

Jiang H., Kirsanov M.N.
An analytical expression for
the influence line of the truss

НИУ МЭИ, г. Москва

The problem of deflection of statically determinate flat truss depending on the number of panels and location of cargo is solved. The problem is solved by induction. The development of induction method is presented in [1-3].

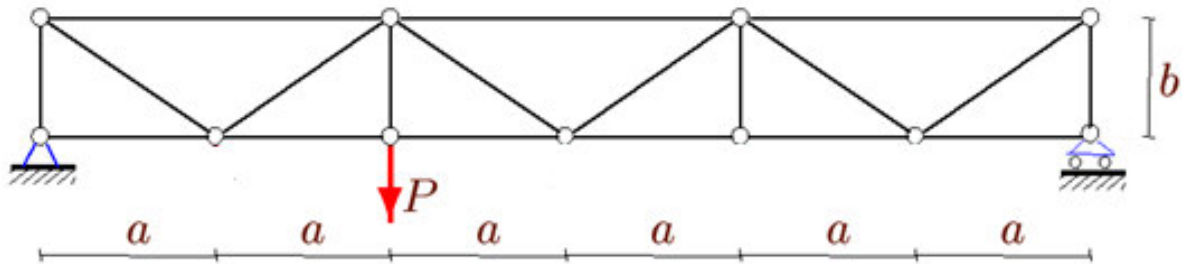


Fig. 1. Truss, $n=3, i=3$

Similarly, on the purpose of inducing the correlation of deflection at load point, it is necessary to induce the variation law of two parameters [4]. In the paper, the method of induction is used to find the formula of truss deflection (Fig. 1). All rods are elastic and undergo only stretching or compression. The flexibility of the supports is not taken into account. With the use of the system of computer mathematics Maple, forces in the rods are defined by cut-nodes based on algorithm [5]. In order to generalize the solution to arbitrary number of panels (the most difficult part of the task), the software package “genfunc” and operators “rgf_findrecur”, “rsolve” are utilized. Determine the deflection of the truss (in its midpoint) depending on its size and location of a cargo P , which will denote by the number i . Deflection is defined by the formula of Maxwell-Mohr. The results are as shown below

$$EF\Delta_{(i,n)} = P(A_{(i,n)}a^3 + B_{(i,n)}b^3 + C_{(i,n)}c^3) / (2b^2),$$

$$c = \sqrt{a^2 + b^2}, A_{(i,n)} = (i-1)(n^2 - i(i-2) / 3), B_{(i,n)} = 1, C_{(i,n)} = i-1, i \leq n+1.$$

The expression can be applied to analyze of arbitrary distribution of forces at the bottom chord influence on deflection. For example, when half of the span is loaded the vertical deflection of the midpoint of the span (due to the linearity of the problem) can

be found by the formula $\Delta = \sum_{i=2}^{n+1} \Delta_{(i,n)}$.

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Zaynieva N.B.
Shelley of the twentieth century

Samarkand State Architecture, Constructional Institute

The conflicting currents and eddies which threatened Shelley's posthumous reputation in the nineteenth century mark the scholarship and criticism of the twentieth century as well. The best and most authoritative survey, co-authored by Bennett Weaver and Donald Reiman, appears in the Shelley chapter of *The English Romantic Poets: A Review of Research and Criticism* (1972) edited by Frank Jordan, Jr. No attempt to condense or spotlight key points in that survey can do justice to their work or its subject. The authors demonstrate that the judgment of Shelley's contemporary critics still stands. For the most part one is either greatly attracted or greatly repelled by Shelley's poetry. Few readers or critics remain indifferent.

The student who wishes to pursue Shelley's fortunes and his reputation in greater detail should consult Newman I. White's *The Unextinguished Hearth and Shelley* as well as Sylva Norman's *Flight of the Skylark: The Development of Shelley's Reputation* and Carl Woodring's 'Dip of the Skylark'. The reaction to Shelley in America has been recounted in admirable detail in Julia Power's *Shelley in America in the Nineteenth Century*.

Twentieth-century readers of Shelley, like their nineteenth-century counterparts, face a serious difficulty in that no complete and scholarly edition of Shelley's works is available. If Neville Rogers's projected four volumes of Shelley's poetry meets expectations, part of the dilemma will be resolved. In the meantime, Thomas Hutchinson's edition (Oxford, 1904), which forms the basis for G.M. Matthews's Oxford Standard Authors Edition, and the ten-volume Julian Edition of prose and poetry edited by Ingpen and Peck are most frequently used. But none is satisfactory, for each is either incomplete or textually corrupt. For the letters, students must consult Frederick L. Jones's *Letters of Percy Bysshe Shelley*, but these volumes will have to be reedited after Kenneth Neill Cameron's *Shelley and his Circle* has been completed. As Weaver and Reiman have emphasized, 'Shelley's text is in flux.'

The twentieth century has treated Shelley as a poet, rather harshly. The wave of 'New Criticism' which began in the 1930s and crested in the 1950s attacked Shelley's poetry for vagueness and lack of organic unity, for ambiguity, tension, and irony. Typical of these judgments are T.S. Eliot's *The Use of Poetry and the Use of Criticism* (1933), F.R. Leavis's *Revaluations*, and the criticism of John Crowe Ransom and Allen Tate. Important dissenting cries were sounded by C.S. Lewis in 'Shelley, Dryden, and Mr. Eliot' (*Rehabilitations*, 1939), by Richard Harter Fogle in *The Imagery of Keats*