Test

Chris Rackauckas

November 17, 2018

This is a test of the builder system.

0.1 Appendix

```
using DiffEqBenchmarks
DiffEqBenchmarks.bench_footer(WEAVE_ARGS[:folder],WEAVE_ARGS[:file])

These benchmarks are part of the DiffEqBenchmarks.jl repository, found at:

https://github.com/JuliaDiffEq/DiffEqBenchmarks.jl

To locally run this benchmark, do the following commands:

using DiffEqBenchmarks
DiffEqBenchmarks.weave_file(".","test.jmd")


Computer Information:

Julia Version 1.0.2
Commit d789231e99 (2018-11-08 20:11 UTC)
Platform Info:
  OS: Windows (x86_64-w64-mingw32)
  CPU: Intel(R) Core(TM) i7-4770K CPU @ 3.50GHz
  WORD_SIZE: 64
  LIBM: libopenlibm
  LLVM: libLLVM-6.0.0 (ORCJIT, haswell)
Environment:
  JULIA_NUM_THREADS = 4

Package Information:

    Status `C:\Users\Chris\.julia\environments\v1.0\Project.toml`
  [28f2ccd6] ApproxFun v0.10.1
  [1f957be0] ArrayInterface v0.0.0 [`C:\Users\Chris\.julia\dev\ArrayInterfa
ce`]
  [c52e3926] Atom v0.7.10
  [6e4b80f9] BenchmarkTools v0.4.1
  [764a87c0] BoundaryValueDiffEq v2.2.1+ [`C:\Users\Chris\.julia\dev\Bounda
ryValueDiffEq`]
  [336ed68f] CSV v0.4.2
  [3895d2a7] CUDAapi v0.5.2
  [be33ccc6] CUDAnative v0.9.1
```

```
  [49dc2e85] Calculus v0.4.1
  [608a59af] ChaosTools v1.2.1
  [3a865a2d] CuArrays v0.8.1
  [717857b8] DSP v0.5.1
  [a93c6f00] DataFrames v0.14.1
  [176a2513] DataInterpolations v0.0.0 [`C:\Users\Chris\.julia\dev\DataInte
rpolations`]
  [864edb3b] DataStructures v0.14.0
  [bcd4f6db] DelayDiffEq v4.6.1+ [`C:\Users\Chris\.julia\dev\DelayDiffEq`]
  [39dd38d3] Dierckx v0.4.1
  [2b5f629d] DiffEqBase v4.31.0+ [`C:\Users\Chris\.julia\dev\DiffEqBase`]
  [ebbdde9d] DiffEqBayes v0.6.1+ [`C:\Users\Chris\.julia\dev\DiffEqBayes`]
  [bb2cbb15] DiffEqBenchmarks v0.0.0 [`C:\Users\Chris\.julia\dev\DiffEqBenc
hmarks`]
  [459566f4] DiffEqCallbacks v2.3.0+ [`C:\Users\Chris\.julia\dev\DiffEqCall
backs`]
  [f3b72e0c] DiffEqDevTools v2.6.1+ [`C:\Users\Chris\.julia\dev\DiffEqDevTo
ols`]
  [01453d9d] DiffEqDiffTools v0.7.1
  [c894b116] DiffEqJump v5.6.0+ [`C:\Users\Chris\.julia\dev\DiffEqJump`]
  [9fdde737] DiffEqOperators v3.4.0+ [`C:\Users\Chris\.julia\dev\DiffEqOper
ators`]
  [1130ab10] DiffEqParamEstim v1.5.0+ [`C:\Users\Chris\.julia\dev\DiffEqPar
amEstim`]
  [a077e3f3] DiffEqProblemLibrary v4.1.0
  [41bf760c] DiffEqSensitivity v2.2.0+ [`C:\Users\Chris\.julia\dev\DiffEqSe
nsitivity`]
  [225cb15b] DiffEqTutorials v0.0.0 #master (https://github.com/JuliaDiffEq
/DiffEqTutorials.jl)
  [163ba53b] DiffResults v0.0.3
  [0c46a032] DifferentialEquations v5.3.1
  [31c24e10] Distributions v0.16.4
  [bbc10e6e] DynamicHMC v1.0.1
  [587475ba] Flux v0.6.9
  [f6369f11] ForwardDiff v0.9.0
  [01680d73] GenericSVD v0.2.0
  [6f062d28] GeometricIntegrators v0.0.0 #master (https://github.com/DDMGNI
/GeometricIntegrators.jl)
  [aebcda57] GeometricIntegratorsDiffEq v0.0.0 [`C:\Users\Chris\.julia\dev\
GeometricIntegratorsDiffEq`]
  [7073ff75] IJulia v1.14.1
  [a98d9a8b] Interpolations v0.10.6
  [42fd0dbc] IterativeSolvers v0.7.1
  [033835bb] JLD2 v0.1.2
  [4076af6c] JuMP v0.18.4
  [e5e0dc1b] Juno v0.5.3
  [7f56f5a3] LSODA v0.4.0+ [`C:\Users\Chris\.julia\dev\LSODA`]
  [2ee39098] LabelledArrays v0.2.1+ [`C:\Users\Chris\.julia\dev\LabelledArr
ays`]
  [093fc24a] LightGraphs v1.2.0
  [6fdf6af0] LogDensityProblems v0.4.0 #master (https://github.com/tpapp/Lo
gDensityProblems.jl.git)
  [6e857e4b] MCMCDiagnostics v0.3.0
  [1914dd2f] MacroTools v0.4.4
  [ee78f7c6] Makie v0.9.0
  [eff96d63] Measurements v1.0.2
  [b80ccba4] ModelingToolkit v0.0.0 [`C:\Users\Chris\.julia\dev\ModelingToo
lkit`]
  [46d2c3a1] MuladdMacro v0.2.1
```

```
  [f9640e96] MultiScaleArrays v1.3.1+ [`C:\Users\Chris\.julia\dev\MultiScal
eArrays`]
  [0e6f8da7] NBodySimulator v0.1.0+ [`C:\Users\Chris\.julia\dev\NBodySimula
tor`]
  [76087f3c] NLopt v0.5.1
  [2774e3e8] NLsolve v3.0.1
  [c030b06c] ODE v2.3.0
  [54ca160b] ODEInterface v0.4.5
  [09606e27] ODEInterfaceDiffEq v2.7.0+ [`C:\Users\Chris\.julia\dev\ODEInte
rfaceDiffEq`]
  [5fb14364] OhMyREPL v0.3.0
  [429524aa] Optim v0.17.2
  [bac558e1] OrderedCollections v1.0.2
  [1dea7af3] OrdinaryDiffEq v4.17.2+ [`C:\Users\Chris\.julia\dev\OrdinaryDi
ffEq`]
  [06a9918f] OrdinaryDiffEqExtendedTests v0.0.0 [`C:\Users\Chris\.julia\dev
\OrdinaryDiffEqExtendedTests`]
  [90014a1f] PDMats v0.9.5
  [2dcacdae] ParallelDataTransfer v0.5.0
  [65888b18] ParameterizedFunctions v4.0.0+ #master (https://github.com/Jul
iaDiffEq/ParameterizedFunctions.jl.git)
  [d96e819e] Parameters v0.10.1
  [91a5bcdd] Plots v0.21.0
  [71ad9d73] PuMaS v0.0.0 [`C:\Users\Chris\.julia\dev\PuMaS`]
  [02bcfc65] PuMaSTutorials v0.0.0 [`C:\Users\Chris\.julia\external\PuMaSTu
torials.jl`]
  [d330b81b] PyPlot v2.6.3
  [1fd47b50] QuadGK v2.0.2
  [ce6b1742] RDatasets v0.6.1
  [731186ca] RecursiveArrayTools v0.18.4+ [`C:\Users\Chris\.julia\dev\Recur
siveArrayTools`]
  [37e2e3b7] ReverseDiff v0.3.1
  [295af30f] Revise v0.7.12
  [f2b01f46] Roots v0.7.3
  [aa65fe97] SnoopCompile v0.3.1
  [90137ffa] StaticArrays v0.9.2
  [2913bbd2] StatsBase v0.25.0
  [789caeaf] StochasticDiffEq v5.10.1+ [`C:\Users\Chris\.julia\dev\Stochast
icDiffEq`]
  [09ab397b] StructArrays v0.1.0
  [c3572dad] Sundials v2.6.0+ [`C:\Users\Chris\.julia\dev\Sundials`]
  [84d833dd] TransformVariables v0.1.4
  [fce5fe82] Turing v0.5.1
  [1986cc42] Unitful v0.12.0
  [44d3d7a6] Weave v0.6.2
  [e88e6eb3] Zygote v0.1.0+ #master (https://github.com/FluxML/Zygote.jl.gi
t)
```