAE OF PROFESSOR, DR MAIJA AKSELA, UNIVERSITY OF HELSINKI, FINLAND

1. MOTTO

Together we are more!

2. RESEARCH

-Research interests:

- science education, chemistry education (e.g. nature of science, science learning, education for sustainable development, ICT learning, inquiry-based science education, in-formal and non-formal science learning, integrated science education, design-based research as a tool for making new solutions and innovations)
 - teacher education and teachers' professional development in math and science, especially in chemistry
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-Director of a research group with 10 members (a university lecturer and 9 doctoral students (7 of them has major in chemistry, 2 in mathematics and 1 in physics)); 15 of my supervised doctoral students have finished Ph.D. thesis since year 2005.

-Supervisor for the doctoral programme, Doctoral Programme in Chemistry and Molecular Sciences and for the doctoral programme, Doctoral Programme in School, Education, Society, and Culture

- I am supervising/supervised altogether about 25 theses at bachelor and M.Sc. levels in science education (mainly in chemistry education; few of them in math or biology) since year 2018
 - I have supervised altogether over 150 theses since year 2001.
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-Publications: over 300 publications (in details:
[https://tuhat.helsinki.fi/portal/en/persons/maiija-aksela\(226699b4-458f-4e50-8ccc-5106726860df\).html](https://tuhat.helsinki.fi/portal/en/persons/maiija-aksela(226699b4-458f-4e50-8ccc-5106726860df).html))

-chief of editor for international journal, LUMAT (International Journal of Math, Science and Technology Education) and a chair of its international advisory board

-a member of editorial advisory boards, e.g. NorDina, ARISE, European Journal of Science and mathematics education

-participating on international and national conferences in field annually (e.g. ECRICE or ESERA); invited speaker e.g. in four conferences (fall 2018)

3. CURRENT POSITIONS AND TASKS

I have worked since 1997 at the University of Helsinki. Since year 2001 I have worked in Faculty of Science.

Since year 2014 I have worked half of my working time for LUMA and Science Education Centres and half time for the Unit of Chemistry Teacher Education, Department of Chemistry at University of Helsinki.

1) National LUMA Centre Finland and Science Education Centre at University of Helsinki:

-Jan 2014- Director of the LUMA Centre Finland (math, science and technology education, <http://www.luma.fi>). Projects or tasks, e.g.:

1) National LUMA2020 programme for promoting math, science and technology education funded by Ministry of Education, Finland (2019-2020; 3,5 million euros)

2) LUMA Finland programme for promoting math, science and technology education funded by Ministry of Education, Finland (2014-2019; 37 projects; 5 million euros)

- 2) National LUMATIKKA in-service programme for math education funded by National Board of Education (2018-2020; about 2 million euros)
- 3) Director of international and national StarT LUMA -project and a chair of International Awards jury (<http://www.start.luma.fi>)
- 4) The chair of LUMA teacher education forum in Finland
- 5) International projects: e.g. LINKS, STEM Design and STEM
- 6) Chief of editor for international peer-reviewed journal, LUMAT

-Jan 2017- Director of the Science Education Centre at University of Helsinki (one centre of the 13 LUMA Centres; <https://www.helsinki.fi/en/science-education>): e.g.

Director of ChemistryLab Gadolin (one of 15th LUMA labs in Finland), Science Education Centre at University of Helsinki, Department of Chemistry, University of Helsinki since year 2008 (see: <https://www.luma.fi/en/news/2018/09/24/learn-everyday-chemistry-in-novel-ways-in-chemistrylab-gadolin/>)

2) Teacher education and its' research:

-Dec 2008- Professor, Research Director, the director of The Unit of Chemistry Teacher Education, University of Helsinki, Department of Chemistry, University of Helsinki (responsible of its' instruction (built 10 courses) and research)
See in details: <https://blogs.helsinki.fi/kem-ope/en/>

-Sep 2017- Vice Director, Math, physics and chemistry teacher education B.Sc. program, University of Helsinki, Faculty of Science, University of Helsinki and a member of a board

3) Director of the following online courses (MOOCs) or forums:

-Teachers' Climate Change Forum (MOOC; in-service training, 2019-)
- International Teachers' climate change forum (year 2016)
<https://www.luma.fi/en/event/international-teachers-climate-change-forum/>

-Sustainable Energy (MOOC; youth; international); 2015-16:
<https://www.luma.fi/en/news/2015/10/28/millennium-youth-course-sustainable-energy/>
-Sustainable Energy in Education (MOOC; in-service training; international) 2015-16:
<https://www.luma.fi/en/news/2015/12/09/sustainable-energy-in-education-mooc-starts-on-january/>

-Introduction to project-based learning through StarT (MOOC); 2018-19:
<https://www.luma.fi/en/news/2018/09/28/our-new-international-online-courses-on-project-based-learning-are-open/>
-Project-based learning and the theory behind it – create your own Project (MOOC) 2018-19:
<https://www.luma.fi/en/news/2018/09/28/our-new-international-online-courses-on-project-based-learning-are-open/>

In Finnish:

-Tiede -ja teknologiakasvatuksen ohjauskurssi (opettajankoulutus) 2017-):
<https://www.luma.fi/sanomat/2017/09/04/tukea-ja-ohjausta-tiede-ja-teknologiakasvatusaktiviteettien-toteuttamiseen-eri-puolilla-suomea/>

-Arjen ilmiötä ja monialaisia projekteja LUMA-aineiden opetuksessa (LUMA SUOMI -kehittämishjelma):
<https://mooc.helsinki.fi/course/view.php?id=34>

-LUMA-aineiden opetusta lähiyryyksessä (LUMA Suomi -kehittämishjelma):
<https://mooc.helsinki.fi/course/view.php?id=109>

4. EDUCATION AND DEGREES

I have studied both sciences (chemistry (major), mathematics, physics and computer science) and education. In addition, competence to be a subject teacher at high school level.

-Nov 2005. Ph.D., Chemistry: Chemistry Education, University of Helsinki, Department of Chemistry

-1995-1999. Education studies, University of Helsinki, Department of Applied Sciences of Education (59 credit units, ov,

sivulaudatur in Finnish)

-Jan 1990. Phil. Lic, Organic Chemistry, University of Oulu, Department of Chemistry, Finland

-Oct 1986. M.Sc., Chemistry: Chemistry Teacher Education Program, University of Oulu, Department of Chemistry, Finland (*competence to teach chemistry in high school and in adult education; in addition studied math, physics and computing science)

- Year 2017. Mentoring program for directing skills

5. PREVIOUS PROFESSIONAL APPOINTMENTS

I have worked in teacher education at University of Helsinki since 1997 and in LUMA activities since 2003. Before it I have worked at Simon Fraser University, Canada (visiting research fellow in chemistry) and about six years at high school level (teaching chemistry, mathematics and physics) in Finland:

- Jan 2010- Dec 2016 Director of the LUMA Centre of University of Helsinki, Faculty of Science

-2004-2016. Director of the National Chemistry Education Centre, Kemma, University of Helsinki, Department of Chemistry

-Jan 2014-Dec 2009. Coordinator, LUMA Centre, University of Helsinki

-Aug 2001-Nov 2008. Senior Lecturer, Chemistry Teacher Education Unit, University of Helsinki, Department of Chemistry

-Aug 1999-Jul 2001. Research Fellow, Centre for Research and Development in Pedagogy of Mathematical Sciences, Department of Teacher Education, University of Helsinki, Finland (Research grant from Neste Oy Foundation)

-Aug 1997-Jul 1999. Lecturer in Chemistry and Physics Didactics, Department of Teacher Education, University of Helsinki, Finland

-Aug 1988-Jul 1991. Visiting Research Fellow, Simon Fraser University, Dept. of Chemistry, B.C., Canada (Grants from Finnish Culture Foundation, Neste Oy Foundation, and Kemira Oy Foundation)

-Since 1997- In-Service Trainer for Chemistry Teachers and Elementary Teachers, University of Helsinki, Finland

6. SOME CONFIDENTIAL POSTS

1) Nowadays

-2010-19. Finland's representative of the ALLEA (ALL European Academies) core group and working group on Science Education.

-2018-19. A member of the group "New senior secondary school", Ministry of Education, Finland

-2018-19. A member of the national curriculum group for senior secondary level, National Board of Education, Finland

-2017-. A member of the board of math, physics and chemistry teacher education program, Faculty of Science, University of Helsinki

-2018-. A member of the development group of subject teacher education at University of Helsinki

-2019-. Member of the delegation, Research Foundation of the University of Helsinki (Helsingin yliopiston Tiedesäätiön tieteellinen valtuuskunta)

-2015-. Member of the Board of URSA Astronomical Association

2) Before year 2019, e.g.

-2010-2013. Finland's representative of Thematic working group on math, science and technology, European Commission

-2009-2018. Member of the Board of Directors, Research Foundation of the University of Helsinki (Helsingin yliopiston Tiedesäätiön hallitus)

-2015-2018 . Member of national working group on the quality of math and science teacher education in Finland

-2014-2015. Member of the national curriculum group, National Board of Education, Finland

-2010-2013. The Chair of National LUMA (math, science and technology) Advisory board (Kansallinen LUMA-neuvottelukunta)

-2010-2016. Member of the Studia Generalia Advisory Board (Studia Generalia –toiminnan tieteellinen ohjausryhmä),

-2010-15 Chair of the Steering Group of the Millennium Youth Camp and the operational director of the Camp (<http://www.helsinki.fi/luma/english/millennium-youth-camp>)

7. SOME HONOURS AND ACKNOWLEDGEMENTS

Altogether 15 honours and awards, for example:

-2018 International Award for StarT Project, LUMA Centre Finland (the director of the project):

<https://www.luma.fi/en/news/2018/10/22/luma-centre-finland-wins-an-international-stem-education-award/>

-2013. Founding member of Teachers' Academy, University of Helsinki (see: http://www.helsinki.fi/opettajienakatemia/eng/academy_members.html)

-2012. 1st University in Society Award for Finland's Science Education Centre, LUMA (the Director of the Centre; see: <http://www.helsinki.fi/luma/english/award-impact>)

-2011. A member of Finnish Academy of Technology (TTA)

-2010. J. V. Snellman Prize, University of Helsinki (the director of the LUMA Centre)

-2009. The State Award for Public Information (the director; three webmagazines, Jippo, Luova and Kreativ of the LUMA Centre)

-2005. 1st Scientist of Year. The Finnish Union of Experts in Science.

-1995. Teacher of Year in Mathematics and Science. The Finnish Association of Teachers of Mathematics, Physics, Chemistry and ICT (First time award was given to a chemistry teacher at senior high school in Finland)

see all in details:

<https://tuhat.halvi.helsinki.fi/portal/fi/activities/searchall.html?searchall=Maija%20Aksela>

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