



# Redundant generating functions in lattice path enumeration

[Jong Hyun Kim](#)

(Submitted on 20 Jul 2011 (v1), last revised 13 Mar 2012 (this version, v2))

A redundant generating function is a generating function having terms which are not part of the solution of the original problem. We use redundant generating functions to study two path problems. In the first application we explain a surprising occurrence of Catalan numbers in counting paths that stay below the line  $y = 2x$ . In the second application we prove a conjecture of Niederhausen and Sullivan.

Subjects: **Combinatorics (math.CO)**

MSC classes: 05A15

Cite as: **arXiv:1107.3870 [math.CO]**

(or **arXiv:1107.3870v2 [math.CO]** for this version)

## Submission history

From: Jong Hyun Kim [[view email](#)]

[v1] Wed, 20 Jul 2011 01:26:21 GMT (16kb)

[v2] Tue, 13 Mar 2012 02:32:24 GMT (16kb)

[Which authors of this paper are endorsers?](#)

Link back to: [arXiv](#), [form interface](#), [contact](#).

## Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

math.CO

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

Change to browse by:

[math](#)

## References & Citations

- [NASA ADS](#)

Bookmark([what is this?](#))

