**Curriculum vitae with track record (for researchers)**

**\* ROLE IN THE PROJECT** Project manager  Work package leader  Project partner   
 **\* PERSONAL INFORMATION**

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| --- | --- | --- | --- |
| \*Family name, First name: | Kanstad, Terje | | |
| \*Date of birth: | 13.09.1957 | \*Sex: | Male |
| \*Nationality: | Norwegian | | |
| Researcher unique identifier(s)  (ORCID, ResearcherID, etc.): | <https://orcid.org/0000-0003-0760-2322> | | |
| URL for personal website: | <https://innsida.ntnu.no/person/kanstad> | | |

**\* EDUCATION**

|  |  |
| --- | --- |
|  | Name of faculty/department, name of university/institution, country |
| 1990 | Ph.D. Division of concrete structures, The Norwegian Institute of technology, NTH, Norway |
| 1981 | Master’s, Division of concrete structures, The Norwegian Institute of technology, NTH, Norway |

**\* POSITIONS** (academic, business, industry, public sector, national or international organisations)

**Current Position**

|  |  |
| --- | --- |
|  | Job title/name of employer/country |
| 2000- | Professor, The Norwegian University of Science and Technology, NTNU, Norway |

**Previous positions held** (list)

|  |  |
| --- | --- |
|  | Job title/name of employer/country |
| 1982-1984 | Sivilingeniør Arne R. Reinertsen, Trondheim, Norway |
| 1985-2000 | Research fellow (stipendiat), Assistant prof, Associate prof, NTNU, Norway |

**MOBILITY** (if applicable)

**Research stays abroad lasting more than three months**

|  |  |
| --- | --- |
|  | Name of faculty/department/centre, name of university/institution/country |
| 1994(6 months) | Faculty of civil engineering and geoscience, TU Delft, Delft, The Netherlands |

**PROJECT MANAGEMENT EXPERIENCE** (if applicable)

**Projects funded by Research Council of Norway, international research programmes, private or public organisations**

|  |  |
| --- | --- |
|  | Project and role, funding from |
| 2009-2014 | Project-manager sub-project: Competitive construction, and board member in SFI COIN(2007-2014). Funding from research council and industry. |
| 2015-2019 | Project manager, DaCS. BIA-project Funding from research council and industry. |
| 2017-2021 | Sub-project manager, ARKON, A sub-project related to the structural consequences of ASR in bridges funded by NTNU and the 5-year R&D programme for bridges and quays “Better Bridge Maintenance” by the Norwegian Public Roads Administration |
| 2018-2022 | Project manager “Ferry free E39-Research related to sustainable performance, analysis and design of large-scale advanced concrete structures in exposed environments” |
| 2021-2025 | Work-package leader, MESLA (Management and Extension of Service Life of infrastructures affected by Alkali‐silica reaction). Structural analysis. |
| 2021-2025 | Work-package leader, Fibercon: Fibre reinforced concrete structures. BIA-project with funding from research council and industry. |
| 2021-2022 | Project manager, “Dynamic behaviour, safety and robustness of hollow core slabs in the construction phase”. Funded by the Norwegian precast concrete industry. |

**SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS** (if applicable)

|  |  |  |  |
| --- | --- | --- | --- |
|  | No. of | Master’s students/ Ph.D./Postdocs | Name of faculty/department/centre, name of university/institution/country |
| 1989- | 350 | Master thesis (main supervisor) | Department of structural engineering, The Norwegian University of Science and Technology, NTNU, Norway |
| 1998- | 14+7 | Ph thesis (main supervisor + co-supervisor) | Department of structural engineering, The Norwegian University of Science and Technology, NTNU, Norway |
| 2017- | 1 | Ph thesis (main supervisor) | Department of engineering science, University of Agder, Grimstad, Norway |

**TEACHING ACTIVITIES** (The last ten years)

|  |  |
| --- | --- |
|  | Teaching position – topic, name of university/institution/country |
| 2010-2017 | TKT 4220 Concrete structures 2 (4th year of study programme) NTNU |
| 2017- | TKT 4222 Concrete structures 3 (5th year of study programme), NTNU |
| 2010- | KT 8214 Creep and shrinkage of concrete structures (PhD-level), NTNU |
| 2017-2023 | BYG 406 Prestressed concrete (4th year of master programme, University of Agder, Grimstad. Norway |
| 2010- | Lectures and responsibilities for industrial courses (Centre for Continuing Education and Professional Development at NTNU, Tekna and the Norwegian Concrete Association) |
| 2021 | Lectures at the *fib*-supported International “Summer school for PhD-students and the industry”. Politecnico di Milano, Lecco Campus, Italy. |

**INSTITUTIONAL RESPONSIBILITIES** (if applicable)

**Member of a committee/graduate student advisor etc.**

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| --- | --- |
|  | Name of university/institution/country |
| 2000- | PhD evaluation committees: 21 (Sweden (Luleå, KTH, Chalmers & Lund), Denmark (DTU), Lithuania (Kaunas), Austria (TUGraz) Switzerland (ETH) & Italy (Brescia) |
| 2000- | International committees for assessment of qualifications: 8 (Sweden, Denmark and Finland) |

**COMMISSIONS OF TRUST** **IN ACADEMIC, PUBLIC OR PRIVATE ORGANISATIONS** (if applicable)

**Scientific advisory board/review board/review panel member/editorial board/scientific advisory board/reviewer/scientific evaluation/etc.**

|  |  |
| --- | --- |
|  | Name of university/institution/country – and role |
| 2000- | Materials and structures, Engineering structures, Construction and building materials Nordic concrete research. Cement and concrete research, Structures. Reviewer of journal papers |
| 2011-2015 | Evaluation of Swedish BSc and MSc-education, Department of Quality Assurance /Swedish Higher Education Authority. [www.uka.se](http://www.uka.se) . |

**Other commissions of trust - in business, organisations or public life**

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| --- | --- |
|  | Name of board/body/country – and role |
| 2016- | SN/K 007 (Standards Norway) The reference group for all concrete standards, Chairman. |
| 2017- | SN/K 370 (Standards Norway) Coordination group for all the Eurocodes. Member. |

**MEMBERSHIPS OF ACADEMIES / SCIENTIFIC SOCIETIES / NETWORKS** (if applicable)

|  |  |
| --- | --- |
|  | Name of academies, scientific societies, networks |
| Present memberships | *fib* TG 8.3 Fibre reinforced concrete,  fib task Group 8.8 “Structural design with highly flowable concrete  *fib* AG 13 Model Code 2020 Reinforced concrete properties,  fib TG 4.5 Time-dependent Behavior of Concrete  *fib* TG 10.1 - SAG on Fibre Reinforced Concrete in MC2020  RILEM TC - Interdisciplinary approach to early age and long-term crack width analysis in RC structures: From material science to structural design  CEN/TC 250/SC 2/WG 1/ (Revision of Eurocode 2) Working group Coordination and Editorial Panel  CEN/TC 250/SC 2/WG 1/ (Revision of Eurocode 2) TG 7 Time-dependent effects. Main responsibility for the Annex related to evaluation of early-age and long-term cracking due to restraint  CEN/TC 250/SC 2/WG 1/ (Revision of Eurocode 2), TG 2 Fibre reinforced concrete  CEN/TC 250/SC 2/PT3 Project team for writing of Eurocode 2 (main responsibility for the Steel Fibre Concrete Annex)  Norwegian Concrete Association committee for fibre concrete, NB 38  Norwegian Concrete Association committee for strengthening with carbon fibre reinforced polymers, NB 36  2014-2018. COST-action TU1404 Towards the next generation of standards for service life of cement-based materials and structures. Member of core group. |

**Track record**

**The total number of publications** (April2025)**:** Total number of publications during the career: Scopus system 69, Cristin (NTNU-system): 294.

Citationsindices **:** **Scopus total citations** 796 **;** h-index: 17

**Selection of Publications (2018-2025):**

1. Terjesen, Otto; Pinto, Gianclaudio; Kanstad, Terje; Tan, Jesus Reignard Medel.  
   Performance study of crack width calculation methods according to Eurocodes, fib model codes and the modified tension chord model. *Structural Concrete* 2024 p. -
2. Jacobsen, Stefan; Asadi, Iman; Skjølsvold, Ola; Kanstad, Terje. Frost testing non-air entrained supplementary cementitious materials high performance concrete: salt-scaling and internal damage. University of British Columbia Press 2023 (ISBN 9780888654915)
3. Kanstad, Terje; Cantero, Daniel; Ji, Guomin; Kristoffersen, Martin; Kjeldsatad, paal; Løseth, Ole Johan. Hollow core slabs during assembly process – structural behaviour and strength during positioning of elements. Betongindustridagene 2023; 2023-01-26 - 2023-01-27
4. Kanstad, Terje; Cantero, Daniel; Kristoffersen, Martin; Ji, Guomin. Hollow core slabs in the assembly process - Structural behaviour and strength during positioning of elements. Trondheim: NTNU Department of Structural Engineering 2023 (ISBN 978-82-7482-203-0) 47
5. Lin, Chen; Kanstad, Terje; Jacobsen, Stefan; Ji, Guomin. Bonding property between fiber and cementitious matrix: A critical review. *Construction and Building Materials* 2023 ;Volume 378.(131169) p. –
6. Pérez Caldentey, Alejandro; Bellod Thomas, Juan Luis; Torres, Lluis; Kanstad, Terje.  
   Serviceability Limit States According to the New Eurocode 2 Proposal: Description and Justification of the Proposed Changes. *Hormigón y Acero* 2023 ;Volume 74.(299/300)
7. Stemland, Kathrine Mürer; Johansen, Håvard; Kanstad, Terje. Load Effects of ASR-induced Expansion in Reinforced Concrete and Their Consequences for Structural Assessment. *Nordic Concrete Research* 2023 ;Volume 68.(68) p. 39-63
8. Arano Barenys, Assis; Colombo, Matteo; Martinelli, Paolo; Overli, Jan Arve; Hendriks, Max; Kanstad, Terje; Prisco, Marco di. Failure characteristics of reinforced concrete circular slabs subsequently subjected to fire exposure and static load: An experimental study. *Structural Concrete* 2022 ;Volume 24.(1) p. 872-891
9. Kanstad, Terje; Jacobsen, Stefan; Klausen, Anja Birgitta Estensen; Skjølsvold, Ola.  
   Eco-friendly high-performance concretes: From particle packing to bridge tower design for record long suspension bridges along the ferry-free E39. XXIV Nordic Concrete Research Symposium 2022; 2022-08-16 - 2022-08-19
10. Klausen, Anja Birgitta Estensen; Kanstad, Terje; Bjøntegaard, Øyvind. The cracking risk of hardening concrete exposed to realistic curing temperature regimes and restraint conditions – Experimental investigations of important parameters. *Construction and Building Materials* 2022 ;Volume 338. p. –
11. Kongshaug, Simen Sørgaard; Hendriks, Max; Kanstad, Terje; Markeset, Gro. Toward identifying the ASR-induced stresses from displacement measurements and crack observations—Demonstration on a beam bridge in Norway. *Engineering structures* 2022 ;Volume 263. p.
12. Lindgård, Jan; Kanstad, Terje; Pedersen, Bård Magne; Rodum, Eva. Management and Extension of Service Life of infrastructures affected by Alkali‐silica reaction (MESLA). I: *XXIV Nordic Concrete Research Symposium 2022*. Stockholm, Sweden: Swedish Concrete Association 2022 ISBN 978-82-8208-056-9.
13. Menga, Antonia; Kanstad, Terje; Cantero, Daniel. Corrosion induced failures of post-tensioned bridges. Trondheim: NTNU, Department of Structural Engineering 2022 (ISBN 978-82-7482-200-9) 155 p.
14. Menga, Antonia; Kanstad, Terje; Klausen, Anja Birgitta Estensen. Effect of cement type on autogenous deformation under isothermal and realistic curing conditions. XXIV NCR Symposium; 2022-08-17 - 2022-08-19
15. Menga, Antonia; Kanstad, Terje; Klausen, Anja Birgitta Estensen. Evaluation Of Early Age Cracking Due to Restraint: Verification of the Simplified Stress Calculation Method Prposed in prEN 1992-1-1. I: *Proceedings of the 6th fib International Congress, June 12-16, 2022, Oslo, Norway*. : fib 2022 ISBN 978-2-940643-15-8. p. 2638-2647
16. Menga, Antonia; Kanstad, Terje; Klausen, Anja Birgitta Estensen. Property development and volume changes in early age concrete. XXIV NCR Symposium; 2022-08-17 - 2022-08-19
17. Osmolska, Magdalena Jadwiga; Kanstad, Terje; Hendriks, Max; Markeset, Gro.  
    Numerical investigation into the effects of corrosion on the shear performance of pretensioned bridge girders with cast-in-place slabs. *Structures* 2022 ;Volume 46. p. 1447-1468
18. Stemland, Kathrine Mürer; Rodum, Eva; Kanstad, Terje. Stiffness damage testing of laboratory-cast alkali-silica reactive concrete and cores drilled from an existing concrete structure. I: *Proceedings of the 16th International Conference on Alkali-Aggregate Reaction in Concrete. Volume I*. : LNEC 2022 ISBN 978-972-49-2315-4.
19. Terjesen, Otto; Kanstad, Terje; Tan, Jesus Reignard Medel. Application of NLFEA for crack width calculations in SLS. Computational Modelling of Concrete and Concrete Structures; 2022-05-23 - 2022-05-26
20. Guomin Ji, Terje Kanstad, Steinar Trygstad; Structural behavior of fiber reinforced concrete foundations, Euro-C, Vienna, May 2022.
21. Otto Terjesen, Terje Kanstad, Reignard Tan; Application of NLFEA for crack width calculations in SLS, Euro-C, Vienna, May 2022.
22. Stemland, Kathrine, Rodum, Eva, and Kanstad, Terje; Stiffness damage testing of laboratory cast alkali-silica reactive concrete and cores drilled from a real concrete structure, Lisbon, Portugal, May 2022.
23. Kanstad, Terje, Jacobsen, Stefan, Klausen, Anja; Eco-friendly high-performance concretes: From particle packing to bridge tower design for record long suspension bridges along the ferry-free E39. Fib-congress, Oslo 2022.
24. Menga, Antonia, Klausen, Anja, & Kanstad, Terje; Evaluation of early age cracking due to restraint: verification of the simplified stress calculation method proposed in prEN 1992-1-1 . Fib-congress, Oslo 2022.
25. Cantero, Daniel; Kanstad, Terje. Numerical investigations of damaged post-tension systems and their structural effect on bridges. Trondheim: NTNU, Department of Structural Engineering 2022 (ISBN 978-82-7482-202-3) 75 p.
26. Menga, Antonia; Kanstad, Terje; Cantero, Daniel. Corrosion induced failures of post-tensioned bridges. Trondheim: NTNU, Department of Structural Engineering 2022 (ISBN 978-82-7482-200-9) 155 p.
27. Kongshaug, Simen Sørgaard; Larssen, Rolf Magne; Hendriks, Max; Kanstad, Terje; Markeset, Gro. Load effects in reinforced concrete beam bridges affected by alkali–silica reaction—Constitutive modelling including expansion, cracking, creep and crushing. Engineering structures 2021 ;Volum 245. s. 1-17
28. Kanstad, Terje. Mechanical characterization and classification of fibre-reinforced materials. Structural design approach according to Eurocode 2020 (4 lectures). Summer school for PhD-students and the industry; 2021-07-02 - 2021-07-07
29. Kanstad, Terje; Jacobsen, Stefan. Green Concrete mix design: Robust Eco-friendly C100 concrete from particle packing to bridge tower analysis in the «Ferry-free E39-project». Konferanse Nordisk Vegforum (NVF) - Bru; 2021-05-19 - 2021-05-19
30. Arano Barenys, Assis; Colombo, Matteo; Martinelli, Paolo; Øverli, Jan Arve; Hendriks, Max; Kanstad, Terje; Prisco, Marco di. Material Characterization Approach for Modelling High-Strength Concrete after Cooling from Elevated Temperatures. *Journal of materials in civil engineering* 2021 ;Volume 33.(5) p. –
31. Colombo, Matteo; Martinelli, Paolo; Arano Barenys, Assis; Øverli, Jan Arve; Hendriks, Max; Kanstad, Terje; Prisco, Marco di. Experimental investigation on the structural response of RC slabs subjected to combined fire and blast. *Structures* 2021 ;Volume 30. p. 1017-1030
32. Klausen, Anja Birgitta Estensen; Kanstad, Terje. The effect of shrinkage reducing admixtures on drying shrinkage, autogenous deformation, and early age stress development of concrete. *Structural Concrete* 2021 ;Volume 22.(51) p. E596-E606
33. Azenha, Miguel; Kanavaris, Fragkoulis; Schlicke, Dirk; Jędrzejewska, Agnieszka; Benboudjema, Farid; Honorio, Tulio; Šmilauer, Vít; Serra, Carlos; Forth, John; Riding, Kyle; Khadka, Binod; Sousa, Carlos; Briffaut, Matthieu; Lacarrière, Laurie; Koenders, Eduardus; Kanstad, Terje; Klausen, Anja Birgitta Estensen; Torrenti, Jean-Michel; Fairbairn, Eduardo M. R..  
    Recommendations of RILEM TC 287-CCS: thermo-chemo-mechanical modelling of massive concrete structures towards cracking risk assessment. *Materials and Structures* 2021 ;Volum 54.(4) s.
34. Menga, Antonia; Kanstad, Terje; Cantero, Daniel; Bathen, Lise; Hornbostel, Karla.  
    Review of corrosion-induced failures of post-tensioned bridges. CACRCS DAYS 2021 Capacity Assessment of Corroded Reinforced Concrete Structures: from Research to Daily Engineering Evaluation; 2021-11-30 - 2021-12-03
35. Kongshaug, Simen Sørgaard; Oseland, Oddbjørn Wathne; Kanstad, Terje; Hendriks, Max; Rodum, Eva; Markeset, Gro. Experimental investigation of ASR-affected concrete – The influence of uniaxial loading on the evolution of mechanical properties, expansion and damage indices. *Construction and Building Materials* 2020 ;Volume 245. p. –
36. Kanstad, T. (on behalf of CEN/TC250/SC2 Project Team T3): Background document to prEN1992-1-1 D4 Rev 6 Annex L Steel Fibre Reinforced Concrete (SFRC)). 2020.
37. Kanstad, T., Døssland, Å.L., Sandbakk, S., Bjøntegaard, Ø., Sæter, Ø., Mathisen, A.E., Leirud, N., Brå, H., Sandaker,T.: Norsk Betongforening's Publikasjon nr. 38 "Fiberarmerte betongkonstruksjoner" (NB38), 2020.
38. Osmolska, Magdalena Jadwiga; Hornbostel, Karla; Kanstad, Terje; Hendriks, Max; Markeset, Gro. Inspection and assessment of corrosion in pretensioned concrete bridge girders exposed to coastal climate. *Infrastructures* 2020 ;Volume 5.(9) p. 1-25
39. Klausen, Anja Birgitta Estensen; Kanstad, Terje; Bjøntegaard, Øyvind; Sellevold, Erik Johan.  
    The effect of curing temperature on autogenous deformation of fly ash concretes. *Cement & Concrete Composites* 2020 ;Volume 109. p. –
40. Tan, Jesus Reignard Medel; Hendriks, Max; Geiker, Mette Rica; Kanstad, Terje. A numerical investigation of the cracking behaviour of reinforced-concrete tie elements. Magazine of Concrete Research 2020 ;Volum 72.(3) s. 109-12
41. Tan, Jesus Reignard Medel; Hendriks, Max; Geiker, Mette Rica; Kanstad, Terje.  
    Analytical Calculation Model for Predicting Cracking Behavior of Reinforced Concrete Ties. Journal of Structural Engineering 2020 ;Volum 146.(2) s. –
42. Arano Barenys, Assis; Øverli, Jan Arve; Hendriks, Max; Colombo, Matteo; Martinelli, Paolo; Kanstad, Terje; Prisco, Marco di. Heated Reinforced Concrete Slabs Subjected to Blast Load: Experimental and Numerical Results. fib Symposium on Concrete Structures for Resilient Society; 2020-11-22 - 2020-11-24
43. Paciorek, Magdalena Jadwiga; Kanstad, Terje; Hendriks, Max; Hornbostel, Karla; Markeset, Gro. Durability of pretensioned concrete girders in coastal climate bridges: Basis for better maintenance and future design. *Structural Concrete* 2019 ;Volume 20.(6) p. 2256-2271
44. Klausen, Anja Birgitta Estensen; Kanstad, Terje; Bjøntegaard, Øyvind. Hardening Concrete Exposed to Realistic Curing Temperature Regimes and Restraint Conditions: Advanced Testing and Design Methodology. *Advances in Materials Science and Engineering* 2019 ;Volume 2019. p. -
45. Tan, Jesus Reignard Medel; Hendriks, Max; Geiker, Mette Rica; Kanstad, Terje.   
    Modified cracked membrane model for consistent crack width predictions of reinforced concrete structures subjected to in-plane loading. *Engineering structures* 2019 ;Volum 196.
46. Basteskår, Mikael; Engen, Morten; Kanstad, Terje; Fosså, Kjell Tore. A review of literature and code requirements for the crack width limitations for design of concrete structures in serviceability limit states. *Structural Concrete* 2019 ;Volume 20.(2) p. 678-688
47. Basteskår, Mikael; Engen, Morten; Kanstad, Terje; Johansen, Håvard; Fosså, Kjell Tore.  
    Serviceability limit state design of large concrete structures: Impact on reinforcement amounts and consequences of design code ambiguity. *Engineering structures* 2019 ;Volume 201.
48. Larsen, Ingrid Lande; Terjesen, Otto; Thorstensen, Rein Terje; Kanstad, Terje. Use of Concrete for Road Infrastructure: A SWOT Analysis Related to the three Catchwords Sustainability, Industrialisation and Digitalisation.. *Nordic Concrete Research* 2019 ;Volume 60. p. 31-50
49. Kanstad, Terje; Klausen, Anja Birgitta Estensen. Background for a new Eurocode 2-annex: Evaluation of early-age and long-term cracking due to restrained deformations. I: *Proceedings of SynerCrete'18: Interdisciplinary Approaches for Cement-based Materials and Structural Concrete: Synergizing Expertise and Bridging Scales of Space and Time. Vol 1*. Rilem publications 2018 ISBN 978-2-35158-211-4. p. 85-90
50. Tan, Jesus Reignard Medel; Eileraas, Kristoffer; Opkvitne, Ola; Zirgulis, Giedrius; Hendriks, Max; Geiker, Mette Rica; Brekke, Dan-Evert; Kanstad, Terje. Experimental and theoretical investigation of crack width calculation methods for RC ties. *Structural Concrete* 2018
51. Klausen, Anja Birgitta Estensen; Kanstad, Terje; Bjøntegaard, Øyvind; Sellevold, Erik Johan.   
    The effect of realistic curing temperature on the strength and E-modulus of concrete. *Materials and Structures* 2018 ;Volum 51.(6) s. 1-14
52. Ji, Guomin; Kanstad, Terje; Bjøntegaard, Øyvind. Calibration of material models against TSTM test for crack risk assessment of early-age concrete containing fly ash. *Advances in Materials Science and Engineering* 2018 ;Volume 2018:1069181. p. 1-11
53. Ji, Guomin; Kanstad, Terje; Bjøntegaard, Øyvind. Crack risk evaluation of submerged concrete tunnel during hardening phase. *Advances in Civil Engineering* 2018 ;Volume 2018. p. –
54. Ji, Guomin; Kanstad, Terje; Bjøntegaard, Øyvind. Numerical modelling of field test for crack risk assessment of early age concrete containing fly ash. *Advances in Materials Science and Engineering* 2018 ;Volume 2018:1058170. p. 1-16