

Erik Fooladi, associate professor dr. scient.

Faculty of Humanities and Education, Volda University College, P.O. Box 500, 6101 Volda, Norway. ef@hivolda.no, +47 7007 5322 (office) | +47 99 01 91 75 (mob.)

Biography

Erik Fooladi holds a doctorate in organometallic chemistry from University of Oslo. He is presently associate professor at Volda University College, Norway, within science teacher education, home economics teacher education and food culture. He has an extensive production of teaching resources and popular scientific material in the interface between science and food, also as co-author of the popular-science book “A Pinch of Culinary Science: Boiling an Egg Inside Out and Other Kitchen Tales” (Finnish/Norwegian: 2017, English: 2019). His main research interest is research in education and communication in domain intersections, such as between science, cooking and food culture, and between scientific and procedural/craftsmanship/practical knowledge. Particular foci are inquiry, argumentation, context-based education and epistemic aspects inherent in transdisciplinary contexts, especially but not limited to food and cooking. More recently, research interests have moved towards sense/ory experiences in the intersection between sciences and arts, both from an epistemic perspective (philosophy of science vs. philosophy of art vs. food/gastronomy), as well as within teaching and communication. He is a musician (percussionist), and collaborates with both researchers, artists and other practitioners to produce, perform, and do research in the context of multimodal and multisensory performances.

Professional experience

2008-present	Associate professor, Volda University College, Norway
2021 (Sep.-Nov., virtual)	Visiting associate professor at PhD programme in Reggio Childhood studies, University of Modena and Reggio Emilia
2015-2018	Head of Dept. of Science and Mathematics, Volda Univ. College
2014-2015	Visiting researcher, Chemistry teacher educ., Univ. of Helsinki
2012-2015	Associate prof. (20%), Norwegian Centre for Science Education
2001-2008	Assistant professor, Volda University College, Norway

Education

2019/20	HPE204_1 – pedagogical course: Digital didactics in teaching (Digital didaktikk i mitt fag og mine emne, UH-pedagogisk kurs), 5 ECTS. Volda University College
2020	Pedagogical course: Supervision of PhD students (Kurs for ph.d.-veiledere, UH-pedagogisk kurs). Two-day course at Oslo Metropolitan University.
2018	HPE202_2 – pedagogical course: Supervision in writing processes (Rettleiing på fagtekst, UH-pedagogisk kurs), 5 ECTS. Volda University College

2016	DLV131_1 – PhD-level course in discourse and text analysis (Diskurs og tekstanalyse), 10 ECTS. University of Stavanger
2010	PEDUP – pedagogical course: Pedagogy in tertiary education (Kurs i universitetspedagogikk, Pedagogisk utviklingsprogram for fast vitenskapelig tilsatte) NTNU - Norwegian University of Science and Technology, Trondheim.
2008	Dr. Scient, Organometallic chemistry, University of Oslo <i>Title: “Group 9 Half-Sandwich Compounds – Synthesis, structure and reactivity”</i>
1997	Cand. Scient (MSc), Organometallic chemistry, Univ. of Oslo <i>Title: “Oksidativt induserte reductive eliminasjoner. Et mekanistisk stadium av oksidasjonskjemien til CnRhMe₃ (Cn = 1,4,7-trimetyl-1,4,7-triazasyklononan”</i>

PhD supervision

Kayima, Festo. *Exploring chemistry teachers’ perspectives on questioning and providing a new way of analyzing teacher questions in science classrooms*. PhD dissertation at UiB February 2018. Co-supervisor. Main supervisor assoc. prof. Matthias Stadler, UiB.

Tuomisto, Maiju. *Design-Based Research: Educational Chemistry Card and Board Games*. PhD dissertation at University of Helsinki June 2018. Co-supervisor. Main supervisor professor Maija Aksela, University of Helsinki.

Herranen, Jaana. *Towards Learner-driven Science Teacher Education for Sustainability*. PhD dissertation at University of Helsinki December 2019. Co-supervisor. Main supervisor professor Maija Aksela, University of Helsinki.

Bødtker-Lund, Daniel. PhD in progress, started spring 2018. *Den profesjonelle smaken*. OsloMet - Oslo Metropolitan University. Co-supervisor. Five-year PhD track. Main supervisor Øyvind Standal, OsloMet.

Coe, Jennifer. PhD in progress, started autumn 2021. *Untitled (topic: analysis of food ateliers designed and implemented by Pause-Atelier dei Sapori in Reggio Emilia from a linguistic anthropology perspective)*. Main supervisor. Three-year PhD track. University of Modena and Reggio Emilia.

Teaching experience

2012-present	Teaching at pre-service and in-service science teacher education for pre-school teachers
2021 (Sep.-Nov.)	«Food and food experiences as transdisciplinary inquiry in education and non-formal contexts» at PhD program in Reggio childhood studies. University of Modena and Reggio Emilia.
2003/4-present	Home economics (education), food science and food culture. Design/revision and teaching of 2 x 30 ECTS courses, Volda university college
2001-present	Science education for pre-service and in-service science teachers, primary and secondary school, Volda University College. Various courses of 15-60 ECTS, design/revision and teaching.

- 2014-2015 Inquiry-based chemistry teaching II (designed and taught 5 ECTS master level course). Chemistry as a Science and a Discipline (5 ECTS). University of Helsinki.
- 1997-2001 Lab course teaching in chemistry (organic, inorganic and analytic), University of Oslo

Guest lecturer appearances (shorter engagements, 1-2 days) within home economics education and science education at various academic institutions (Norway), and annual 2-day seminars 2017-2022 on communication and knowledge transfer at Master in Gastronomic Sciences, Basque Culinary Center (Mondragon University), San Sebastian, Spain.

Peer-reviewed articles and book chapters, educational research and related

Main author:

Fooladi, E. C., Tuomisto, M., & Haapaniemi, J. (2023). Food in Science, Science in Food - Interdisciplinarity in Science/Chemistry and Home Economics Lower Secondary Curricula Across Three Countries. *International Journal of Science Education*. doi: 10.1080/09500693.2023.2213801.

Fooladi, E., & Barth, A. (2022). Flere ting på en gang? Pluralisme i lydlig erfaring og utøvelse. In Oltedal, E., Sørbø, J. I., Hjorthol, G. P., & Løvoll, H. S. (Eds.), *Stemma i stilla i musikk og litteratur. Festskrift til Magnar Åm* (p. 285-313). Oslo: Cappelen Damm Akademisk.

Fooladi, E. C., & Hopia, A. (2022). Revisiting the “porridge feud” in 19th century Norway: How knowledge and methods from multiple disciplines may reveal new clues to historical cooking practices. *International Journal of Gastronomy and Food Science*, 27, 100475.

Fooladi, E. C. (2020). Between Education and Opinion-Making - Dialogue between Didactic/Didaktik Models from Science Education and Science Communication in the Times of a Pandemic. *Science & Education*, 29(5), 1117-1138.

Fooladi, E. (2020). *Taste as Science, Inquiry and Aesthetic Experience*. In Burnard & Colucci-Gray (Eds.). Why Science and Art Creativities Matter: STEAM (re-)Configurings for Future-making Education (pp. 358-380). Brill | Sense.

Fooladi, E., Hopia, A., Lasa, D., & Arbolea, J.-C. (2018). Chefs and researchers: Culinary practitioners' views on interaction between gastronomy and sciences. *International Journal of Gastronomy and Food Science*, 15, 6-14.

Fooladi, E., & Hopia, A. (2013). Culinary precisions as a platform for interdisciplinary dialogue. *Flavour*, 2(6).

Fooladi, E. (2013). Molecular gastronomy in science and cross-curricular education – The case of “Kitchen stories”. *LUMAT - Research and Practice in Math, Science and Technology Education*, 1(2), 17-30.

Co-author:

Coe, J., Manera, L., & Fooladi, E. (2023/24). Exploring the Senses of Taste with Young Children: Multisensory Discoveries of Food. *Food and Foodways*, accepted for publication.

Fuglseth, K., & Fooladi, E. C. (2022). Økologisk berekraft formidla til barn og unge – ei innhaldsanalyse av nyheitsmagasinet supernytt. *Berekraft - Fjordantologien 2022*. Molde University College/Universitetsforlaget. <https://doi.org/10.18261/9788215062938-2022-04>.

Herranen, J., Kousa, P., Fooladi, E., & Aksela, M. (2019). Inquiry as a context-based practice – A case study of pre-service teachers' beliefs and implementation of inquiry in context-based science teaching. *International Journal of Science Education*, 41(14), 1977. doi:10.1080/09500693.2019.1655679.

Tuomisto, M., Haapaniemi, J., & Fooladi, E. (2017). Close Neighbours, Different Interests? – Comparing Three Nordic Home Economics Curricula. *International Journal of Home Economics*, 10(2), 121-131.

Other:

Jaana, H., Erik Cyrus, F., & Marina, M.-B. (2021). Editorial: Special Issue “Promoting STEAM in Education”. *LUMAT: International Journal on Math, Science and Technology Education*, 9(2).

Peer-reviewed articles in scientific journals, chemistry

Main author:

Fooladi, E., Krapp, A., Sekiguchi, O., Tilset, M., & Uggerud, E. (2010). Mechanism for C–H bond activation in ethylene in the gas phase vs. in solution – vinylic or agostic? Revisiting the case of protonated Cp*Rh(C₂H₄)₂. *Dalton Transactions*, 39, 6317–6326.

Fooladi, E., Dalhus, B., & Tilset, M. (2004). Synthesis and Characterization of Half-sandwich N-heterocyclic carbene complexes of cobalt and rhodium. *Journal of the Chemical Society - Dalton Transactions* (22), 3909-3917.

Fooladi, E., Graham, T., Turner, M. L., Dalhus, B., Maitlis, P. M., & Tilset, M. (2002). Oxidatively Induced M-C Bond Cleavage Reactions of Cp*Ir(Me₂SO)Me₂ and Cp*Rh(Me₂SO)Me₂ (Cp* = η^5 -C₅Me₅). *Journal of the Chemical Society - Dalton Transactions* (6), 975-982.

Co-author:

Fooladi, E., Dalhus, B., Rømming, C., & Tilset, M. (2002). An organometallic Rh^{III} complex with a distorted octahedral structure: (acetonitrile- κ N)dimethyl(1,4,7-trimethyl-1,4,7-triazacyclononane- κ^3 N,N',N'')rhodium(III) tetraphenylborate. *Acta Crystallographica Section C-Crystal Structure Communications*, 58, M567-M569.

Bruheim, I., Fooladi, E., Lundanes, E., & Greibrokk, T. (2001). Purity testing of air-sensitive organometallic compounds by capillary supercritical fluid chromatography. *Journal of Microcolumn Separations*, 13(4), 156-162.

Bruheim, I., Fooladi, E. C., Lundanes, E., & Greibrokk, T. (1999). Purity testing of organometallic catalysts by micro liquid chromatography-electron ionization mass spectrometry. *Chromatographia*, 50(7-8), 479-484.

Fooladi, E., & Tilset, M. (1997). Oxidatively induced reductive eliminations. A mechanistic study of the oxidation chemistry of CnRhMe₃ (Cn = 1,4,7-trimethyl-1,4,7-triazacyclononane). *Inorganic Chemistry*, 36(26), 6021-6027.

Research conference presentations (peer reviewed unless otherwise specified)

Sæterås, B., Innselset, E., Hasle, K. A., Fooladi, E. C., & Ekornes, S. M. (2022, 16-17 June). *Analyse av studentar si undervisning i PPU*. Fjordkonferansen 2022, Loen.

Innselset, E., Sæterås, B., Hasle, K. A., Ekornes, S. M., & Fooladi, E. C. (2022, 20-21 September). *TTI as a tool for supervising teacher students*. The 6th European Seminar on Systematic Observation, online/Volda.

Fooladi, E. C. (2021). *Disciplinary Encounters in Flavour and Music*. Paper presented as part of session “Panel 1 - Food and music as transdisciplinary sensory cultures” at the Food Matters and Materialities: Critical Understandings of Food Cultures, Carleton University. <https://carleton.ca/foodmatters/paper-abstracts> (editorial review only).

Fooladi, E. C. (2020). *Putting sense experiences at the front in STEAM-oriented inquiry*. Keynote lecture at the International LUMAT Symposium 2020, University of Helsinki. <https://www.luma.fi/en/lumat-symposium/previous-lumat-symposiums>.

Fooladi, E., & Aurdal, S. K. (2020). *Can science make a difference when music education is the main goal?* Poster presented at the International LUMAT Symposium 2020, Univ. Helsinki. <https://www.luma.fi/en/lumat-2020>.

Fooladi, E. (2019). *Taste in science and transdisciplinary education*. Paper presented as part of symposium session at the ESERA 2019 conference, University of Bologna, Italy.

Fooladi, E. (2018). *Making use of all five senses in the intersection between scientific and aesthetic practices – The case of “The porridge music experiment”*. Paper presented as part of symposium session at the IOSTE 2018 conference, Malmö University, Sweden.

Fooladi, E. (2017). *“Aesthetic” and “analytic” in concert – Combining multisensory experience and inquiry*. Paper presented at the ESERA 2017 conference, Dublin City University, Ireland.

Fooladi, E. (2017). *Does school science provide answers to “everyday life” questions? Student choices of information sources in open-ended inquiry*. Paper presented at the NFSUN 2017 conference, NTNU, Trondheim.

Tuomisto, M., Vanhanen, J., Fooladi, E., & Aksela, M. (2016). *Close neighbours but different interests? A comparison of Home Economics curricula from three Nordic countries*. Poster presented at the XXIII IFHE World Congress 2016, Daejeon, South Korea.

Fooladi, E., Vanhanen, J., Tuomisto, M., & Aksela, M. (2016). *Linking Home Economics and Science Curricula in Three Nordic Countries - Possibilities for Integration and Dialogue*. Paper presented at the XXIII IFHE World Congress 2016, Daejeon, South Korea.

Hopia, A., & Fooladi, E. (2015). *The porridge feud – who was right in 19th century Norway?* Paper presented at the Food Heritage and Culinary Practices International and interdisciplinary symposium, National Museum of Natural History and Université Paris-Sorbonne, Paris.

Fooladi, E., Herranen, J., Kousa, P., & Aksela, M. (2015). *What is inquiry? Student teachers' implementation of inquiry in context-based teaching.* Paper presented at the ESERA 2015 conference, Helsinki, Finland.

Fooladi, E., Tuomisto, M., Hopia, A., & Aksela, M. (2015). *Molecular gastronomy club as informal learning context for scientific and epistemic practices.* Paper presented at the ESERA 2015 conference, Helsinki, Finland.

Fooladi, E. (2015). *Walking the epistemic tightrope - Science versus craftsmanship in two science-oriented cookbooks from the 19th and 20th century.* Paper presented at the Food in Society and Culture – Research across the Social Sciences and the Humanities, University of Helsinki.

Fooladi, E., & Hopia, A. (2014). *Culinary claims as entry to the "how we know"s of science in an informal learning environment.* Paper presented at the NFSUN 2014 conference, University of Helsinki, Finland.

Fooladi, E. (2010). *"Kitchen stories" - Assertions about food and cooking as a framework for teaching argumentation.* Paper presented at the XIV IOSTE Symposium, Bled, Slovenia.

Other contributions – publications, development work and communication

Fooladi, E. C. (2021). *Teaching Argumentation and Inquiry through Culinary Claims.* In Burke, Kelly, Lavelle, & This vo Kientza (Eds.), *Handbook of Molecular Gastronomy - Scientific Foundations, Educational Practices, and Culinary Applications* (pp. 643-650). CRC Press.

Hopia, A., & Fooladi, E. (2019). *A Pinch of Culinary Science: Boiling an Egg Inside Out and Other Kitchen Tales.* London and Boca Raton: CRC press. English translation of "Kjemi på kjøkkenet - Om hvorfor kaka faller sammen og andre kjøkkenhistorier".
NSD level 1.

Hopia, A., & Fooladi, E. (2017). *Kjemi på kjøkkenet - om hvorfor kaka faller sammen og andre kjøkkenhistorier.* Oslo: Humanist forlag (book, 207 p.). Also published in Finnish by Gaudeamus publishers under the name "Hyppysellinen tiedettä - valeomenapiirakka ja muita kokeiluja keittiössä".

Fooladi, E. (2014). Sensibus festival, Seinäjoki, Finland

Paper presented at international trans-disciplinary seminar: "Scent and sound" - Sensory correspondences in performance and education.

Geitmyra matkultursenter for barn, Oslo

A number of online teaching resources (<https://www.geitmyra.no/verkty>). 2011 – 2012

TV appearances:

- NRK, Schrödingers katt 20.10.2011. On miracle fruit and the physiological effect of miraculin
- Praktisk info med Jon Almaas 30.04.2019. On cooking eggs

Main contributor to Naturfagsenteret's online portal for educational resources www.naturfag.no/mat.

Main contributor to the Norwegian National Centre for Science Education's online portal for educational resources www.naturfag.no/mat

Blog: <http://fooducation.org> (2005 – present)

Peer review assignments, research journals

Journal/anthology	Year(s): no. manuscripts
Acta Didactica Norge, anniversary edition	2017 (4)
Fjordantologien 2020, research anthology from Fjordkonferansen 2019	2020 (1)
International Journal of Gastronomy and Food Science	2014 (1), 2018 (3), 2023 (2)
Kyrkjefag profil, research anthology	2018 (1)
LUMAT – Int. Journal on Math, Science and Technology Education	2022 (1)
NorDiNa,	2014 (1), 2017 (1), 2019 (4)
Science Education	2020 (1), 2022 (1)
Science & Education	2011 (1), 2012 (1), 2019 (1), 2020 (1), 2022 (1)

Peer review assignments, research conferences

ESERA 2015, 2017 and 2019 conferences. Reviewer for several extended conference abstracts

NFSUN 2017 conference. Reviewer for several extended conference abstracts

IOSTE 2018 conference. Reviewer for five extended conference abstracts

Commissions and other academic assignments

First opponent for PhD dissertation at Dept. of Food Science, Aarhus University, Denmark. 15 June 2022.

Opponent for PhD dissertation at Aarhus Universitet, Denmark. June 2022.

Member of editorial board for International Journal of Gastronomy and Food Science for the period 2020-present.

Rating review of an individual researcher's eight-year research output quality and impact. National Research Foundation (NRF) of South Africa (2020).

Member of the academic board for journal *LUMAT - Research and Practice in Math, Science and Technology Education* at University of Helsinki for the period 2017-2021.

Commission for promotion of one candidate to førstelektor (HSN), autumn 2017. Subject domain: Mat og helse.

External member in commissions for employment in academic positions on associate professor level in Norway: Bergen University College / Western University of Applied Sciences (2012, 2016 & 2019), Nord Universitet (2016), University of Bergen (2016), University of Agder (2018 & 2018), NTNU (2019 & 2020).

Norwegian teacher education reform 2009-2010, member of committee for development of science curriculum guidelines in national primary/secondary teacher education (grunnskolelærerutdanning, GLU).

Projects and grants

2023-24 – Partner in project funded by NordForsk call for Exploratory Workshops 2022 (429 000 NOK): Proposal 136366: “Olfactory cultural studies”. Interdisciplinary two-year project featuring cultural studies (A.-V. Villén, Uniarts Helsinki, PI), design and consumer behavior (Q. J. Wang, Univ. Copenhagen), food science (Anu Hopia, Univ. Turku) and communication (E. Fooladi, Volda Univ. College).

2021 – Grant for coordination and collaboration activity. Norwegian research council & Møre og Romsdal county, “Forsker til låns” (200 000 NOK). Collaboration with Atlanterhavsparken aquarium and science museum, Ålesund. Development of interdisciplinary food-related activities for school class visits.

2018 – Grant from Apoteker Harald Conrad Thaulows legat (75 000 NOK) for science communication through conducting open food science workshops.