

Continuing Engineering Education (CEE) & Lifelong Learning (LLL) SIG - 45 years young (2025)

The new world of CEE: progress through cooperation & knowledge sharing (1980s)

- The Continuing Engineering Education Working Group was born at the **SEFI Conference, Paris, 1980** (reflecting worldwide interest in Continuing Education facilitated by UNESCO Working Group - WGCEET).
- CEE was new emergent mission and opportunity for universities and industry.
- This period saw an **open-minded, collaborative approach** helped individuals and institutions learn and exchange knowledge through **annual working group seminars** (Nancy, 1981; London, 1982; Esslingen, 1983; Dublin, 1985; Vienna, 1986; L'Aquila, 1987, Stuttgart, 1988, Balatonfüred, 1989) in a then-fragmented European Higher Education system.
- SEFI was founding member of International Association for Continuing Engineering Education (IACEE) in 1989.
- **Special issues on CEE** in EJEE: Vol 10 (3 & 4) [Editor: M. Harthill]; Vol. 14 (1), 1989 [Editor – Markku Markkula].



European Journal of Engineering Education, Vol. 10, Nos 3 & 4, 1985

Editorial

M. J. HARTILL

The *European Journal of Engineering Education* once again returns to the theme of Continuing Education for Engineers (CEE).

European Journal of Engineering Education, Vol. 14, No. 1, 1989 3

EDITORIAL

IACEE—a Framework for International Co-operation

MARKKU MARKKULA, *Chairman, SEFI Working Group on Continuing Engineering Education*

Key contributors to SIG:

- ❑ **Niels Krebs Ovesen** (Danish Engineering Academy): Chair [1980 - 1986].
- ❑ **Markku Markkula** (Helsinki University Centre for Continuing Education/Lifelong Learning Institute Dipoli): Chair [1986 - 1992].
- ❑ **Maurice Harthill** (Institute of Mechanical Engineers, UK): Secretary [1986 - 1987].



(1st, 5th, and 6th from the left: C. Padfield, T. Hedberg and A. Laloux at the Lulea Annual Conference, 1993)

European Journal of Engineering Education, Vol. 18, No. 2, 1993 123

Editorial Continuing Engineering Education

D. SEITZER

Expansion of CEE and LLL within Europe (EU) - 1990s/2000s

- **Annual Working Group** meetings continued (Hague, 1990; Leuven, 1991; Cambridge, 1992; Eindhoven, 1993; Vienna, 1994; Trondheim, 1995; Alicante, 1986; Lyon, 1997; Budapest, 1998; Porto, 1999; Espoo, 2000; Vienna, 2001; Tallinn, 2004).
- Development of **EuroPro (European Professional Degree)** with objective “to develop a framework for continuing professional development of engineers” (see Markkula, Miettinen & Lindquist, 1993 for information) paper in EJEE, Vol 18 (2).
- 1991 - **European Continuing Engineering Education Network (EuCEENet)** launched— see Horvat and Reichl (1993).
- 1992 – Baltic Subgroup of the Task Force for Eastern European funded by TEMPUS.
- 1993 - **Special issue on CEE** in EJEE, Vol., 18 (2) (Editor: D. Seitzer).
- **Expansion of CEE within Europe:** ‘East-West Cooperation in CEE’ (1991 publication, from 1989 Budapest meeting)
- **1996 SEFI conference** was focused on lifelong learning (Vienna) – European Year of Lifelong Learning.
- 1997 – Thematic Network Engineering Education for Europe (**THENUCE**) project launches (Co-ordinator Viktor de Kosinsky).
- 1998 - **FACILE** project around Distance Learning for CEE.
- 2006 – SEFI SIG active partners of Socrates Thematic Network **TREE (Teaching and Research in Engineering in Europe)** around [sustainability competences](#).

Key contributors to SIG:

- ❑ **Markku Markkula** (Helsinki University Centre for Continuing Education/Lifelong Learning Institute Dipoli): Chair [1986 – 1992].
- ❑ **Anders Hagstrom** (Helsinki University Centre for Continuing Engineering Education): Secretary [1989; 1996 – 2000].
- ❑ **Christopher Padfield** (University of Cambridge): Chair [1992 – 1998].
- ❑ **Michel Futin** (Ecole Centrale de Lyon) & **Alexander van den Eijnde** (TU Eindhoven): Vice-Chairs [1996 - 1997]
- ❑ **Patricio Montesinos** (Universidad Politecnica de Valencia): Chair [1998-2003]; Co-Chair [2004-2006].
- ❑ **Juhani Rautiainen** (Helsinki University of Technology): Vice-Chair [1998 – 2000].
- ❑ **Markku Markkula** (Aalto University): Chair [2004 - 2011].
- ❑ **Tapio Koskinen** (Aalto University): Secretary [2004 – 2006].



Helsinki, 2000

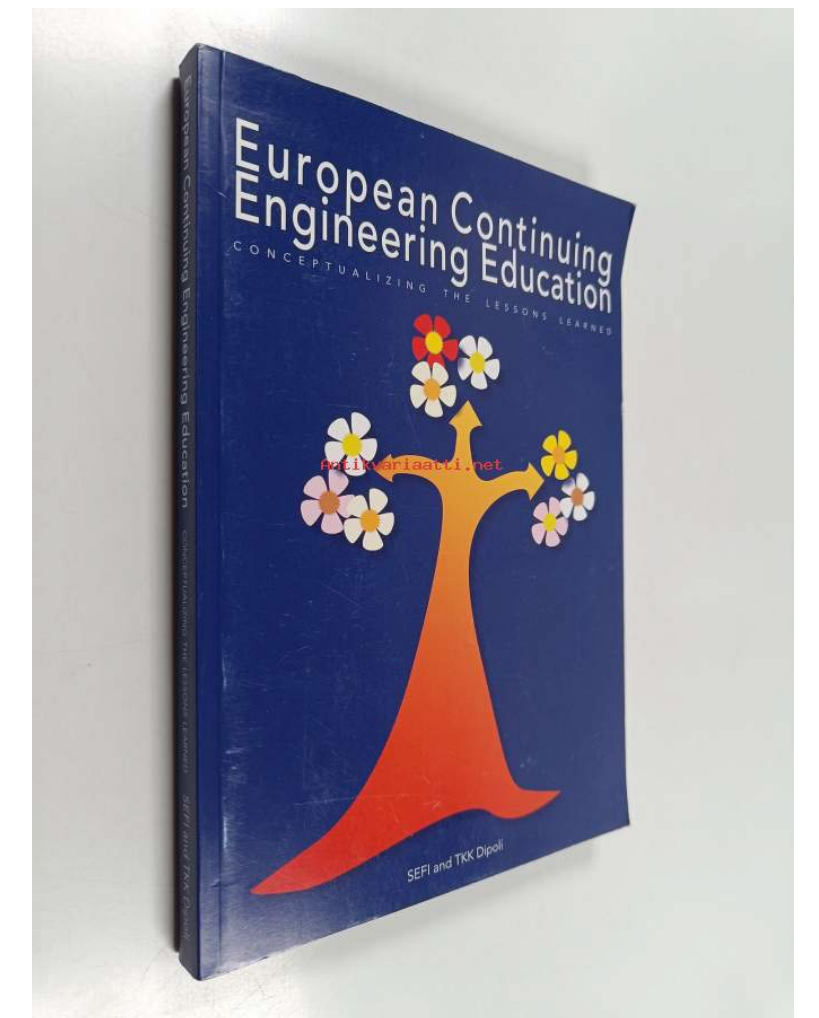


Christopher Padfield, Patricio Montesinos, and Markku Markkula (Japan, 2021)

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Recent history and where now? (2005 to 2025)

- **Annual Working Group** meeting – final one in Dublin (2005) on *Knowledge Management – concept, tools and practice*, reflecting broad coverage of CEE.
- **Evolution of Lifelong Learning Centres** with emphasis on **Third Mission of Universities** (more entrepreneurial university – see Carrión García et al., 2012 – including Alfredo Soeiro, Mike Murphy and Christopher Padfield as co-authors) and different models (e.g., de-centralised) – see perspective from Kirsti Miettinen in SEFI@40 short [article](#) on CEE/LLL. Also, the '[Knowledge Triangle: Reinventing the Future](#)' (eds. Pia Lappalainen & Markku Markkula).
- **Self-assessment matrix for CE organisations** resulted from DAETE (Development of Accreditation in Engineering Training & Education project, 2006-2011), e.g., see Soeiro (2020) that gives some history.
- 2009 book: *Collating European Continuing Engineering Education – Conceptualising the Lessons Learned* (eds. Markku Markkula & Pia Lappalainen).
- 2013 – *The Knowledge Triangle*
- **Impact of digitalisation and globalisation** came to the fore in this period and continue to do so.
- 2023 – 2025 **Recent work** has continued to focus on different aspects, including 1) what we are offering in CEE, 2) how we are offering CEE, 3) to whom are we offering, and 4) how we support those that deliver CEE.
- 2024/2025 - **Increased collaboration** between CEE and other SIGs is taking place, e.g., around LLL competences, and strategic co-operation with IACEE.
- 2025 - **SEFI Position Paper on Lifelong Learning** – a basis for our future discussions and work.



August 2025

SEFI POSITION AND LONG-TERM PLAN ON LIFELONG LEARNING

Drivers for Lifelong Learning (LLL) in Engineering Education
Engineering is recognised as playing a crucial role in delivering the UN Sustainable Development Goals (UNESCO, 2021) and contributing to responsible socio-economic development (EWB, 2022; Maloney and Caicedo, 2022). An updated set of competences needs to be nurtured and maintained by engineers throughout their working life to allow them to contribute to responsible innovation, development, and use of current and emergent technologies and systems.

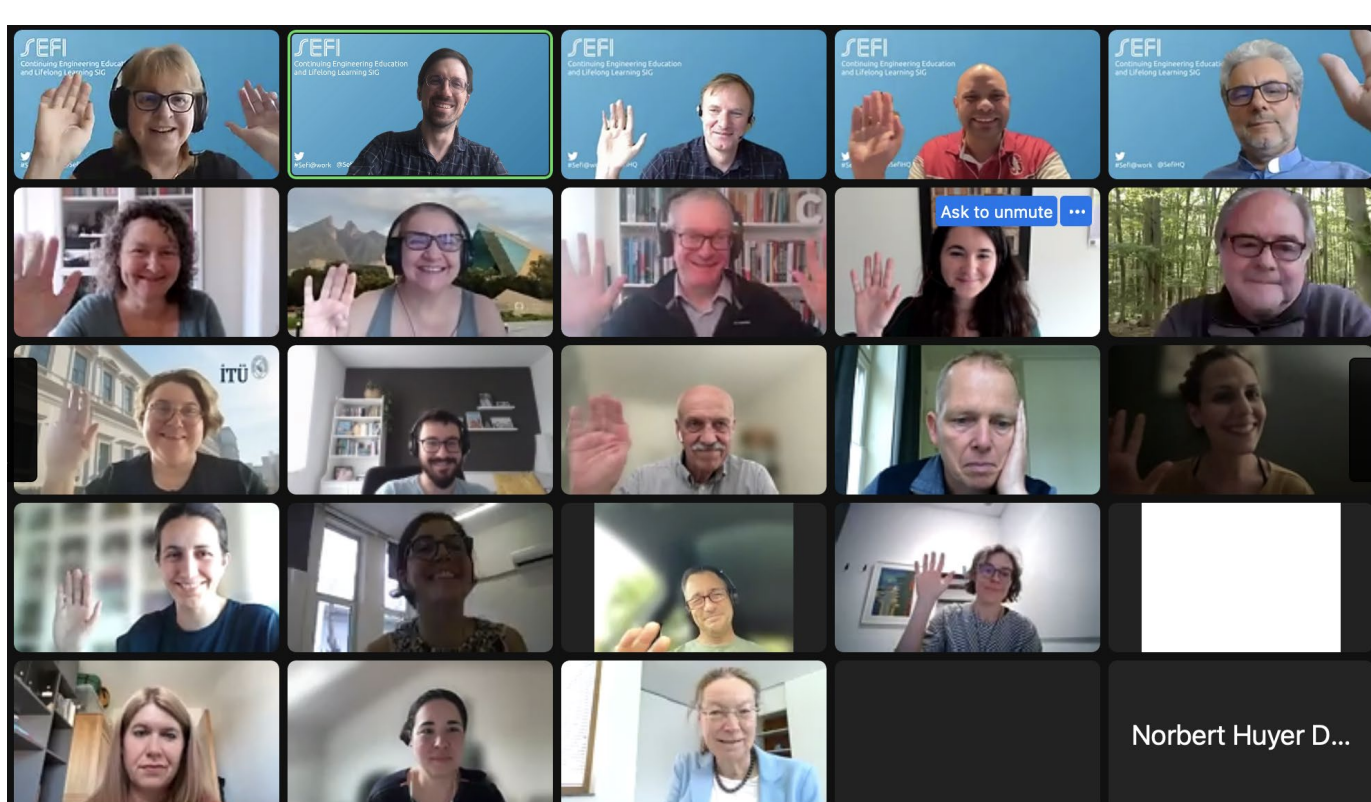
Key contributors to SIG:

- ☐ **Kirsti Miettinen** (Aalto University Professional Development): Chair [2012- 2014].
- ☐ **Bente Norgaard** (Aalborg University): Chair [2015 – 2021].
- ☐ **Aniko Kalman** (Budapest University of Technology & Economics;): Co-Chair [2020 – present].
- ☐ **Christopher Smith** (Glasgow Caledonian University): Co-Chair [2021 - present].

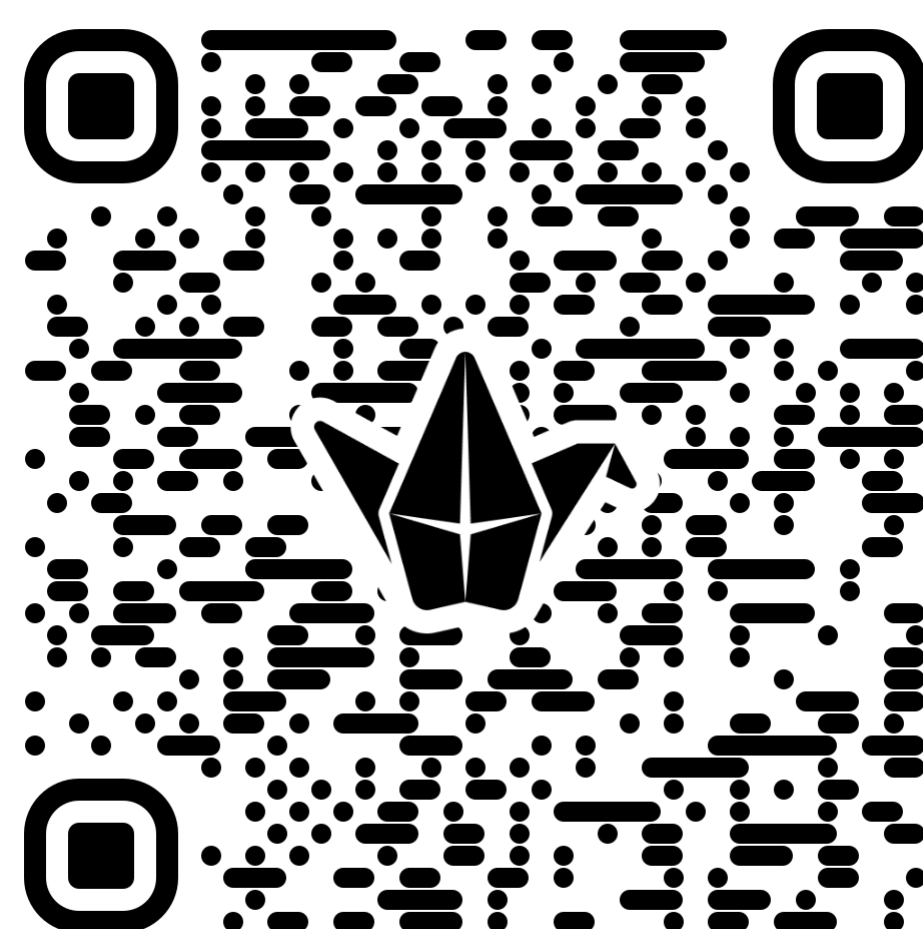
Some key outputs/references

- Borri, C. and Maffioli, F. (2007) *TREE: Teaching and Research in Engineering in Europe*.
- Carrión García, Andrés & Carot, Jose & Soeiro, Alfredo & Hämäläinen, Kauko & Boffo, Stefano & Pausits, Attila & Murphy, Mike & Marhl, Marko & Vidal, Javier & Mora, Jose & Padfield, Christopher. (2012). Green Paper. Fostering and Measuring 'Third Mission' in Higher Education Institutions. 10.13140/RG.2.2.25015.11687.
- Horvat, M. and Reichl, F. (1993) 'EuCEENet: European Continuing Engineering Education Network', *European Journal of Engineering Education*, 18(2), pp. 191–199. doi: 10.1080/03043799308923233.
- Klus, J.P., Markkula, M., Venho, J., JARVENPM, A., Sirkeinen, U. and AHLROOS, R., 1985. Effective technology transfer. Helsinki: Katkaoffset.
- Lappalainn, P & Markkula, M. (2009) *European Continuing Engineering Education Conceptualizing the Lessons Learned*
- Markkula, M., Miettinen, K. and Lindquist, K. (1993). EuroPro: A Project to Create a European Professional Development Degree. *European Journal of Engineering Education*, 18(2), pp.155-159.

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SEFI@work session on microcredentials, June 2024



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