



Welcome & Year in Review

Prof. Juan J. Alonso, Dr. Thomas D. Economon, and Dr. Francisco Palacios

2nd Annual SU2 Developers Meeting
Stanford University
December 18, 2017

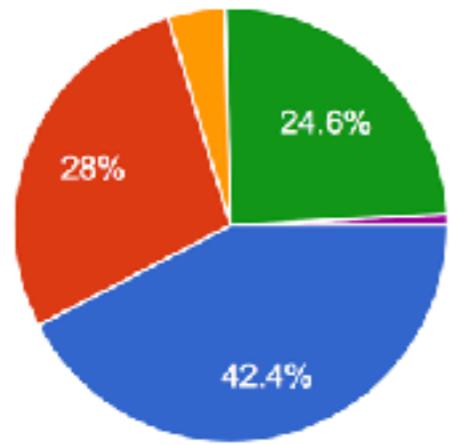
Welcome Developers!



1st Annual SU2 Developers Meeting, September 2016, TU Delft

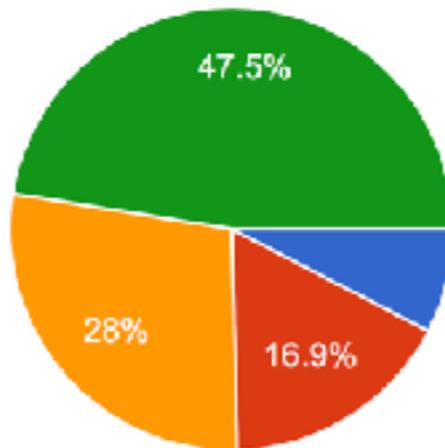
Welcome to the Meeting - Demographics

Affiliation



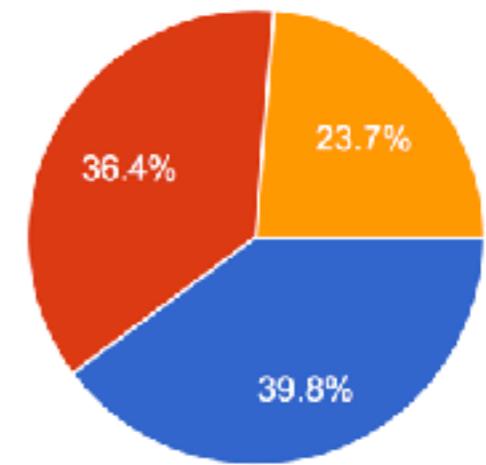
Academia	50	42.4%
Industry	33	28%
Government	5	4.2%
Student	29	24.6%
Other	1	0.8%

Years of CFD Experience



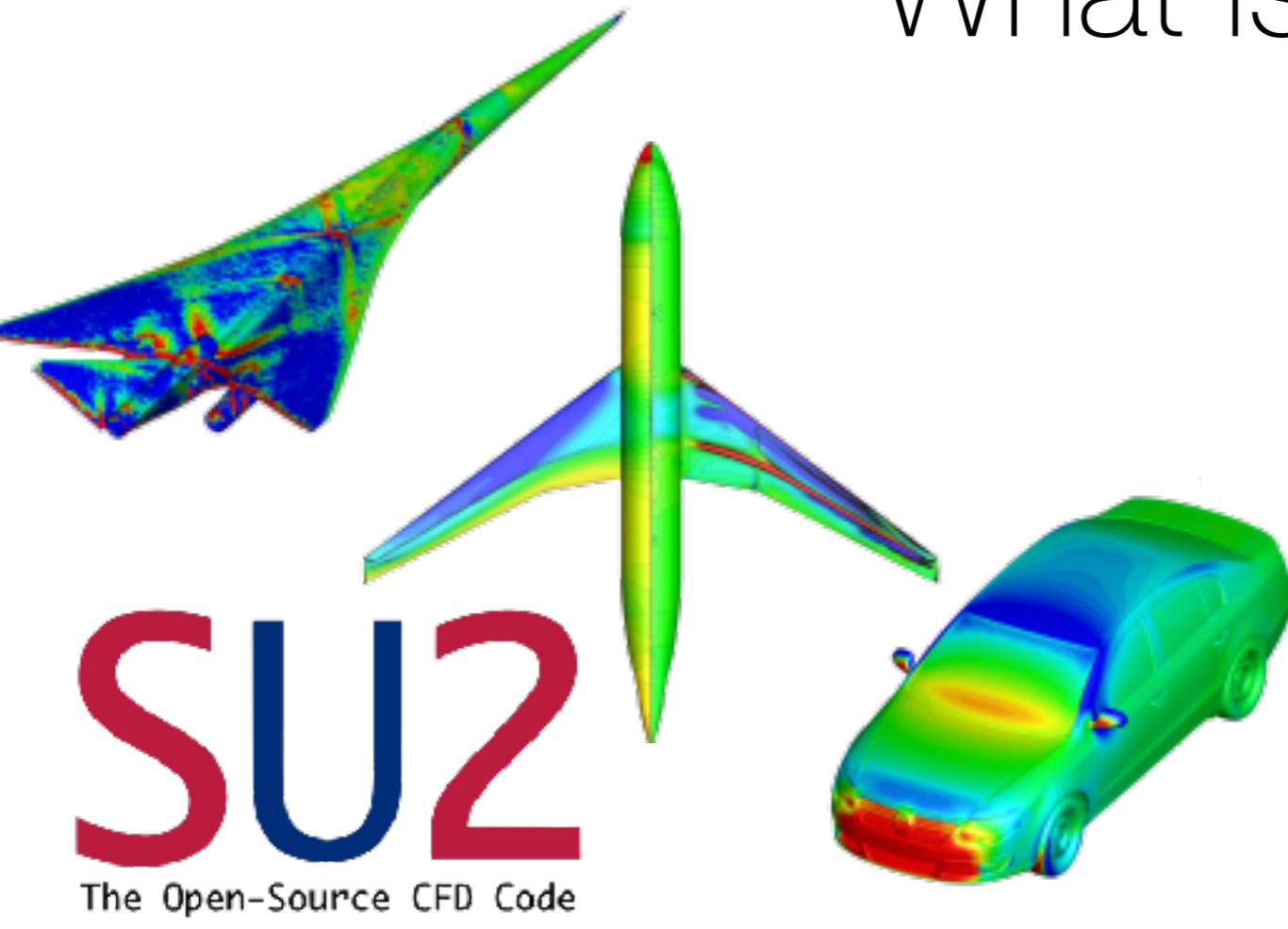
< 1 Year	9	7.6%
1-2 Years	20	16.9%
2-5 Years	33	28%
5+ Years	56	47.5%

How familiar are you with SU2?



Developer	47	39.8%
User	43	36.4%
Have not used SU2	28	23.7%

What is **SU2**?



- SU2 is an open-source software package for **multiphysics analysis and design**. Gradient availability through adjoints.

- Research platform for CFD, multiphysics, adjoint methods, HPC, and more.

Reusability, readability, portability...

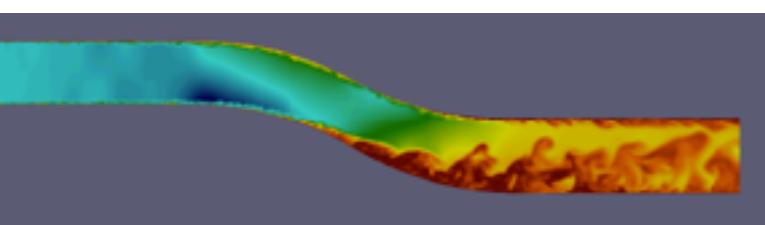
- Software released as **open source** under the LGPL 2.1 license. Available **freely** on GitHub.

- C++/MPI core with a Python layer for automation (~250k lines of code, **HPC-ready**).

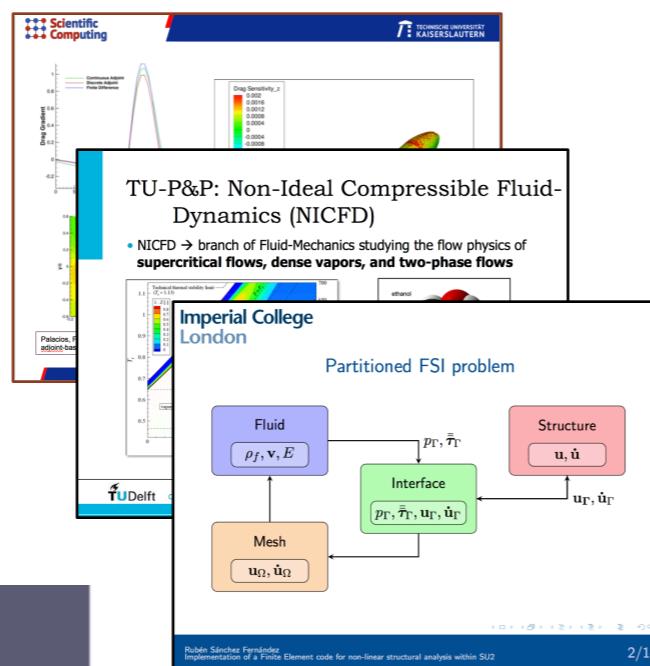
- Initial v1.0 release in Jan 2012, latest v5.0 released Jan 2017.

<https://github.com/su2code/SU2>

<https://su2code.github.io>



DG-FEM Higher-order Solver



SU2 and the NASA CFD Vision 2030 Study

- Emphasis on physics-based, predictive modeling

Transition, turbulence, separation, unsteady/time-accurate, chemically-reacting flows, radiation, heat transfer, acoustics and constitutive models

- Management of errors and uncertainties

Quantification of errors and uncertainties arising from physical models, mesh and discretization, and natural variability

- Automation in all steps of the analysis process

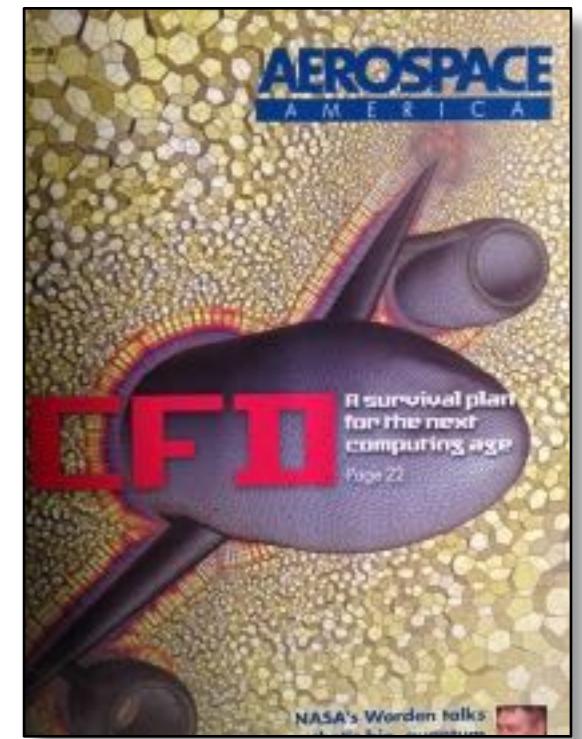
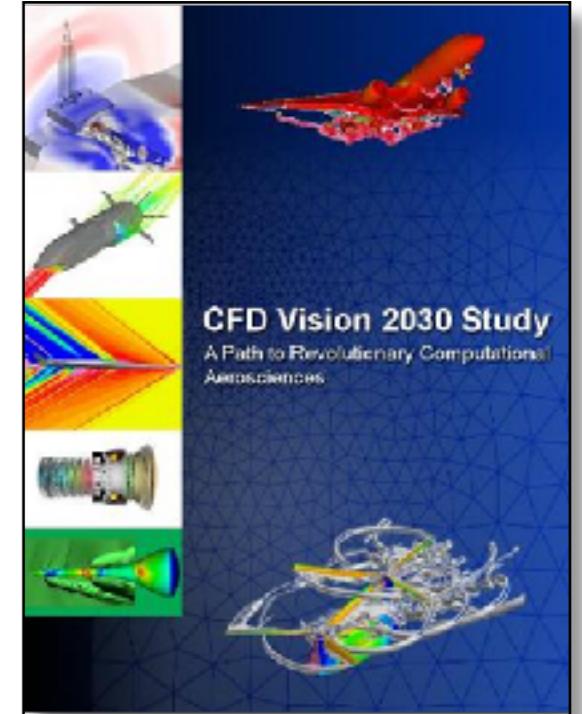
Geometry creation, meshing, large databases of simulation results, extraction and understanding of the vast amounts of information

- Harness exascale HPC architectures

Multiple memory hierarchies, latencies, bandwidths, programming paradigms and runtime environments, etc.

- Seamless integration with multi-disciplinary analyses and optimizations

High fidelity CFD tools, interfaces, coupling approaches, the science of integration, etc.



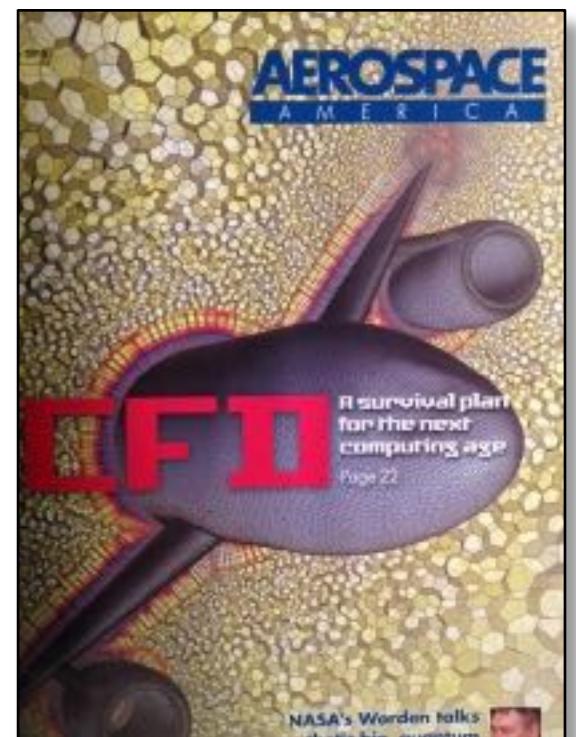
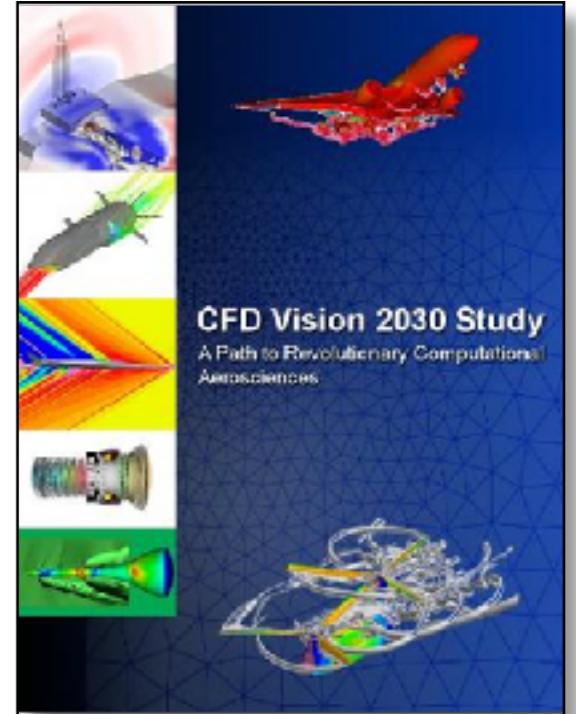
Slotnik, et al., "CFD Vision 2030 Study: A Path to Revolutionary Computational Aerosciences," NASA/CR-2014-218178, 2014



SU2 and the NASA CFD Vision 2030 Study

- **Emphasis on physics-based, predictive modeling**
Transition, turbulence, separation, unsteady/time-accurate, chemically-reacting flows, radiation, heat transfer, acoustics and constitutive models
- **Management of errors and uncertainties**
Quantification of errors and **uncertainties arising from physical models**, mesh and discretization, and natural variability
- **Automation in all steps of the analysis process**
Geometry creation, **meshing**, large databases of simulation results, extraction and understanding of the vast amounts of information
- **Harness exascale HPC architectures**
Multiple memory hierarchies, latencies, bandwidths, programming paradigms and runtime environments, etc.
- **Seamless integration with multi-disciplinary analyses and optimizations**
High fidelity CFD tools, **interfaces**, **coupling approaches**, the science of integration, etc.

Slotnik, et al., "CFD Vision 2030 Study: A Path to Revolutionary Computational Aerosciences,"
NASA/CR-2014-218178, 2014



A Global Development Team...

POINTWISE®



UNIVERSITY OF TWENTE.



Imperial College
London

SU2



BOSCH

Stanford | ENGINEERING
Aeronautics & Astronautics



POLITECNICO
MILANO 1863



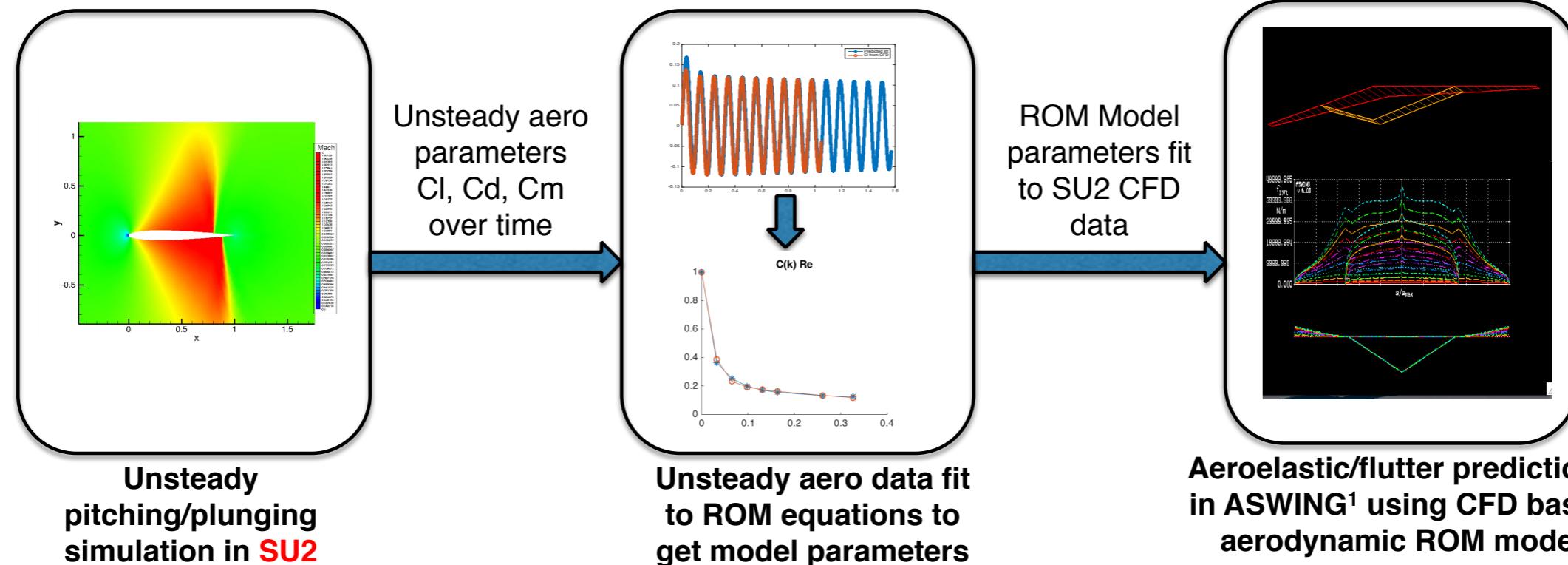
AIRBUS

And many others...

One Active Community...

Unsteady CFD to inform lower-fidelity unsteady aero models for flutter prediction

SU2
The Open-Source CFD Code

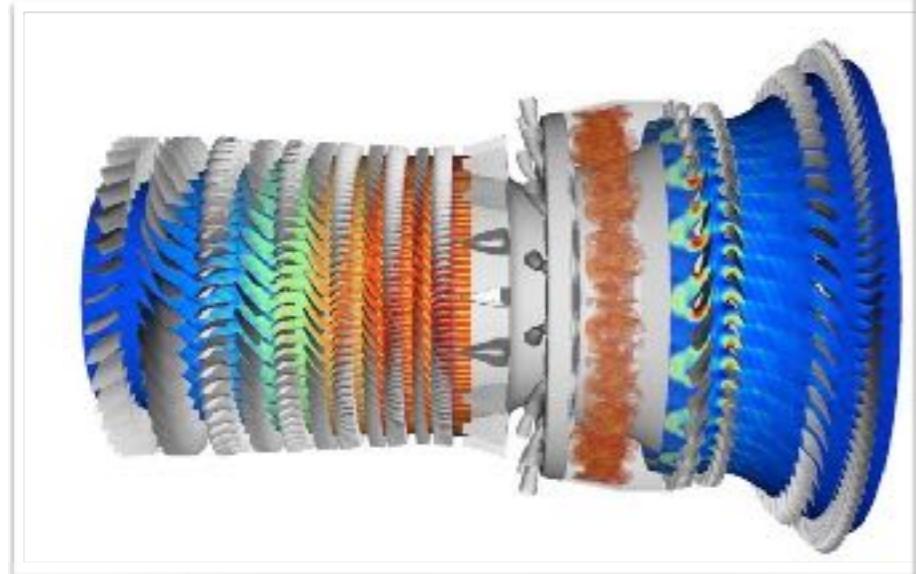


The objective of the work is:

- to improve the accuracy of transonic flutter prediction,
- while maintaining low online computational cost
- for wing/aircraft configurations in conceptual design
- permitting inclusion in a conceptual design/optimization loop

1) Drela, M., "Integrated simulation model for preliminary aerodynamic, structural, and control-law design of aircraft," 40th Structures, Structural Dynamics, and Materials Conference and Exhibit, AIAA, 1999

The SU2 Timeline



SUmb solver
developed
@ ADL

June 2008
Francisco Palacios
completes PhD with
Juan Alonso
on committee



Jan 2011
Francisco joins
ADL @ Stanford

2003-2008

2009

2010

2011

“We must think big... on Jan 20th everybody in the aeronautical community must know that there is a new player in the CFD open-source community.”

- Dr. Francisco Palacios, January 9 2012

SU² Pre-Release Workshop

Presented by Thomas D. Economon
Hosted by the SU² Development Team
Aerospace Design Lab, Stanford University, Stanford, CA 94301, USA.

January 17, 2012

STANFORD UNIVERSITY
Unstructured Code

Jan 17
Pre-release
Workshop



Stanford University Unstructured (SU²): Analyze, Optimize, Design!

STANFORD | SU²

Home Download Guides Forum Training News Contact

Analyze. Optimize. Design!

The New Open Source CFD Code

Computational analysis tools have revolutionized the way we design aerospace systems, but most established codes are proprietary, unavailable, or prohibitively expensive for many users. The SU team is changing this, making computational analysis and design freely available as open-source software and involving everyone in its creation and development.

Visualizations About the Code Cite Us

Information Latest News Follow Us

SU² website tops 40,000 visits Mar 6, 2013 SU² website tops 30,000 visits Jan 15, 2013 SU² version 2.0 workshop Jan 8, 2013 APT on Stanford University, SU² 2.0.5 (developer version) is now

Tweets Follow @su2code 27 Jun 2013 SU², the main generator by Laromma Engineering Dynamics now supports SU2 mesh format laromma.com/travis.html 21 Jun 2013

Oct 31
su2.stanford.edu update



<http://su2.stanford.edu>

STANFORD UNIVERSITY UNSTRUCTURED CODE (SU²) RELEASED
TODAY, THURSDAY JANUARY 19, 2012

The First Release of The SU² Open-Source Computational Fluid Dynamics (CFD)
Analysis and Optimization Suite is Out Today

Jan 19
SU2 v1.0
SU2 is born!

Winter

2012

<http://su2.stanford.edu>

Aero: SU²

SU² is an open source scientific software application for high-fidelity numerical simulation, analysis, optimization and design of PDE-based systems in unstructured grids. The suite includes C++ analysis modules, linked via python scripts, that:

- Solve the FDS system
- Compute residuals for numerical convergence
- Determine sensitivities often objective function (O & OF, OOF)
- Design site moves via grid or surface shape optimization
- Perform adaptive and refinement

Max OF, Loss and Residuals output modules can be generated from the SU² code:
<http://su2.stanford.edu>

STANFORD UNIVERSITY
Open-source Analysis and Design

Jun 25
SU2 v1.1

Spring

Summer

Fall

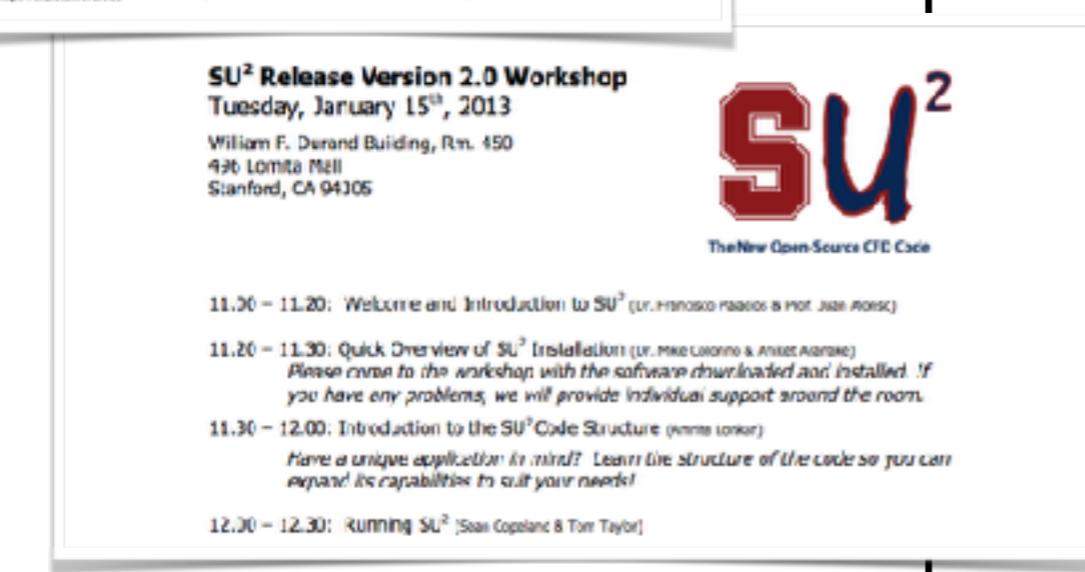
Stanford University Unstructured (SU²): An open-source integrated computational environment for multi-physics simulation and design.

Francisco Palacios*, Michael R. Colomio*,
 Aniket C. Aranake†, Alejandro Campos‡, Sean R. Copeland§, Thomas D. Economon†,
 Amrita K. Lenkar†, Trent W. Lukaczyk‡, Thomas W. R. Taylor‡,
 and Juan J. Alonso‡
 Stanford University, Stanford, CA 94305, U.S.A.

Jan 7
 AIAA SciTech
 Presentation



Jan 8
 SU2 v2.0,
 CFD Online
 Forum Open



Winter

2013

Spring



May 17 & 25
 SU2's first two PhDs

openMDAO and SU² joint Workshop
 Apr 26 – Oct 17, 2013
 William F. Durand Building, Rm. 450
 496 Lomita Mall, Stanford, CA 94305

First day - Basic topics

- 08:00 – 08:30: Welcome and introduction to the Workshop.
- 08:30 – 10:00: Overview of OpenMDAO and installation.
- 10:00 – 11:30: Running OpenMDAO and working with Python. Discussion session.
- 11:45 – 11:55: Short break.
- 11:55 – 13:00: Overview of SU² and installation.
- 13:00 – 14:30: Running SU² and working with Python. Discussion session.
- 14:45 – 15:00: Adjourn.

Second day - Advanced topics

- 08:00 – 08:30: Welcome to the second day.
- 08:30 – 09:45: Advanced topics in SU². SU² has a number of capabilities for performing high-fidelity analysis of complex geometries. Learn about them here.
- 09:45 – 11:30: Design and Optimization Using SU². Learn why SU² is better suited for aerodynamic design and optimization than more expensive codes.
- 11:45 – 11:55: Short break.
- 11:55 – 13:30: Advanced topics in OpenMDAO.
- 13:30 – 14:30: Working with coupled derivatives in OpenMDAO.
- 14:45 – 15:30: Advanced topics in SU². SU² supports many advanced features such as mesh refinement, mesh smoothing, and meta-models.
- 15:45 – 16:00: Short break.
- 16:00 – 16:30: Advanced topics in OpenMDAO.
- 16:30 – 17:00: Wrap up, next steps, what will be done during OpenMDAO/SU² collaboration.
- 17:00 – 17:30: Adjourn second day.

TO REGISTER: <http://tiny.cc/meyarw> (MEYARW) OR <http://tiny.cc/meyarw> (MEYARW).

Please RSVP by registering at the SU² forum page (<http://tiny.cc/meyarw>).

Please feel free to ask questions about the codes in:

- OpenMDAO Forum: <http://tiny.cc/meyarw>
- SU² homepage: <http://tiny.cc/meyarw>

Please, note: other models (such as the software discussed and installed) (<http://tiny.cc/meyarw> and <http://tiny.cc/meyarw>). If you have any problems, we will provide individual support around the room.

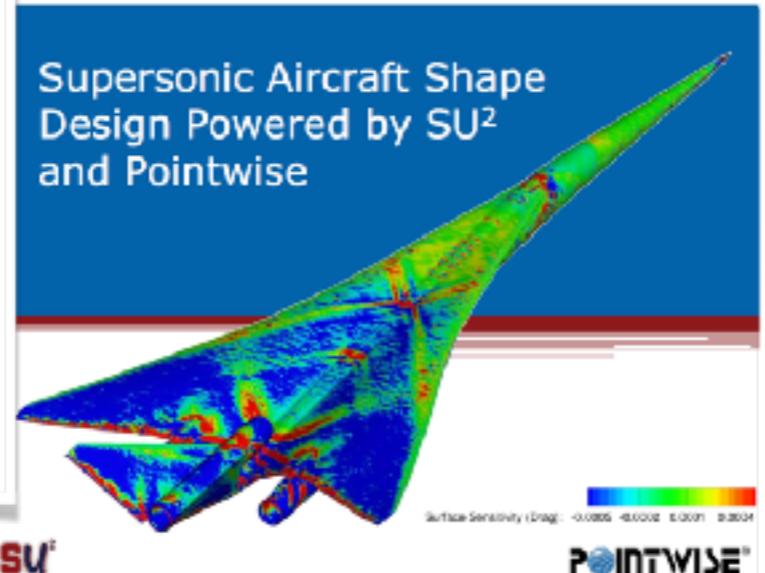
Sep 30
 OpenMDAO / SU2
 Joint Workshop



Aug 10
 SU2 on GitHub

Summer

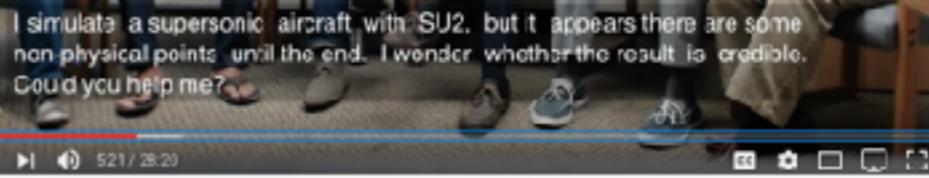
Fall



Jan 15
SU2 v3.0
SU2_EDU v1.0

Apr 29
Pointwise-SU2
Webinar

Apr 14
SU2 v3.1



Jul 29 - New Logo



May 7
Intel Parallel
Comp. Center



JULY 31
TU Delft & Polimi
Visit Stanford



Jun 17
SU2 v3.2

Sep 16
Dev
Email List

Winter

Spring

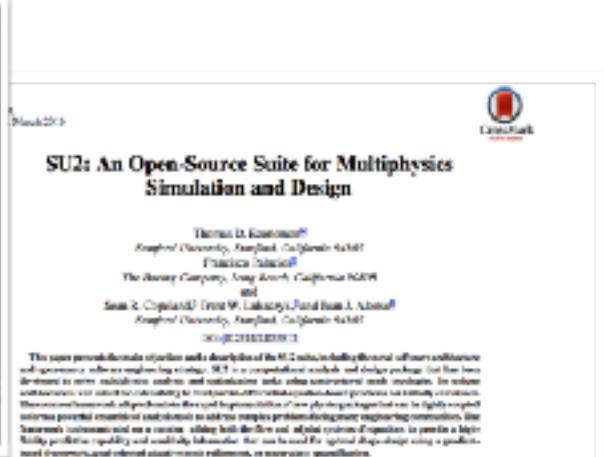
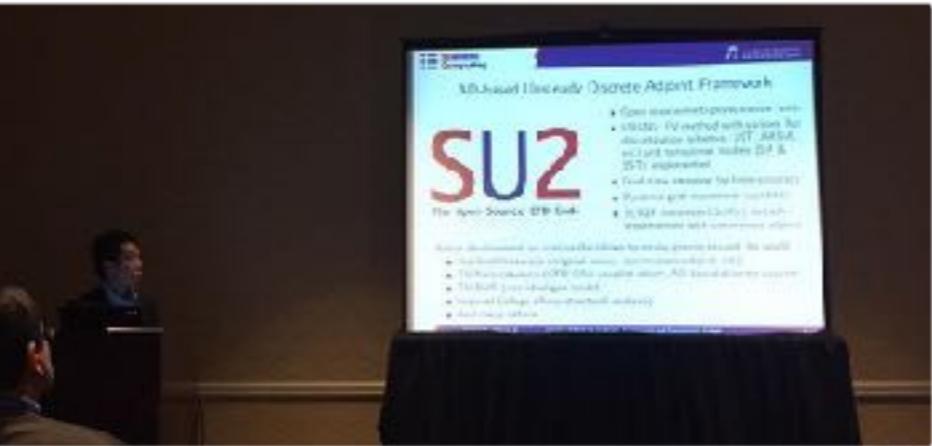
Summer

Fall

2014

Sep 29
Pointwise-SU2
Joint Workshop

Sep 24
“This Week in SU2”
Youtube Season 1
Premiere



Mar 14
Francisco's farewell
from Stanford

Wednesday, March 18

MS302 PDE-constrained Optimization using the Open-source Code SU2

2:00 PM - 3:40 PM
Room: 151 AB

Most established codes for PDE-constrained optimization are proprietary, unavailable, or prohibitively expensive for many users. The SU2 code is freely available as open-source and features a complete computational analysis framework for multidisciplinary design in applications such as, but not limited to, aerospace technology. This minisymposium will cover up-to-date topics within the SU2 framework related to its continuous and discrete adjoint capabilities, the application to large-scale aerodynamic design, and the utilization of many-core architectures. Each of the topics covered involve the combination of multiple research areas of interest to the CS&E community.

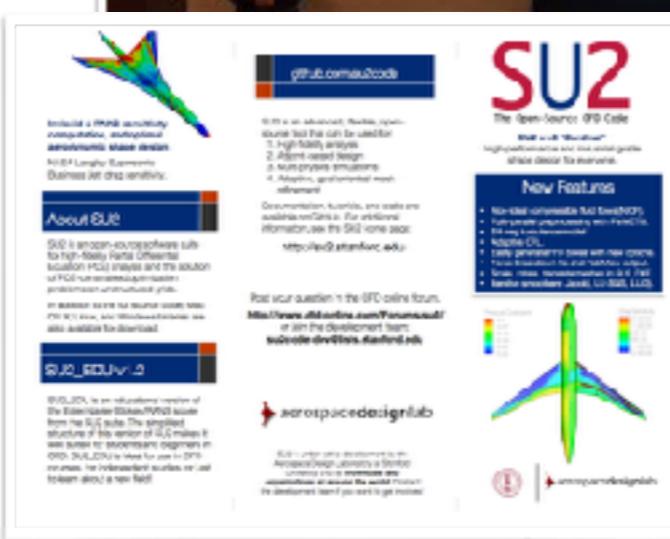
Mar 18
SIAM CSE
Mini



March
TU Kaiserslautern
Visits Stanford

Winter

2015



Jun 23
SU2 v4.0@ AIAA
AVIATION
Travis CI

UNIVERSITY OF TWENTE.



August 6
ALCF Theta
ESP Selection

Imperial College
London

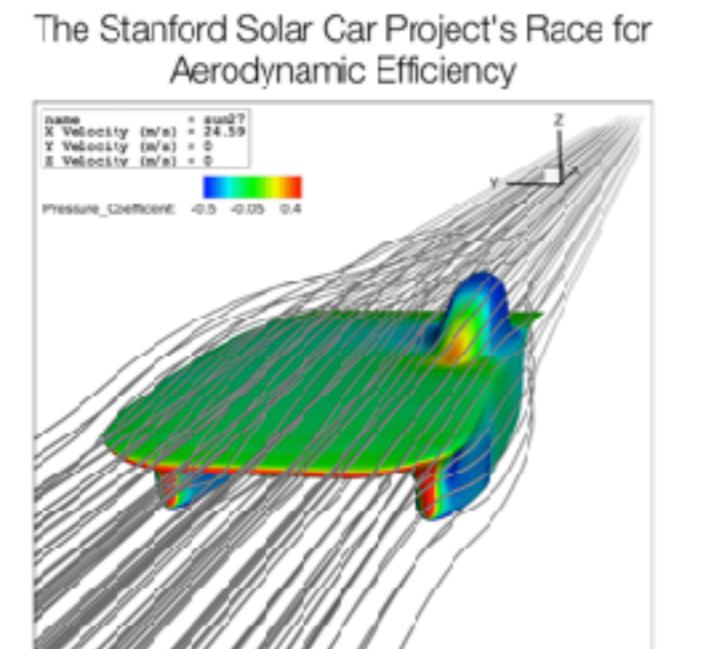
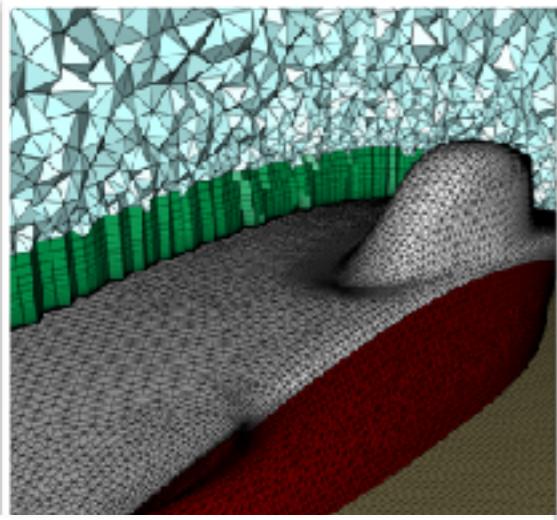
Aug - Sept
Imperial College
Visits Stanford

Spring

Summer

Fall

December 29
SU2 in the
AIAA Journal



SU2

The Open-Source CFD Code

Continuous and Discrete.

The open-source **SU2** package for CFD analysis and design serves not only as a valuable example to computational scientists, but also as a common baseline for future development by the entire community. The current open-source model has enabled the leading experts across many technical areas, anywhere in the world, to work together in creating new capabilities that would not have materialized in the absence of collaboration. Today, we demonstrate this once again with the release of **SU2** version 4.1 "Graal."

[Download SU2 v4.1](#)

Through collaboration with the GoGemo Team at TU Kaiserslautern, we are proud to introduce the support of Algorithmic Differentiation (AD). Based on Interlace, Interlace exact derivative computations throughout implementation uses the recently released open-source library **Gr**, derivatives of all occurring operations and to evaluate the first order C++ features (like static polymorphism and expression templates). Advanced AD methods (backward, externally differentiated computation) result in a low memory footprint and less evaluation.

Jan 7
SU2 v4.1

Feb 29
NASA LBFD
Announced

Winter

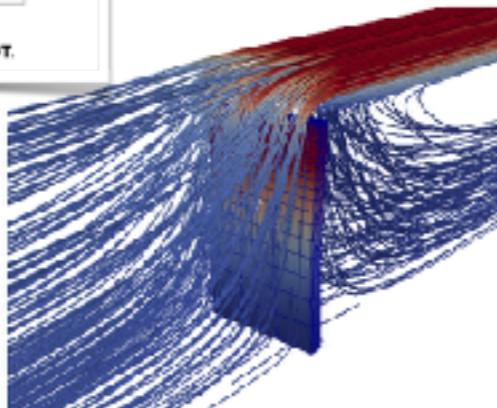
2016



SU2

The Open-Source CFD Code

Fluid, meet Structure.



Apr 5
Pointwise,
Tecplot,
SU Solar Car,
SU2 Webinar



Jun 15
SU2 v4.2

Jul / Aug
U of Liege
Visits Stanford



Sep 5
1st Annual SU2
Developers
Meeting

Fall

1st Annual SU2 Developers Meeting
Sept 7, 2016
TU Delft, Aula Conference Center, Cornelis van Eesterenlaan 1
Amsterdam, NL, 1000, Netherlands

Meeting Agenda

09:00 – 09:15 Welcome & Introducer
09:15 – 09:30 Overview of History, Status, and Future Developments
Prof. Michael Farhat, University of Colorado Boulder, Colorado, USA
09:30 – 10:00 LBFD (Large Eddy Covariance Flow Dynamics) for the SU2 Framework
Prof. Alberto Cabot, Politecnico di Milano, Genova, Italy
Prof. Florin Collino & Antonio Alberdi, TU Delft, Delft, The Netherlands
10:00 – 10:30 Automatic Differentiation Meets Adjoint SU2
Prof. Michael Farhat, University of Colorado Boulder, Colorado, USA
10:30 – 10:45 Q&A Break
10:45 – 11:00 Development of a High-Order Discretization Scheme for Fluid-Structure Interaction
Prof. Polixenos Vanoye, University of Twente
11:00 – 11:15 Multi-Structure Interaction Problems Using Matrix and External Structural Solvers Coupled to SU2
Prof. Michael Farhat, University of Colorado Boulder, Colorado, USA
11:15 – 11:30 Numerical Simulations Using SU2
Prof. Michael Farhat, University of Colorado Boulder, Colorado, USA
11:30 – 12:15 Panel Discussion for SU2 with the NASA LBFD
Prof. James E. D. Thomas, NASA Langley Research Center, VA, USA
Prof. Michael Farhat, University of Colorado Boulder, Colorado, USA
12:15 – 12:30 Q&A Development Priorities for the Next Year / Discussion
Prof. Michael Farhat, University of Colorado Boulder, Colorado, USA

To register to participate (or present or virtually), please register for the meeting by following the link on the SU2 home page ([http://su2.sandia.net/meetings](#)).
Thank you for interest! And we're looking forward to see all of you at the 1st Annual SU2 Developers Meeting!

To find more information about SU2 or to ask questions, check out the following pages:
– [GitHub Page](#) ([https://github.com/su2/SU2](#))
– [SU2 Forum on GitHub](#) ([https://github.com/su2/SU2-forum](#))
– [Forums SU2 on YouTube](#) ([https://www.youtube.com/channel/UCWzJLjPf-AfIwRwMw](#))

Spring

Summer

Nov 8 (2016)

SU2 Article Becomes Most Read Paper in AIAA Journal

<https://su2code.github.io>

SEARCH Advanced Search

SEARCH RECENT SEARCHES

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AIAA Journal



The AIAA Journal is a multidisciplinary journal that publishes research papers in the fields of aerospace engineering, materials science, and related disciplines. The journal covers topics such as aerodynamics, aerothermodynamics, combustion, fundamentals of aeropropulsion, fluid mechanics, aircraft design, aircraft performance, materials, structures, and control systems, among others.

Editor-in-Chief: Michael J. Sauter

Volume 50 Number 12 December 2018

AVAILABILITY

ARTICLES

6, 12 - Air Craft Science
6, 13 - Microsatellites
6, 14 - 2018-01-2018-03
6, 15 - 2018-02-2018-03
6, 16 - 2018-03-2018-04
6, 17 - 2018-04-2018-05
6, 18 - 2018-05-2018-06
6, 19 - 2018-06-2018-07
6, 20 - 2018-07-2018-08
6, 21 - 2018-08-2018-09
6, 22 - 2018-09-2018-10
6, 23 - 2018-10-2018-11
6, 24 - 2018-11-2018-12

MEETING ANNOUNCEMENTS

SU2 Winter Workshop

July 17, 2019
Stanford, CA 94302

Raven SU2: Immobilization with analysis options

Meeting Announcements

PART I

10:00 - 11:00 - Welcome & Introduction

11:00 - 11:30 - Tutorial 1: Basic Analysis & Configuration Options

11:30 - 12:30 - Q&A

13:00 - 14:00 - Tutorial 2: Python Scripts & Optimization Problems

14:00 - 14:30 - Q&A

14:30 - 14:45 - Coffee Break

PART II

14:45 - 15:00 - Data Structures & Tools: Visualizing the Results

Understanding how SU2 works & how to modify it.

15:00 - 16:00 - Q&A

16:00 - 16:30 - Introduction to SU2 and SU2 Development Best Practices

How to place your aerospace CFD code in production.

16:30 - 16:45 - Interactive Demos: Modifying a Python Script

Recommended: bring an idea for a problem that requires non-trivial mesh/CFD solution or parameter or uncertainty quantification.

16:45 - 17:00 - Social Hour Reception

In order to participate (in person or virtually), please register for the meeting by following the link included in the meeting announcement for your interested date. Please remember to log in first and not at least one hour before the meeting.

In case more information about SU2 is needed, please visit the official page:

- SU2 on GitHub: <https://github.com/CS217/SU2>
- Stanford University SU2 Development Team: <http://su2.sandia.gov/>
- Stanford SU2 GitHub: <https://github.com/su2code>

Stanford ENGINEERING
ADVANCING KNOWLEDGE

SU2

The Open-Source CFD Code

SU2 v5.0 Raven

Get wrapped up in it.

On January 16, 2012, we launched SU2 v1.0. What started as a small project has snowballed into a movement. The SU2 community continues to grow, numbering in the thousands of users and hundreds of developers. Our open-source philosophy isn't just bringing together the top expertise in CFD from around the world to accomplish new feats at a lightning pace. Today marks the 8th anniversary of SU2, and we're celebrating with the official release of SU2 v5.0 "Raven," featuring a sum-in-maturity Python wrapper.

Download SU2 v5.0

Feb 3

SU2 Winter Workshop @ Stanford

Feb 3
SU2 Winter
Workshop
@ Stanford

Aug 21
SU2 Summer
School
@ Kaiserslautern

Sep 11
Webpage
Moves
to GitHub

<p>2nd Annual SU2 Developers Meeting December 1st, 2017 Standford University, Cervone Building, Room 410 Standford, California, 94305, USA</p> <p>Meeting Agenda</p> <p>2000 – 2020: Welcome & Year in Review, J. Alonso, Standford; I. Easonian, BoeI, F. Palacios, Boeing</p> <p>2025 – 2030: Upgrades for Parallel Performance and New Speed Records with Heat Transfer I. Easonian, Boeing</p> <p>2030 – 2035: Implementation and assessment of High-Order Methods in the Framework of SU2 K. Singh, D. Drakakis, I. Kotsopoulos, M. Frend, University of Bristol A 3D Kinetic Formulation including Vibrational and Electronic Energy Modes A. Agouzal, J. Hernández-Montaña, M. Asensio, University of Strathclyde</p> <p>2035 – 2040: Current Developments and Applications Related to the Discrete Adjoint Solver in SU2 F. Hitting, R. Geurts, et al., TU Delft/aerospace</p> <p>2040 – 2050: Coffee Break</p> <p>2045 – 2050: An Overview of DOORS in SU2: Implementation and Recent Results E. Martínez, R. G. A. de Almeida, Aeronautical Institute of Technology (ITA-Brazil)</p> <p>2050 – 2055: Recent Advances in Flow Analysis Capability and Subjected Areas (Design, See Trajectory Optimality with SU2) M. Piro, S. Vrtola, A. Kubinec, L. Rozitis, W. Arendt, T. Colonius, TU Delft</p> <p>2055 – 2100: Uncertainty Estimation of Turbulence Model Predictions in SU2 A. Mazzoni, M. Alonso, I. Easonian, J. Alonso, Boeing</p> <p>2130 – 2140: Coffee Break</p> <p>2140 – 2150: A Practical Comparison of SU2 vs. TAU: Two-Dimensional Transonic Aerodynamic Applications G. Ion, Politecnico di Milano, F. M. Congedo, Univ. Bourgogne Franche-Comté, A. Durodossou, Politecnico di Milano</p> <p>2150 – 2155: General Adaptive Mesh Refinement Using the K3D Meshes Method R. Jiménez, C. Venkataraman-Chitre, F. Palacios, Imperial College</p> <p>2155 – 2160: Phenomenon of a Model With Solver within the SU2 Framework E. van der Weide, University of Twente; J. Choi, Standford; A. Mudigere, Intellicode, P. Hennicke, J. Alonso, Standford</p>	 The Open-Source CFD Code
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Jan 19
SU2 v5.0

Winter

Spring

Summer

Fall

2017

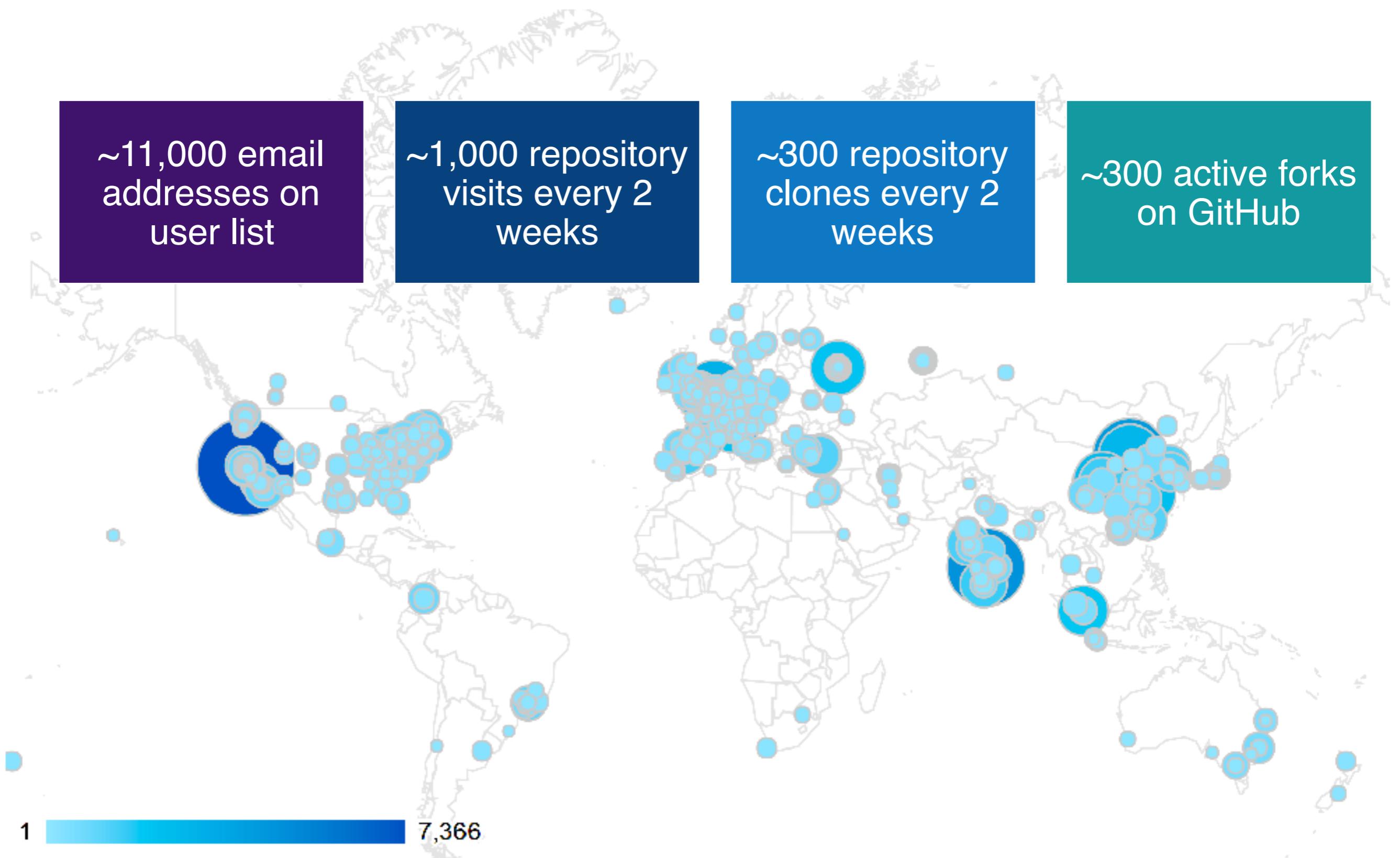
Where are we today? Everywhere.

~11,000 email
addresses on
user list

~1,000 repository
visits every 2
weeks

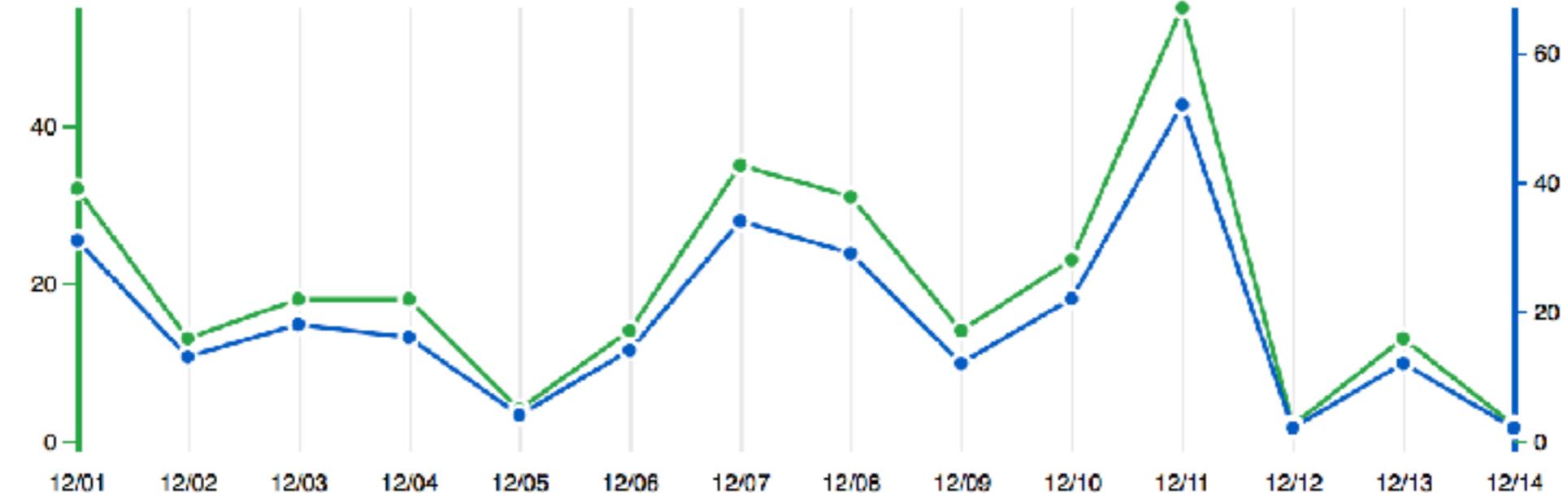
~300 repository
clones every 2
weeks

~300 active forks
on GitHub



Git clones

Traffic data from the SU2 GitHub repository. Accessed 12.14.2017.



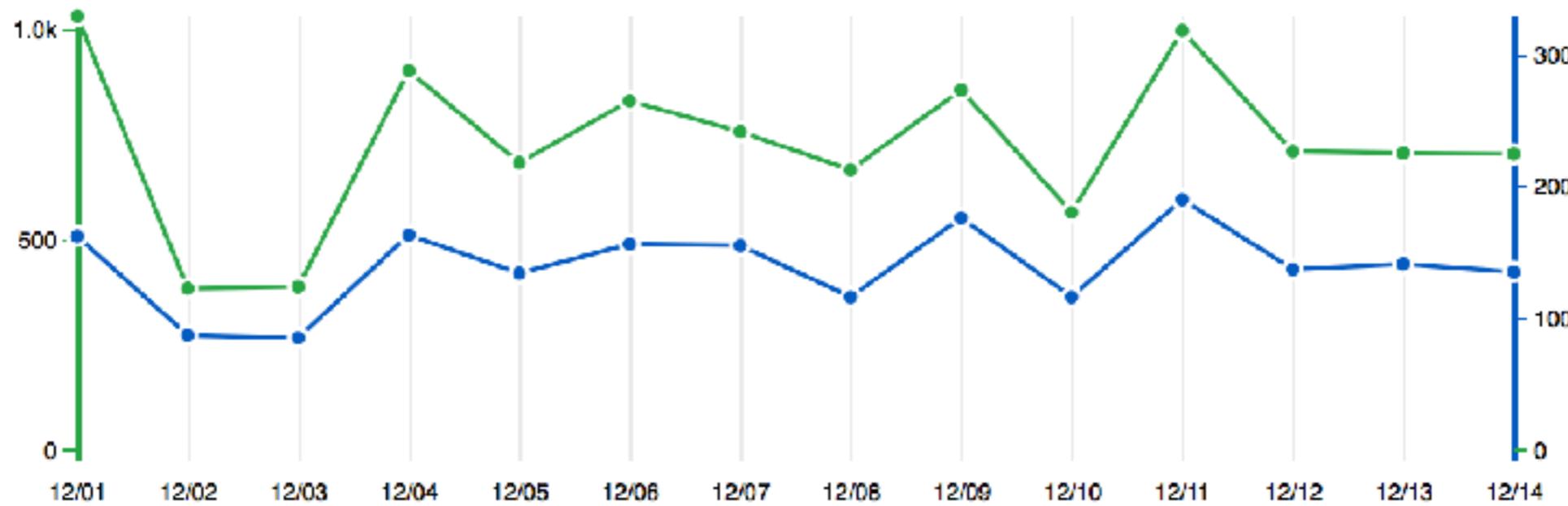
274

Clones

254

Unique cloners

Visitors



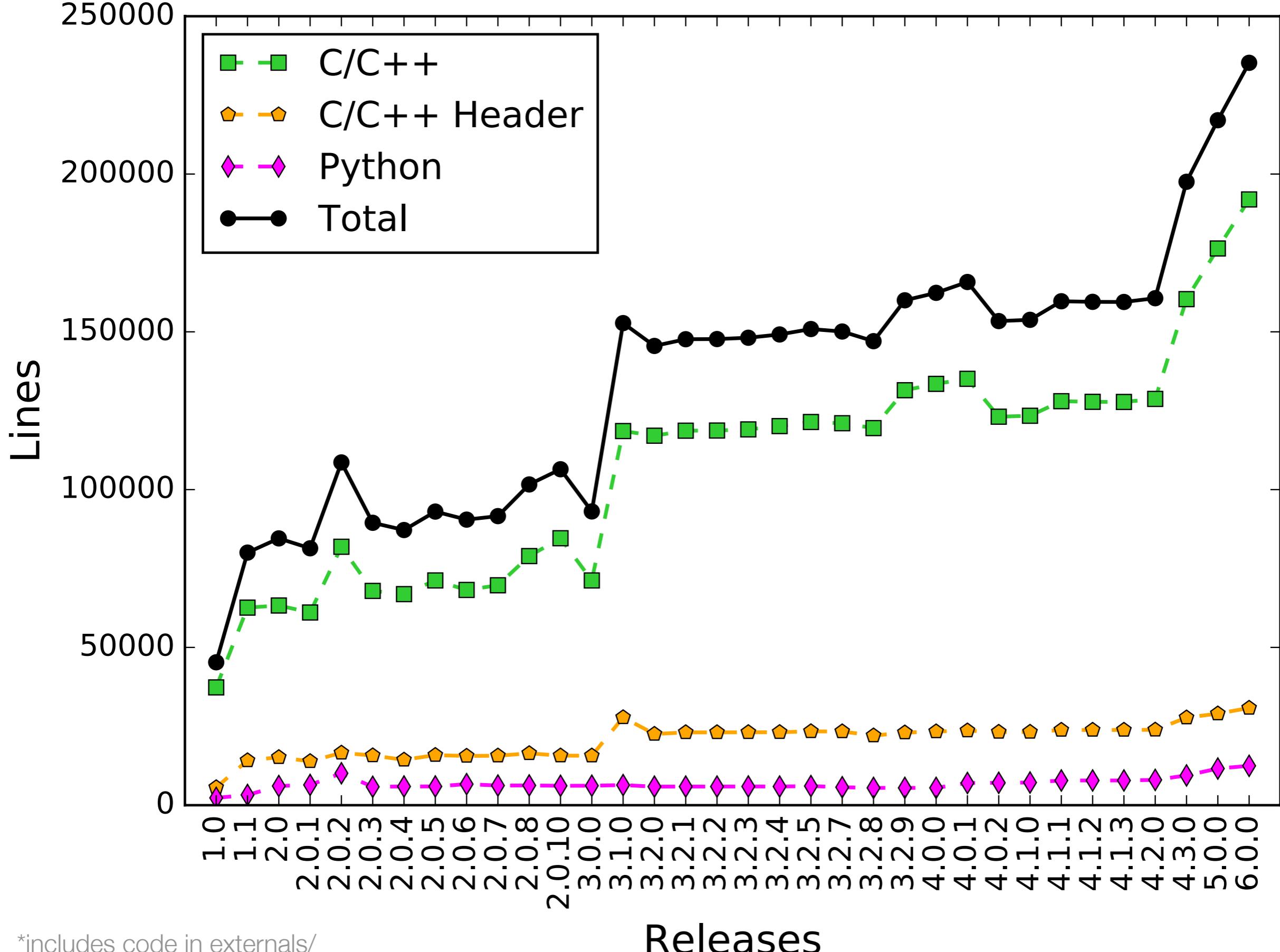
10,180

Views

1,484

Unique visitors

Lines of Code in SU2 by Release (w/out comments or blanks)



Anyone can be an SU2 Developer.

Fork/Branch

Commit

Pull Request

Reviews

Regressions

Merge

This repository [su2code / SU2](#)

Code [Raw](#) Issues [Marketplace](#) Explore

Unwatch 153 ⚡ Star 314 Fork 320

Fix relative import in ordered_bunch.py ce5ffbc

Add polar attribut to TestCase dfa4b08

Dec

Cat

Sec

ite

Fix

Con

Py2 and Py3 support #424

Merged economon merged 89 commits into su2code:develop from petebachant:py2_and_py3_support 8 days ago

talbring approved these changes 12 days ago

View changes

Just tested the branch locally. Everything seems to work fine. We can merge this is in next.

su2code / SU2 build passing

Current Branches Build History Build Details

Pull Request Commit #424 PR Tim A

economon merged commit 7256bea into su2code:develop 8 days ago Hide details Revert

1 check passed

continuous-integration/travis-ci/pr The Travis CI build passed Details

petebachant deleted the petebachant:py2_and_py3_support branch 7 days ago



74 Pull
Requests in
2017

1,385 Commits
Staged for
Release

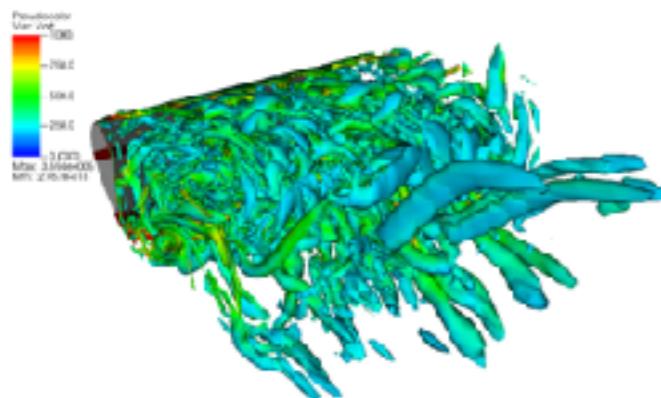
18,193 Code
Lines Staged
for Release

179 Continuous
Regression
Tests

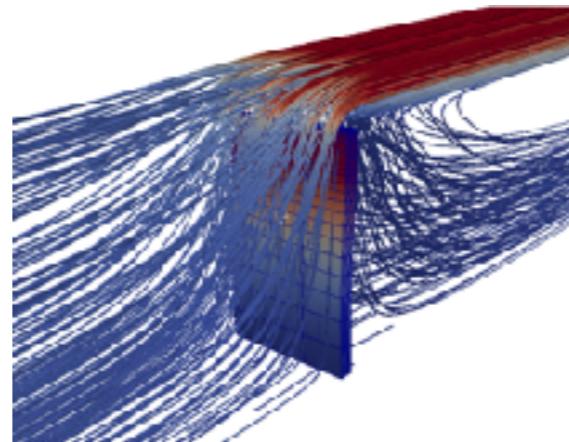
109 Active
Branches in
Repository

320 Active
Forks on
GitHub

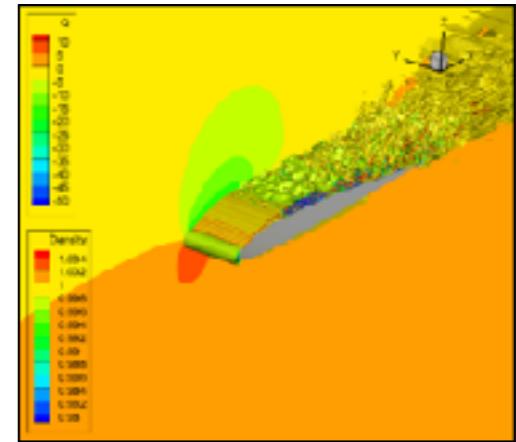
Some Topics for Today



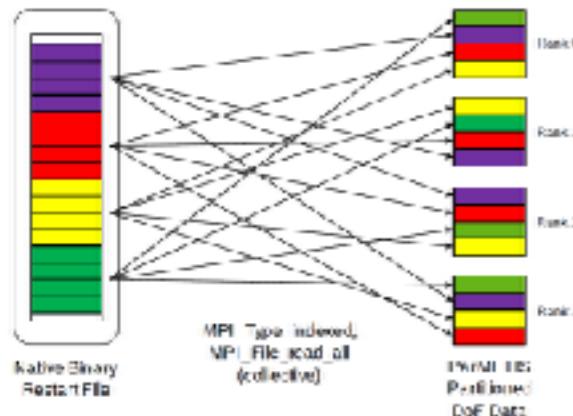
Delayed Detached Eddy Simulation (DDES)



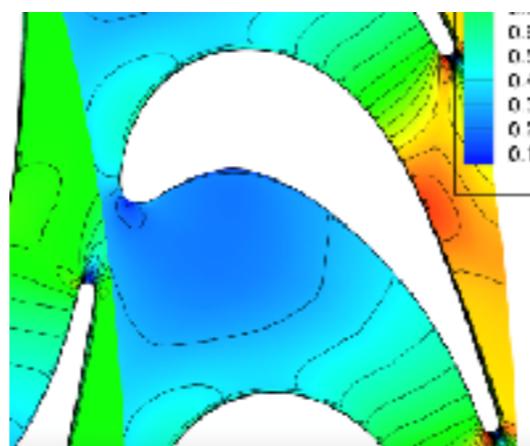
Coupled-Adjoints for FSI



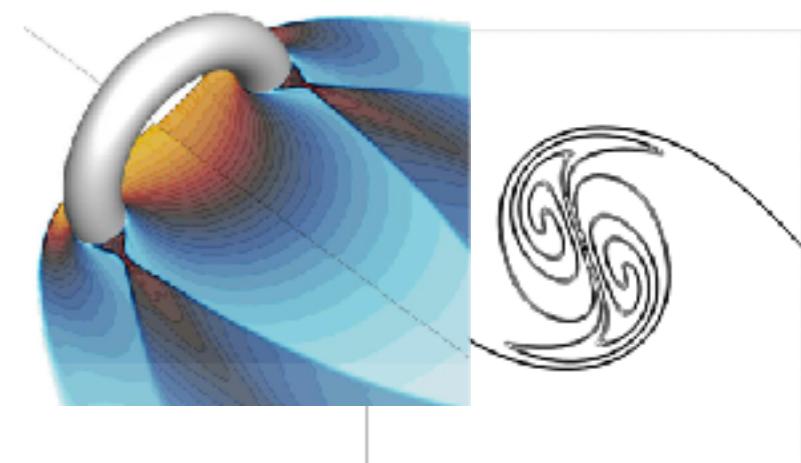
High-Order DG-FEM Solver for iLES/LES/DNS



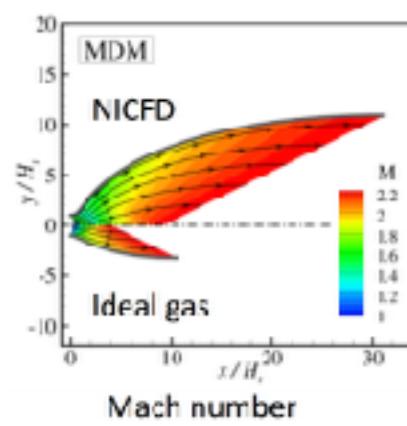
Parallel Performance Upgrades



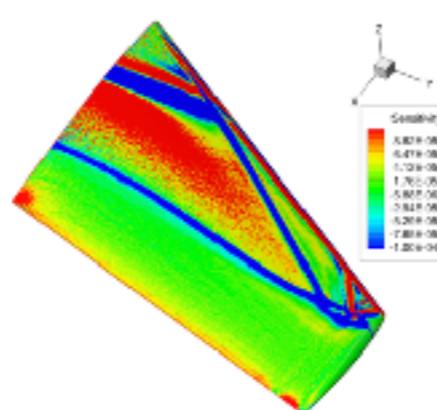
Adjoint-based Turbomachinery Design



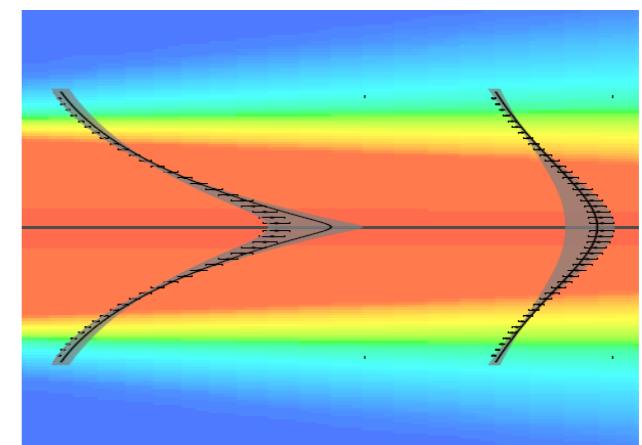
High-Speed Schemes. High-Order Schemes



Non-Ideal Compressible-Fluid Dynamics



Discrete Adjoint-Based Optimization



Uncertainty Quantification for RANS

Open source is everywhere. Join us.

“In the tech community, there is a lot of momentum behind open source and this notion that, if everyone shares information, we'll all grow more quickly and all know more eventually. So, there's no reason to keep secrets. We really live that theory, and it feels like it's working for us as well . . .”

“. . . if you put information out there, somebody else is going to pick up the book, think ‘Hey, this looks kind of interesting,’ start making chocolate, discover something you don't know, and get in touch with you.”

Greg D'Alesandre.

Co-owner, vice-president of research and development, Dandelion Chocolate.

On tech roots playing a role in releasing a book on chocolate creation from scratch.

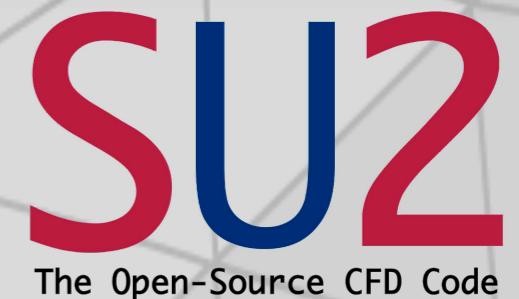
KQED Forum Radio Program Airing December 15, 2017.

2nd Annual SU2 Developers Meeting

December 18th, 2017

Stanford University, Durand Building, Room 450
Stanford, California, 94305, USA

Meeting Agenda



0800 – 0825: Welcome & Year in Review, J. Alonso, Stanford, T. Economou, Bosch, F. Palacios, Boeing

0825 – 0850: Upgrades for Parallel Performance and Low Speed Flows with Heat Transfer
T. Economou, Bosch

0850 – 0915: Implementation and Assessment of High-Order Methods in the Framework of SU2
K. Singh, D. Drikakis, I. Kokkinakis, M. Frank, University of Strathclyde
A BGK-Kinetic Formulation Including Vibrational and Electronic Energy Modes
A. Mogavero, J. Herrera-Montojo, M. Fossati, University of Strathclyde

0915 – 0940: Current Developments and Applications Related to the Discrete Adjoint Solver in SU2
T. Albring, N. Gauger, et al., TU Kaiserslautern

0940 – 1005: Coffee Break

1005 – 1030: An Overview of DDES in SU2: Implementation and Recent Results
E. Molina, R. G. A. da Silva, Aeronautical Institute of Technology (ITA-Brazil)

1030 – 1055: Recent Advances in Flow Analysis Capability and Adjoint-based Design for Turbomachinery with SU2
M. Pini, S. Vitale, A. Rubino, L. Azzini, N. Anand, P. Colonna, TU Delft

1055 – 1120: Uncertainty Estimation of Turbulence Model Predictions in SU2
J. Mukhopadhyaya, A. Mishra, G. Iaccarino, J. Alonso, Stanford

1120 – 1145: Coffee Break

1145 – 1210: SU2: A Reliable Computational Framework for Non-Ideal Compressible-Fluid Dynamics Applications
G. Gori, Politecnico di Milano, P. M. Congedo, Inria - Bordeaux Sud-Ouest, A. Guardone, Politecnico di Milano

1210 – 1235: Coupled Adjoint-based Sensitivities Using the SU2 Native FSI Solver
R. Sánchez, C. Venkatesan-Crome, R. Palacios, Imperial College

1235 – 1300: Development of a Nodal DG Solver within the SU2 Framework
E. van der Weide, University of Twente, J. Choi, Stanford, D. Mudigere, Intel Labs, P. Urbanczyk, J. Alonso, Stanford

In order to participate (in-person or virtually), please register for the meeting by following the link on the SU2 home page (<https://su2code.github.io>).

Thanks for your interest and note that all stated times are Pacific Standard Time (PST).



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Institutions that have downloaded SU2. Sized by frequency.