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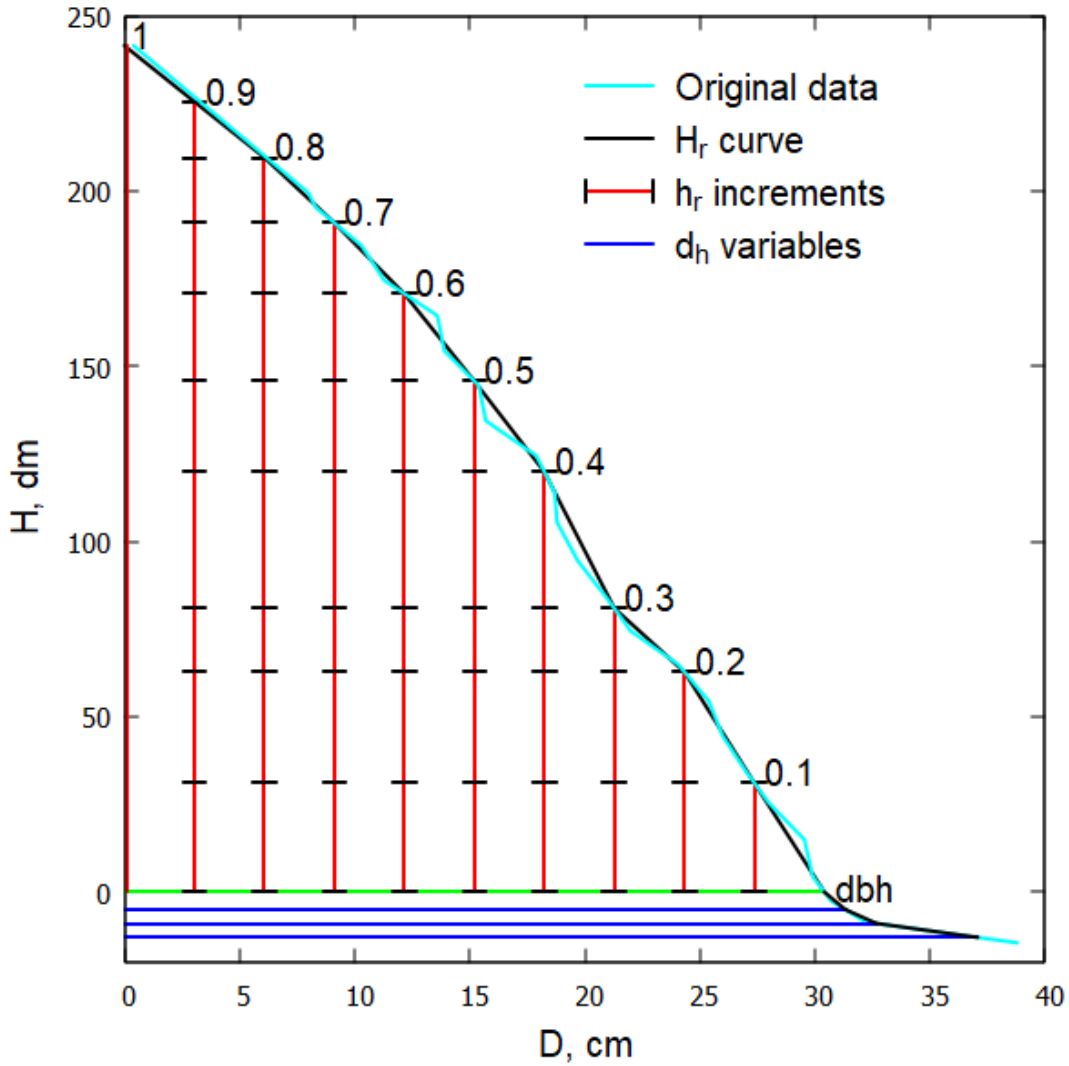
- A new kind of stem curve model
- A new linear programming algorithm for forest management planning problems with factories.

Forthcoming paper:

Predicting heights of stem diameters provides good taper models for harvesters and digital camera applications without measured total height

If dbh and one point in lower stem are measured, the volume prediction error variance is 25% of the variance obtained with total height and dbh.


Original data
$H_r$ curve
$h_r$ increments
$d_h$ variables
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
dbh
H, dm
D, cm
250
200
150
100
50
0
0
5
10
15
20
25
30
35
40

**A new linear programming algorithm for forest management planning problems with factories**

- **JLP** linear programming algorithm in Finnish Mela planning system since 1991
- 2004 **J** software replaced **JLP**, except in Mela
- 2013 **J** included also factories
  - Treatment of factories was complicated and nonefficient
- 2022 **Jlp22** replaced **J**, but does not yet include factories
- Norwegian GAYA planning system has used JLP/J/Jlp22 since 1991

- 2024 I discovered how factories can be included in a simple and efficient way . This is not yet implemented.
- **DTRAN** of Howard Hoganson has been able to include factories using heuristically computed shadow prices. **JLP/J/Jlp22** compute shadow prices using standard matrix computations.
- The new algorithm will use the idea of DTRAN to use shadow prices to select factories to be included in the solution but computes the shadow prices using matrix algebra.

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Jlp22 is open source software available at github.com/juhalappi/jlp22

- Stem curve modeling (etc) is done using Jlp22
- None has started to develop it execpt me.
- It seems now that it will my personal effort with some  use but without any future, unless someone e.g. in Latvia starts to develop it.


To develop Jlp22

Sign in:

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