# Viggo Tvergaard

List of Publications by Year
in descending order



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|---|---|---|---|
| 118 papers | 13,278 citations | 38660 50 h-index | 21474 114 g-index |
| 119 all docs | 119 docs citations | 119 times ranked | 4461 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | 3D study of plastic flow localization at a void-sheet. International Journal of Mechanical Sciences, 2020, 173, 105426. | 3.6 | 4 |
| 2 | Full Three-Dimensional Cavitation Instabilities Using a Non-Quadratic Anisotropic Yield Function. Journal of Applied Mechanics, Transactions ASME, 2020, 87, . | 1.1 | 1 |
| 3 | Effects of Plastic Anisotropy and Void Shape on Full Three-Dimensional Void Growth. Journal of Applied Mechanics, Transactions ASME, 2018, 85, . | 1.1 | 11 |
| 4 | Effect of Properties and Turgor Pressure on the Indentation Response of Plant Cells. Journal of Applied Mechanics, Transactions ASME, 2018, 85, . | 1.1 | 5 |
| 5 | Plastic Flow Localization and Ductile Fracture. Journal of Physics: Conference Series, 2018, 1063, 012005. | 0.3 | 2 |
| 6 | Nucleation from a cluster of inclusions, leading to void coalescense. International Journal of Mechanical Sciences, 2017, 133, 631-638. | 3.6 | 7 |
| 7 | Application of a model of plastic porous materials including void shape effects to the prediction of ductile failure under shear-dominated loadings. Journal of the Mechanics and Physics of Solids, 2016, 94, 148-166. | 2.3 | 47 |
| 8 | Effect of void cluster on ductile failure evolution. Meccanica, 2016, 51, 3097-3105. | 1.2 | 8 |
| 9 | Ductile failure modeling. International Journal of Fracture, 2016, 201, 29-80. | 1.1 | 181 |
| 10 | Cavitation instabilities between fibres in a metal matrix composite. Acta Mechanica, 2016, 227, 993-1003. | 1.1 | 1 |
| 11 | Behaviour of porous ductile solids at low stress triaxiality in different modes of deformation. International Journal of Solids and Structures, 2015, 60-61, 28-34. | 1.3 | 34 |
| 12 | Study of localization in a void-sheet under stress states near pure shear. International Journal of Solids and Structures, 2015, 75-76, 134-142. | 1.3 | 24 |
| 13 | Effect of initial void shape on ductile failure in a shear field. Mechanics of Materials, 2015, 90, 2-9. | 1.7 | 18 |
| 14 | Numerical Simulation of Cropping. Journal of Applied Mechanics, Transactions ASME, 2014, 81, . | 1.1 | 1 |
| 15 | Bifurcation into a localized mode from non-uniform periodic deformations around a periodic pattern of voids. Journal of the Mechanics and Physics of Solids, 2014, 69, 112-122. | 2.3 | 12 |
| 16 | Statistics of ductile fracture surfaces: the effect of material parameters. International Journal of Fracture, 2013, 184, 137-149. | 1.1 | 13 |
| 17 | Effect of Contact Conditions on Void Coalescence at Low Stress Triaxiality Shearing. Journal of Applied Mechanics, Transactions ASME, 2012, 79, . | 1.1 | 35 |
| 18 | Prediction of Ductile Fracture Surface Roughness Scaling. Journal of Applied Mechanics, Transactions ASME, 2012, 79, . | 1.1 | 20 |

| # | ARTICLE | IF | CITATIONS |
|---|---|---|---|
| 19 | Collapse and coalescence of spherical voids subject to intense shearing: studied in full 3D. International Journal of Fracture, 2012, 177, 97-108. | 1.1 | 88 |
| 20 | Effect of stress-state and spacing on voids in a shear-field. International Journal of Solids and Structures, 2012, 49, 3047-3054. | 1.3 | 61 |
| 21 | Comment on â€œInfluence of the Lode parameter and the stress triaxiality on the failure of elasto-plastic porous materialsâ€•by K. Danas and P. Ponte CastaÃ±eda. International Journal of Solids and Structures, 2012, 49, 3484-3485. | 1.3 | 13 |
| 22 | On cavitation instabilities with interacting voids. European Journal of Mechanics, A/Solids, 2012, 32, 52-58. | 2.1 | 10 |
| 23 | Void shape effects and voids starting from cracked inclusion. International Journal of Solids and Structures, 2011, 48, 1101-1108. | 1.3 | 15 |
| 24 | Failure by void coalescence in metallic materials containing primary and secondary voids subject to intense shearing. International Journal of Solids and Structures, 2011, 48, 1255-1267. | 1.3 | 61 |
| 25 | Relations between a micro-mechanical model and a damage model for ductile failure in shear. Journal of the Mechanics and Physics of Solids, 2010, 58, 1243-1252. | 2.3 | 68 |
| 26 | Ductile shear failure or plug failure of spot welds modelled by modified Gurson model. Engineering Fracture Mechanics, 2010, 77, 1031-1047. | 2.0 | 171 |
| 27 | Effect of pure mode I, II or III loading or mode mixity on crack growth in a homogeneous solid. International Journal of Solids and Structures, 2010, 47, 1611-1617. | 1.3 | 22 |
| 28 | Behaviour of voids in a shear field. International Journal of Fracture, 2009, 158, 41-49. | 1.1 | 113 |
| 29 | Effect of a shear modified Gurson model on damage development in a FSW tensile specimen. International Journal of Solids and Structures, 2009, 46, 587-601. | 1.3 | 76 |
| 30 | On the formulations of higher-order strain gradient crystal plasticity models. Journal of the Mechanics and Physics of Solids, 2008, 56, 1591-1608. | 2.3 | 137 |
| 31 | A finite deformation theory of higher-order gradient crystal plasticity. Journal of the Mechanics and Physics of Solids, 2008, 56, 2573-2584. | 2.3 | 76 |
| 32 | Response to comments by J. Toribio and V. Kharin. International Journal of Solids and Structures, 2008, 45, 1149-1150. | 1.3 | 0 |
| 33 | Effect of T-stress on crack growth under mixed mode Iâ€“III loading. International Journal of Solids and Structures, 2008, 45, 5181-5188. | 1.3 | 23 |
| 34 | Shear deformation of voids with contact modelled by internal pressure. International Journal of Mechanical Sciences, 2008, 50, 1459-1465. | 3.6 | 90 |
| 35 | Analyses of Cavitation Instabilities in Ductile Metals. Key Engineering Materials, 2007, 340-341, 49-57. | 0.4 | 1 |
| 36 | Size-effects in porous metals. Modelling and Simulation in Materials Science and Engineering, 2007, 15, S51-S60. | 0.8 | 14 |

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|---|---|---|---|
| 37 | Mesh sensitivity effects on fatigue crack growth by crack-tip blunting and re-sharpening. International Journal of Solids and Structures, 2007, 44, 1891-1899. | 1.3 | 11 |
| 38 | Interface crack growth for anisotropic plasticity with non-normality effects. International Journal of Solids and Structures, 2007, 44, 7357-7369. | 1.3 | 1 |
| 39 | Influence of porosity on cavitation instability predictions for elasticâ€“plastic solids. International Journal of Mechanical Sciences, 2007, 49, 210-216. | 3.6 | 22 |
| 40 | Effect of anisotropic plasticity on mixed mode interface crack growth. Engineering Fracture Mechanics, 2007, 74, 2603-2614. | 2.0 | 8 |
| 41 | Effects of texture on shear band formation in plane strain tension/compression and bending. International Journal of Plasticity, 2007, 23, 244-272. | 4.1 | 136 |
| 42 | Effect of residual stresses on interface crack growth by void expansion mechanism. International Journal of Fracture, 2007, 142, 43-50. | 1.1 | 0 |
| 43 | Discrete modelling of ductile crack growth by void growth to coalescence. International Journal of Fracture, 2007, 148, 1-12. | 1.1 | 15 |
| 44 | Numerical modelling in non linear fracture mechanics. Frattura Ed Integrita Strutturale, 2007, 1, 25-28. | 0.5 | 1 |
| 45 | Crack growth resistance for anisotropic plasticity with non-normality effects. International Journal of Solids and Structures, 2006, 43, 2160-2173. | 1.3 | 4 |
| 46 | A viscoplastic strain gradient analysis of materials with voids or inclusions. International Journal of Solids and Structures, 2006, 43, 4906-4916. | 1.3 | 41 |
| 47 | Effect of underloads or overloads in fatigue crack growth by crack-tip blunting. Engineering Fracture Mechanics, 2006, 73, 869-879. | 2.0 | 51 |
| 48 | Studies of scale dependent crystal viscoplasticity models. Journal of the Mechanics and Physics of Solids, 2006, 54, 1789-1810. | 2.3 | 87 |
| 49 | Size Effects on Cavitation Instabilities. Journal of Applied Mechanics, Transactions ASME, 2006, 73, 246-253. | 1.1 | 19 |
| 50 | DEBONDING OR BREAKAGE OF SHORT FIBRES IN A METAL MATRIX COMPOSITE. , 2006, , 67-76. | | 0 |
| 51 | Overload effects in fatigue crack growth by crack-tip blunting. International Journal of Fatigue, 2005, 27, 1389-1397. | 2.8 | 25 |
| 52 | Effect of Residual Stress on Cavitation Instabilities in Constrained Metal Wires. Journal of Applied Mechanics, Transactions ASME, 2004, 71, 560-566. | 1.1 | 6 |
| 53 | Effect of plastic anisotropy on crack growth resistance under mode 1 loading. International Journal of Fracture, 2004, 130, 411-425. | 1.1 | 8 |
| 54 | 3D Analysis of cold rolling using a constitutive model for interface friction. International Journal of Mechanical Sciences, 2004, 46, 653-671. | 3.6 | 5 |

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|---|---|---|---|
| 55 | Predictions of mixed mode interface crack growth using a cohesive zone model for ductile fracture. Journal of the Mechanics and Physics of Solids, 2004, 52, 925-940. | 2.3 | 36 |
| 56 | Nonlocal plasticity effects on interaction of different size voids. International Journal of Plasticity, 2004, 20, 107-120. | 4.1 | 77 |
| 57 | Shear band development in anisotropic bent specimens. European Journal of Mechanics, A/Solids, 2004, 23, 811-821. | 2.1 | 26 |
| 58 | On fatigue crack growth in ductile materials by crackâ€“tip blunting. Journal of the Mechanics and Physics of Solids, 2004, 52, 2149-2166. | 2.3 | 89 |
| 59 | Breakage and debonding of short brittle fibres among particulates in a metal matrix. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 369, 192-200. | 2.6 | 12 |
| 60 | Effect of T-Stress on Crack Growth Along an Interface Between Ductile and Elastic Solids. Journal of Materials Science, 2003, 11, 303-308. | 1.2 | 2 |
| 61 | Cohesive zone representations of failure between elastic or rigid solids and ductile solids. Engineering Fracture Mechanics, 2003, 70, 1859-1868. | 2.0 | 57 |
| 62 | Influence of plasticity on interface toughness in a layered solid with residual stresses. International Journal of Solids and Structures, 2003, 40, 5769-5779. | 1.3 | 11 |
| 63 | Debonding of short fibres among particulates in a metal matrix composite. International Journal of Solids and Structures, 2003, 40, 6957-6967. | 1.3 | 16 |
| 64 | Growth and coalescence of non-spherical voids in metals deformed at elevated temperature. International Journal of Mechanical Sciences, 2003, 45, 1283-1308. | 3.6 | 38 |
| 65 | Nonlocal plasticity effects on fibre debonding in a whisker-reinforced metal. European Journal of Mechanics, A/Solids, 2002, 21, 239-248. | 2.1 | 23 |
| 66 | Two mechanisms of ductile fracture: void by void growth versus multiple void interaction. International Journal of Solids and Structures, 2002, 39, 3581-3597. | 1.3 | 173 |
| 67 | Theoretical investigation of the effect of plasticity on crack growth along a functionally graded region between dissimilar elasticâ€“plastic solids. Engineering Fracture Mechanics, 2002, 69, 1635-1645. | 2.0 | 37 |
| 68 | Effects of plastic anisotropy on crack-tip behaviour. International Journal of Fracture, 2002, 117, 297-312. | 1.1 | 23 |
| 69 | Resistance curves for mixed mode interface crack growth between dissimilar elasticâ€“plastic solids. Journal of the Mechanics and Physics of Solids, 2001, 49, 2689-2703. | 2.3 | 66 |
| 70 | Nonlocal plasticity effects on the tensile properties of a metal matrix composite. European Journal of Mechanics, A/Solids, 2001, 20, 601-613. | 2.1 | 26 |
| 71 | Shear band development predicted by a non-normality theory of plasticity and comparison to crystal plasticity predictions. International Journal of Solids and Structures, 2001, 38, 8945-8960. | 1.3 | 28 |
| 72 | A phenomenological plasticity model with non-normality effects representing observations in crystal plasticity. Journal of the Mechanics and Physics of Solids, 2001, 49, 1239-1263. | 2.3 | 93 |

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|---|---|---|---|
| 73 | Crack growth predictions by cohesive zone model for ductile fracture. Journal of the Mechanics and Physics of Solids, 2001, 49, 2191-2207. | 2.3 | 65 |
| 74 | Three-dimensional analyses of ductile failure in metal reinforced by staggered fibres. Modelling and Simulation in Materials Science and Engineering, 2001, 9, 143-155. | 0.8 | 5 |
| 75 | Interface failure by cavity growth to coalescence. International Journal of Mechanical Sciences, 2000, 42, 381-395. | 3.6 | 21 |
| 76 | Effect of strain path change on limits to ductility of anisotropic metal sheets. International Journal of Mechanical Sciences, 2000, 42, 867-887. | 3.6 | 97 |
| 77 | Forming limit diagrams for anisotropic metal sheets with different yield criteria. International Journal of Solids and Structures, 2000, 37, 5037-5059. | 1.3 | 144 |
| 78 | Void growth and coalescence in metals deformed at elevated temperature. International Journal of Fracture, 2000, 106, 259-276. | 1.1 | 18 |
| 79 | On Low Cycle Fatigue in Metal Matrix Composites. International Journal of Damage Mechanics, 2000, 9, 154-173. | 2.4 | 9 |
| 80 | Use of abrupt strain path change for determining subsequent yield surface: illustrations of basic idea. Acta Materialia, 1999, 47, 3879-3890. | 3.8 | 72 |
| 81 | Edge-Cracks in Single Crystals Under Monotonic and Cyclic Loads. International Journal of Fracture, 1999, 99, 81-95. | 1.1 | 7 |
| 82 | Interaction of very small voids with larger voids. International Journal of Solids and Structures, 1998, 35, 3989-4000. | 1.3 | 61 |
| 83 | Micromechanical models for graded composite materials. Journal of the Mechanics and Physics of Solids, 1997, 45, 1281-1302. | 2.3 | 223 |
| 84 | On the toughness of ductile adhesive joints. Journal of the Mechanics and Physics of Solids, 1996, 44, 789-800. | 2.3 | 236 |
| 85 | Effect of void size difference on growth and cavitation instabilities. Journal of the Mechanics and Physics of Solids, 1996, 44, 1237-1253. | 2.3 | 51 |
| 86 | Fibre debonding and breakage in a whisker-reinforced metal. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1995, 190, 215-222. | 2.6 | 43 |
| 87 | Effects of nonlocal damage in porous plastic solids. International Journal of Solids and Structures, 1995, 32, 1063-1077. | 1.3 | 216 |
| 88 | Nonlocal continuum effects on bifurcation in the plane strain tension-compression test. Journal of the Mechanics and Physics of Solids, 1995, 43, 741-770. | 2.3 | 52 |
| 89 | Toughness of an interface along a thin ductile layer joining elastic solids. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1994, 70, 641-656. | 0.8 | 166 |
| 90 | Necking in tensile bars with rectangular cross-section. Computer Methods in Applied Mechanics and Engineering, 1993, 103, 273-290. | 3.4 | 99 |

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| 91 | The influence of plasticity on mixed mode interface toughness. Journal of the Mechanics and Physics of Solids, 1993, 41, 1119-1135. | 2.3 | 612 |
| 92 | Model studies of fibre breakage and debonding in a metal reinforced by short fibres. Journal of the Mechanics and Physics of Solids, 1993, 41, 1309-1326. | 2.3 | 70 |
| 93 | Matrix, Reinforcement, and Interfacial Failure. , 1993, , 233-250. | | 20 |
| 94 | The relation between crack growth resistance and fracture process parameters in elastic-plastic solids. Journal of the Mechanics and Physics of Solids, 1992, 40, 1377-1397. | 2.3 | 1,440 |
| 95 | Effect of thermally induced residual stresses on the failure of a whisker-reinforced metal. Mechanics of Materials, 1991, 11, 149-161. | 1.7 | 21 |
| 96 | Effect of plastic spin on localization predictions for a porous ductile material. Journal of the Mechanics and Physics of Solids, 1991, 39, 763-781. | 2.3 | 36 |
| 97 | Mechanical modelling of ductile fracture. Meccanica, 1991, 26, 11-16. | 1.2 | 11 |
| 98 | A creep rupture model accounting for cavitation at sliding grain boundaries. International Journal of Fracture, 1991, 48, 153-178. | 1.1 | 40 |
| 99 | Three-Dimensional Effects in Microcrack Nucleation in Brittle Polycrystals. Journal of the American Ceramic Society, 1990, 73, 1548-1554. | 1.9 | 36 |
| 100 | Effect of fibre debonding in a whisker-reinforced metal. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1990, 125, 203-213. | 2.6 | 570 |
| 101 | Numerical study of localization in a void-sheet. International Journal of Solids and Structures, 1989, 25, 1143-1156. | 1.3 | 44 |
| 102 | Material Failure by Void Growth to Coalescence. Advances in Applied Mechanics, 1989, , 83-151. | 1.4 | 756 |
| 103 | Microcracking in Ceramics Induced by Thermal Expansion or Elastic Anisotropy. Journal of the American Ceramic Society, 1988, 71, 157-166. | 1.9 | 576 |
| 104 | Effect of yield surface curvature and void nucleation on plastic flow localization. Journal of the Mechanics and Physics of Solids, 1987, 35, 43-60. | 2.3 | 157 |
| 105 | Effect of material rate sensitivity on failure modes in the Charpy V-notch test. Journal of the Mechanics and Physics of Solids, 1986, 34, 213-241. | 2.3 | 99 |
| 106 | Analysis of creep crack growth by grain boundary cavitation. International Journal of Fracture, 1986, 31, 183-209. | 1.1 | 57 |
| 107 | On the creep constrained diffusive cavitation of grain boundary facets. Journal of the Mechanics and Physics of Solids, 1984, 32, 373-393. | 2.3 | 141 |
| 108 | On the transition from a diamond mode to an axisymmetric mode of collapse in cylindrical shells. International Journal of Solids and Structures, 1983, 19, 845-856. | 1.3 | 67 |

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| 109 | Plastic buckling of axially compressed circular cylindrical shells. Thin-Walled Structures, 1983, 1, 139-163. | 2.7 | 74 |
| 110 | Material failure by void coalescence in localized shear bands. International Journal of Solids and Structures, 1982, 18, 659-672. | 1.3 | 184 |
| 111 | Influence of void nucleation on ductile shear fracture at a free surface. Journal of the Mechanics and Physics of Solids, 1982, 30, 399-425. | 2.3 | 369 |
| 112 | Ductile fracture by cavity nucleation between larger voids. Journal of the Mechanics and Physics of Solids, 1982, 30, 265-286. | 2.3 | 207 |
| 113 | On localization in ductile materials containing spherical voids. International Journal of Fracture, 1982, 18, 237-252. | 1.1 | 1,173 |
| 114 | Influence of voids on shear band instabilities under plane strain conditions. International Journal of Fracture, 1981, 17, 389-407. | 1.1 | 1,900 |
| 115 | On localized thermal track buckling. International Journal of Mechanical Sciences, 1981, 23, 577-587. | 3.6 | 47 |
| 116 | Effect of kinematic hardening on localized necking in biaxially stretched sheets. International Journal of Mechanical Sciences, 1978, 20, 651-658. | 3.6 | 100 |
| 117 | Imperfection-sensitivity of a wide integrally stiffened panel under compression. International Journal of Solids and Structures, 1973, 9, 177-192. | 1.3 | 104 |
| 118 | Influence of post-buckling behaviour on optimum design of stiffened panels. International Journal of Solids and Structures, 1973, 9, 1519-1533. | 1.3 | 46 |