

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DEXCOM, INC.,
Petitioner,

v.

ABBOTT DIABETES CARE INC.,
Patent Owner.

U.S. Patent No.: 11,298,056
Issued: April 12, 2022
Application No.: 17/411,154
Filed: August 25, 2021

Title: METHODS AND SYSTEMS FOR EARLY SIGNAL
ATTENUATION DETECTION AND PROCESSING

DECLARATION OF MORTEN O. JENSEN, PH.D., DR.MED

TABLE OF CONTENTS

I. INTRODUCTION AND ENGAGEMENT 3

II. BACKGROUND AND QUALIFICATIONS 3

III. MATERIALS CONSIDERED AND
INFORMATION RELIED UPON REGARDING THE '056 PATENT.....7

IV. UNDERSTANDING OF PATENT LAW 8

V. STATE OF THE ART AND LEVEL OF SKILL IN THE ART 10

VI. THE CLAIM SCOPE 11

VII. THE GRANDPARENT APPLICATION AS FILED 15

I, Morten O. Jensen, declare as follows:

I. INTRODUCTION AND ENGAGEMENT

1. I have been retained as an independent expert on behalf of Dexcom, Inc. in connection with the above-captioned Petition for Inter Partes Review (“IPR”) to provide my analyses and opinions on certain technical issues related to U.S. Patent No. 11,298,056 (hereinafter “the ’056 Patent”).

2. I am being compensated at my usual and customary rate for the time I spend in connection with this IPR. My compensation is not affected by the outcome of this IPR.

3. Specifically, I have been asked to provide my opinions regarding whether Mr. Harper’s patent application filed on December 21, 2018, U.S. Ser. No. 16/228,910 (“the Grandparent application,” (Ex1202)) sufficiently described and enabled, from the perspective of an ordinarily skilled artisan, the claims of the ’056 patent.

II. BACKGROUND AND QUALIFICATIONS

4. I am an expert in the fields of biomedical engineering and electrical and computer engineering. In formulating my opinions, I have relied upon my training, knowledge, and experience in the relevant art. A copy of my curriculum vitae is appended to this declaration as Appendix A and provides a description of my professional experience, including my academic and employment history,

publications, conference participation, awards and honors, and more. The following is a brief summary of my relevant qualifications and professional experience.

5. I graduated with honors from the Engineering College of Aarhus in Denmark in July 1997 with a B.Sc. (bachelor's) degree in electrical and computer engineering with a focus on biomedical engineering. I graduated from the Georgia Institute of Technology and Emory University School of Medicine (joint program) in May 2000 with a M.Sc. (master's) degree in biomedical engineering. I graduated from the University of Aarhus School of Medicine in Denmark in November 2008 with a Ph.D. (doctorate) in medicine. The focus of my Ph.D. research was to create measurement equipment for physiological/biomedical monitoring. In March 2015, I was granted a Dr.Med (doctorate) in medical science from the University of Aarhus School of Medicine in Denmark. The Dr.Med degree is a higher-level doctorate that is awarded at certain universities in Northern Europe in the field of medicine. The Dr.Med degree is awarded after a candidate's research and publications have proven to make a *significant* difference in the advancement of science. Historically, the Dr.Med degree has been given only to medical doctors, with rare exceptions. I was the third engineer in Denmark since 1479 to receive this degree.

6. I am currently employed as an Associate Professor of Biomedical Engineering at the University of Arkansas in Fayetteville, Arkansas. I have held this position since August 2015. I am also a Scholar of the Arkansas Research Alliance, a public-private partnership dedicated to elevating a fundamental belief that “research matters.” This Alliance provides financial support for my research at the university in the field of increasing the understanding of the mechanics of cardiovascular disease and intervention while creating solutions and dedicated devices. I also hold an Adjunct Associate Professorship at the University Hospital of Aarhus in Denmark where my main role has been to teach biomedical engineering to MD/PhD students and advise on projects where measurements and signal optimization is in focus. I have held that position since July 2009.

7. Over the past two decades, I have developed and taught numerous courses at both the undergraduate and graduate level, as well as in medical schools, in the field of biomedical engineering, including medical device development, sensor design, measurements on biological and living systems, instrumentation, signal analysis, and presentation. As set forth on my CV (Appendix A hereto), I have published numerous articles relating to aspects of device interactions with living tissues, including device design, performance and specific features that allow these devices to function optimally. Amongst my publications are 118 papers and articles, 164 conference and seminar presentations, and 11 books/book

chapters. I have also received numerous awards for my research work, as outlined in Appendix A.

8. As part of my approximately six years of work in industry at National Instruments, a global data-acquisition, -instrumentation, -analysis and -presentation company, my role as a consulting services engineer in the business development unit was to make customers using the company's products successful. Many of the applications that I worked with were highly relevant to the '056 patent. My work with customers was typically confidential in nature, although whenever possible I managed to publish on both specific projects as well as general topics in biomedical measurement and automation. For example, in 2002 I published two articles in the magazine "Scientific Computing & Instrumentation - SC&I", and one of them became a cover article. See Appendix A for details. I also wrote a chapter on physiologic signals acquisition and analysis in a published book entitled "Virtual Bio-Instrumentation" during my time with the company.

9. Given my experience in measurements and analysis from medical devices on data from the human body, about seven years ago I became responsible for our Senior Design program at the Department of Biomedical Engineering at the University of Arkansas in Fayetteville. I have since then joined my colleagues in electrical, mechanical, and computer engineering/data science to encourage and support our students to work together across departments in their senior design

projects. Several of the projects that I have advised and co-advised through the Department of Biomedical Engineering across multi-departmental collaborations have won first and second prizes at the annual College-wide Senior Design presentation competition. This is a highly anticipated event, open to the public, where members of the community and industry vote on projects.

10. I have also actively participated, and worked alongside surgeons, radiologists, and anesthesiologists in more than one hundred large animal experimental surgeries and interventions on 60-80 kg. porcine and ovine models. The pig and sheep are well-known models for the human physiological system in many aspects of medicine, as also documented in literature during the last several decades. The relevant instruments, equipment, and monitoring systems used on the large animal porcine and ovine models are the same as those used for humans. Hence, the experience of working with these models is relevant to an in-depth understanding of how instruments interact with the human biomedical system.

11. As a result of my background, education, and experience both in industry and academia, I believe that I am highly qualified to provide opinions from the standpoint of a person of skill in the art relating to the design and performance of biomedical monitoring systems, and the technology described in the '056 patent and other references that I discuss in this Declaration.

III. MATERIALS CONSIDERED AND INFORMATION RELIED UPON REGARDING THE '056 PATENT

12. For this declaration, I have considered the '056 patent, the Grandparent application, and the other materials I reference herein.

IV. UNDERSTANDING OF PATENT LAW

13. I am not an attorney. For the purposes of this declaration, I have been informed about certain aspects of the law that are relevant to my opinions. My understanding of the law was provided to me by the Petitioner's attorneys as well as my experience from previous involvement in U.S. patent cases.

14. I have been asked to analyze the disclosure of the December 21, 2018, patent application filed by Mr. Harper, referred to as the Grandparent application, and designated Ex1202, to compare it with the scope of the claims of the '056 patent.

15. Patent law requires that a patent application's specification contain an adequate "written description" of the alleged invention claimed. Under this requirement, the application's disclosure must clearly allow persons of ordinary skill in the art as of the application's filing date (here, December 21, 2018), without foreknowledge of the later-drafted patent claims (here, the '056 patent claims), to recognize that the patent applicant (here, Mr. Harper) invented what is claimed in those claims, such that the disclosure of the application relied upon reasonably conveys to those skilled in the art that the patent applicant had possession of the claimed subject matter as of the application's filing date. To

show such possession, the application's disclosure of the claimed subject matter must be as broad as the claim. It is not enough for the application's disclosure to describe something close to what is claimed even if what is claimed would have been an obvious extension of what is described. Instead, the application must describe the subject matter that is claimed. The application, however, need not use the verbatim language of the later-issued claims.

16. Patent law requires that a patent application's specification contain also an "enabling disclosure" of the subject matter claimed in the issued patent. This requires a description of the claimed subject matter and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, by following the teachings of the application, without undue experimentation. A considerable amount of experimentation is permissible, if it is merely routine in the relevant field, or if the application's disclosure provides a reasonable amount of guidance to the skilled artisan. The enabling disclosure must be provided in the specification. A patent applicant cannot rely on the knowledge of a person of ordinary skill to serve as a substitute for missing information in the application. The scope of the disclosure's enablement must be as broad as the claims.

17. I have been asked to assume that the '056 patent claims are broad enough to encompass systems with the features identified in the section below entitled "The Claim Scope." With that assumed claim scope, I have been asked to analyze and opine on whether the Grandparent application described and enabled such a breadth of later claimed subject matter in the manner required by the above written-description and enablement requirements, with a focus on the perspective of the skilled artisan in the relevant fields in December 2018.

18. My analysis in this declaration is in accordance with the above-stated legal principles.

V. STATE OF THE ART AND LEVEL OF SKILL IN THE ART

19. The person of ordinary skill in the art pertinent to the '056 patent in December 2018 ("POSITA") would have had a Bachelor of Science degree in biomedical engineering, or a similar field, such as electrical or computer engineering, and two years of industry experience or research working with medical devices and systems for measuring biomedical signals, for example levels of blood analytes, such as glucose, in a patient and transmitting indications of such levels of analytes to a receiving device for reporting the measurements. Additional education, such as a Master's degree in biomedical engineering could substitute for the industry experience as it typically involves at least two years of additional study, which can be focused on medical devices including data electronics and

analysis systems, as well as a thesis or project spanning several semesters to implement a substantial project.

VI. THE CLAIM SCOPE

20. For purposes of this declaration, I have been asked to assume that the '056 patent claims include systems with the following capabilities. Listing a capability below does not mean that the claim requires that all systems covered by the claims must have that capability. Instead, it means that the claims are broad enough to include some systems having that capability. For example, only claim 22 of the '056 patent requires that the “receiver unit” component include a mobile phone. But all of the claims include systems in which the “receiver unit” component has the capability of being a mobile phone.

21. Detect 17 adverse conditions: Claim 1 of the '056 patent recites that the “glucose monitoring system is configured to detect an adverse condition.” ('056 15:65-66.) The '056 patent expressly states that “an” refers to one *or more*: “as used herein and in the appended claims, the singular forms ‘a’, ‘an’, and ‘the’ include plural referents unless the context clearly dictates otherwise.” ('056 3:50-52.) I have been asked to assume that each '056 patent claim encompasses systems configured to detect all 17 of the “adverse conditions” identified in the dependent claims or the specification of the '056 patent, namely: (1) “a sensor communication error” ('056 claim 3, 13:65), (2) “a signal error associated with the glucose sensor”

(claim 4), (3) “a signal error associated with the data processing and transmitter unit” (claim 5), (4) “a signal error associated with the receiver unit” (claim 6), (5) “a system malfunction associated with the data processing and transmitter unit” (claim 7), (6) “a system malfunction associated with the receiver unit” (claim 7), (7) “an inability of the receiver unit to display or output at least a portion of [the] first line graph” (claim 8), (8) “a sensor instability condition” (claim 9, 13:61), (9) “a calibration failure condition” (claim 10, 13:61-62), (10) “a monitoring system failure condition” (claim 11, 13:62), (11) “a sensor misposition error” (claim 13, 13:64-65), (12) “a temperature measurement outside a predetermined range” (claim 14, 13:65-66), (13) “an analyte level exceeding a predetermined threshold” (claim 15, 14:2), (14) “a rate of change of an analyte level exceeding a predetermined threshold” (claim 16, 14:2-4), (15) “a data unavailability condition” (claim 17, 14:5), (16) “a signal error associated with the blood glucose reference data” (claim 25, *see* 14:4), and (17) an “early signal attenuation condition of the sensor” (13:63).

22. Several of the dependent claims state that “the adverse condition comprises” an identified condition. I have been asked to assume that “comprises” in these claims means “includes” and that these dependent claims also encompass systems configured to detect all 17 of the “adverse conditions.”

23. Continuously monitor for and detect all 17 adverse conditions, and when they start and end: Claim 1 of the '056 patent recites a first line graph that “has an end corresponding to a time associated with a start of the adverse condition” (*id.* 16:1-3) and recites a second line graph that has “a second end corresponding to a time associated with an end of the adverse condition” (*id.* 16:16-20). Dependent claim 18 recites displaying data “immediately after the correction of the adverse condition.” I have been asked to assume that each claim encompasses systems in which the system’s processor(s) are programmed to continuously monitor for all 17 adverse conditions to detect when they start and when they end.

24. Store data throughout 72-hour or longer adverse-condition period: Claim 1 requires certain data to be stored “during a time period corresponding to the adverse condition.” ('056 16:4-7.) The patent states that the sensor may be configured for calibration 72 hours after insertion. (*Id.* 11:8-13). I have been asked to assume that each claim encompasses storing data throughout a 72-hour or longer adverse condition period.

25. Store calibrated sensor data derived from sensor data received during the adverse-condition time period but not store that uncalibrated sensor data: Claim 1 recites that the “data processing and transmitter unit” (hereinafter, “transmitter”) is configured to “receive the sensor data from the glucose sensor ...” ('056 15:39)

and is configured to “process the sensor data using calibration data to provide processed sensor data ...” (*id.* 15:42-43). I will refer to the former, received data as uncalibrated sensor data and the latter, processed data as calibrated sensor data. I have been asked to assume that “sensor data” referenced elsewhere in the claims at least includes this uncalibrated sensor data, and that “processed sensor data” referenced elsewhere in the claims at least includes this calibrated sensor data.

26. Claim 1 recites storing “sensor data” and/or “processed sensor data” “during a time period corresponding to the adverse condition.” (’056 16:4-7). I have been asked to assume that both terms encompass data that is bad (inaccurate) on account of some adverse condition such as a sensor or transmitter malfunction or a calibration failure.

27. Claim 1 recites that during the adverse-condition time period, “sensor data, processed sensor data, or both” are stored in the memory of the transmitter. (’056 16:4-7). I have been asked to assume that each claim encompasses systems configured for three different modes of operation during the adverse-condition time period: (1) uncalibrated sensor data is stored in the transmitter’s memory, but no calibrated sensor data is stored, (2) calibrated sensor data is stored in the transmitter’s memory, but no uncalibrated sensor data is stored, and (3) both uncalibrated sensor data and calibrated sensor data are stored in the transmitter’s memory.

28. Immediately after any detected adverse condition is corrected; display accurate glucose values for the entire adverse-condition time period on the screen of a mobile phone or other receiver unit: Claim 1 recites that “the receiver unit is configured to output to the display, after the adverse condition is corrected,” processed “sensor data for the time period corresponding to the adverse condition.” (’056 16:8-12.) Dependent claim 18 recites that this line graph is displayed “immediately after the correction of the adverse condition.” Dependent claim 22 recites that “the receiver unit comprises a mobile phone” (’056 17:21). I have been asked to assume that each claim encompasses systems configured to display on a mobile phone accurate calibrated glucose sensor data, for the entire 72-hours or longer adverse condition, “immediately” after correction of the adverse condition.

29. Immediately display accurate values despite having stored only inaccurate calibrated data or having not stored uncalibrated sensor data: I have been asked to assume that the claims encompass systems configured to display on the screen of a mobile phone accurate calibrated glucose sensor data, for an entire adverse-condition time period, “immediately” after correction of the adverse condition, despite having stored only inaccurate, calibrated sensor data during that time period, and not accurate, uncalibrated sensor data.

VII. THE GRANDPARENT APPLICATION AS FILED

30. I have reviewed the Grandparent application (Ex1202), including its claims as filed on December 21, 2018, from the perspective of a skilled artisan in December 2018, without foreknowledge of the '056 patent claims, to determine whether it provided the disclosure required by the written description requirement described above and the enabling disclosure requirement described above, for the above-identified scope of the '056 patent claims. I have not reviewed the materials said to be incorporated by reference.

31. Detect 17 adverse conditions: The Grandparent application did not describe and enable systems configured to detect all 17 of the “adverse conditions” identified in the patent.

32. As outlined above in ¶21, the '056 patent identifies 17 “adverse conditions”: (1) “a sensor communication error” ('056 claim 3, 13:65), (2) “a signal error associated with the glucose sensor” (claim 4), (3) “a signal error associated with the data processing and transmitter unit” (claim 5), (4) “a signal error associated with the receiver unit” (claim 6), (5) “a system malfunction associated with the data processing and transmitter unit” (claim 7), (6) “a system malfunction associated with the receiver unit” (claim 7), (7) “an inability of the receiver unit to display or output at least a portion of [the] first line graph” (claim 8), (8) “a sensor instability condition” (claim 9, 13:61), (9) “a calibration failure condition” (claim 10, 13:61-62), (10) “a monitoring system failure condition”

(claim 11, 13:62), (11) “a sensor misposition error” (claim 13, 13:64-65), (12) “a temperature measurement outside a predetermined range” (claim 14, 13:65-66), (13) “an analyte level exceeding a predetermined threshold” (claim 15, 14:2), (14) “a rate of change of an analyte level exceeding a predetermined threshold” (claim 16, 14:2-4), (15) “a data unavailability condition” (claim 17, 14:5), (16) “a signal error associated with the blood glucose reference data” (claim 25, *see* 14:4), and (17) an “early signal attenuation condition of the sensor” (13:63).

33. Two disclosures in the Grandparent application might relate to techniques for detecting an adverse condition. One concerns sensor current leakage detection and the other concerns calibration failures.

34. **Sensor Leakage Current:** Figure 2 of the Grandparent application has a box 214 labeled “leak detection” without anything inside the box describing how this function is performed. The only text description in the Grandparent application of this box is the following, in [0045]: “The leak detection circuit 214 in accordance with one embodiment of the present disclosure may be configured to detect leakage current in the sensor unit 101 to determine whether the measured sensor data are corrupt or whether the measured data from the sensor 101 is accurate.” The Grandparent application did not describe this circuit or any algorithm performed by this circuit. It did not give an example of this circuit

detecting leakage current. It did not clearly point the reader to any external document to find a description of this “leak detection circuit.”

35. It is not only leak-currents that can cause the sensor data to be corrupt or inaccurate. This can be caused by many factors with different properties, such as mechanical, chemical, electrical, etc.

36. Skilled artisans were familiar with leak detection circuits by the application’s filing date of December 21, 2018. An electrical current leak detection circuit is designed to identify unintended or abnormal leakage of electrical current in a system. It is commonly used to detect faults or insulation breakdown in electrical wiring, power cables, or electronic devices. The purposes of such a circuit are numerous, such as to enable correct readings from a sensor, to ensure safety by alerting users to potential electrical hazards, to prevent damage to equipment, and also to reduce the risk of electrical fires. The circuit typically comprises various components, including sensors, monitoring devices, and an alarm system.

37. Some leak detection circuits are designed to continuously monitor for leakage current, and others are not.

38. The key elements of an electrical current leak detection circuit designed to monitor for leakage current are discussed below.

39. A leak detection circuit can contain current sensors that are placed at specific points in the electrical system where leakage is likely to occur. They detect the flow of electrical current and any deviations from the expected values. Current transformers or current sensors are commonly used for this purpose. If an imbalance is detected, indicating a current leak, the residual current device (RCD) “trips” and disconnects the power supply. A leak detection circuit can also contain monitoring devices that receive signals from the current sensors and perform analysis to determine if there is any abnormal current leakage. They can be microcontrollers, programmable logic controllers (PLCs), or dedicated monitoring circuits. The monitoring devices continuously assess the current levels and compare them against predefined thresholds or reference values. When a current leak is detected, the alarm system is typically activated to alert users or operators. It can consist of audible alarms, visual indicators, or notifications sent to a control panel or monitoring station. The alarm system serves as an immediate warning to prompt appropriate actions, such as investigating the cause of the leakage and taking corrective measures, such as alerting a glucose monitoring system of this condition. More advanced current leak detection circuits may include data logging and communication capabilities. This allows for the recording of historical data related to current leakages, remote monitoring, and real-time notifications. It

facilitates proactive maintenance, troubleshooting, and analysis of these electrical systems, that may contain sensors and other electrical equipment.

40. The Grandparent application did not clearly disclose its leak detection circuit detecting at least the following adverse conditions: (1) “a sensor communication error” (’056 claim 3, 13:65), (3) “a signal error associated with the data processing and transmitter unit” (claim 5), (5) “a system malfunction associated with the data processing and transmitter unit” (claim 7), (6) “a system malfunction associated with the receiver unit” (claim 7), (7) “an inability of the receiver unit to display or output at least a portion of [the] first line graph” (claim 8), (11) “a sensor misposition error” (claim 13, 13:64-65), (12) “a temperature measurement outside a predetermined range” (claim 14, 13:65-66), (13) “an analyte level exceeding a predetermined threshold” (claim 15, 14:2), (14) “a rate of change of an analyte level exceeding a predetermined threshold” (claim 16, 14:2-4), (16) “a signal error associated with the blood glucose reference data” (claim 25, *see* 14:4), and (17) an “early signal attenuation condition of the sensor” (13:63).

41. **Condition Unsuitable for Calibration:** The Grandparent application described disabling the display of glucose values in the event of a “condition unsuitable for a sensor calibration event.” (Ex1202 [0052]; *see also* [0051]–[0058], [0068].) It described such disabling mostly in outlining the methods of Figs. 4 and 5. The application stated that calibration converts the data signals received from

the sensor into corresponding analyte levels. It stated that the conditions unsuitable for calibration include when a predetermined calibration event is triggered “but a successful calibration does not result.” (Ex1202 [0052].) It did not describe, however, an example, algorithm, or circuit for determining whether a “successful calibration” has resulted. “Other conditions may also result in rendering the condition unsuitable for sensor calibration including, but not limited to, detection of a failure mode of a sensor, *sensor data values being outside a predetermined range, rate of change of sensor data values being above a predetermined threshold, a temperature measurement outside a predetermined range, or any combination thereof.*” (Ex1202 [0053].)

42. The Grandparent application did not describe an example, algorithm or circuit for detecting such a condition unsuitable for calibration when none of the three out-of-range or above-a-threshold conditions italicized above are present. It asserted that the receiver unit “determines whether the sensor is calibrated and is in acceptable condition for further data processing.” (Ex1202 [0054]) and is configured to “determine if calibration of the sensor data is suitable—that is, whether the conditions necessary for sensor calibration are met” (Ex1202 [0056]). But it did not describe how this is done, apart from the three conditions italicized above. It did not show the skilled artisan that Mr. Harper possessed the knowledge necessary to make these determinations or configure a processor to make them.

And it did not give the skilled artisan the steps to follow to configure a processor to make these determinations.

43. The Grandparent application's discussion of conditions unsuitable for calibration did not clearly disclose detecting at least the following adverse conditions: (4) "a signal error associated with the receiver unit" (claim 6), (6) "a system malfunction associated with the receiver unit" (claim 7), and (7) "an inability of the receiver unit to display or output at least a portion of [the] first line graph" (claim 8).

44. Continuously monitor for and detect all 17 adverse conditions, and when they start and end: The Grandparent application did not adequately disclose systems programmed to continuously monitor for all 17 of the adverse conditions to detect when they start and end.

45. **Sensor Leakage Current**: For a leak detection circuit to detect the start and/or end of a period of inaccurate sensor-measured data caused by leakage current it would need to continuously monitor for such leakage current. Not all leak detection circuits continuously monitor for leakage current.

46. For example, U.S. Patent No. 8,112,240 to Abbott describes a leak detection circuit that checks for sensor leakage current only intermittently by sending a test signal to the sensor. For example, it states: "When it is desired to test for the leakage current in the sensor 101, a leak detection test signal may be

applied to the guard electrode 211 from the processor 204 of the transmitter 102 to detect leakage current in the sensor 101 as discussed in further detail in conjunction with FIG. 8 below.” (U.S. Pat. No. 8,112,240, col. 7, lines 23 to 28.) Because this leak detection circuit does not continuously monitor for leakage current, it is not designed to detect the start and end times of any adverse condition.

47. The Grandparent application did not state whether its “leak detection circuit” continuously monitors the sensor for leakage current. A skilled artisan would understand from the Grandparent application that the “leak detection circuit” could be designed to check for sensor leakage current only intermittently, not continuously. Such a leak detection circuit would be unable to determine when exactly the leakage current began or ended. It therefore would be unable to detect the start and/or end of a period of inaccurate sensor-measured data caused by leakage current.

48. **Condition Unsuitable for Calibration:** The Grandparent application did not describe how to monitor the sensor in order to detect the start and/or end of a condition unsuitable for calibration. It described no example, circuit or algorithm for monitoring of conditions unsuitable for calibration. A skilled artisan would have understood that the system might instead be configured to make this determination on demand, or at predetermined intervals only, and be unable to determine when exactly the condition unsuitable for calibration began or ended.

This system can be constructed as a hardware/software combination, with some of the functionality located in the hardware and some of the functionality located in the software. A skilled artisan would understand that this location of functionality can be moved to/from the hardware and software, if conditions allow (speed, cost, heat management, connectivity, etc.)

49. Store calibrated sensor data derived from uncalibrated sensor data received during the adverse-condition time period but not store that uncalibrated sensor data: The Grandparent application did not adequately disclose systems configured to store in the transmitter's memory, during the adverse-condition time period, calibrated sensor data, but not store uncalibrated sensor data.

50. The Grandparent application disclosed that the transmitter had memory for storing "the data signals received from the sensor" (Ex1202 [0041]). But the Grandparent application did not clearly disclose that this transmitter memory stores *calibrated* sensor data calculated from the data signals received from the sensor. For example, the Grandparent application did not clearly disclose that the transmitter (1) received data signals from the sensor during an adverse-condition time period, (2) calculated calibrated sensor data from those received signals, and then (3) stored those calibrated sensor data in the transmitter's memory. The Grandparent application also did not clearly disclose that this

transmitter memory stores such calibrated sensor data without also storing the uncalibrated sensor data received from the sensor.

51. Display on the display of a mobile phone or other receiver unit, immediately after any detected adverse condition is corrected, accurate glucose values for the entire adverse-condition time period: The Grandparent application did not adequately disclose systems configured to output on a receiver, including a mobile phone, accurate, calibrated data “immediately” after correction of the 72-hours or longer adverse condition.

52. The Grandparent application disclosed two receiver units, one primary and one secondary. It did not disclose that the primary receiver unit could be a mobile phone. It did disclose that the secondary receiver unit could be a mobile phone but only if it had reduced functionality as compared to the primary receiver unit:

“Also shown in FIG. 1 is an optional secondary receiver unit 106 which is operatively coupled to the communication link and configured to receive data transmitted from the data processing and transmitter unit 102. As discussed in further detail below, in one embodiment of the present disclosure, the secondary receiver unit 106 may be configured to include a limited number of functions and features as compared with the primary receiver unit 104. As such,

the secondary receiver unit 106 may be configured substantially in a smaller compact housing or embodied in a device such as a wrist watch, pager, mobile phone, PDA, for example. Alternatively, the secondary receiver unit 106 may be configured with the same or substantially similar functionality as the primary receiver unit 104.

The receiver unit may be configured to be used in conjunction with a docking cradle unit, for example for one or more of the following or other functions: placement by bedside, for re-charging, for data management, for night time monitoring, and/or bi-directional communication device.” (Ex1202 [0028].)

53. The skilled artisan would understand the above passage as indicating that the secondary receiver could be a mobile phone but only if it had fewer functions and features than the primary receiver, indicating that the primary receiver could not be a mobile phone. It would have been specifically mentioned that the primary receiver could be a mobile phone if that is what was intended, which it is not.

54. Immediately display accurate values despite having stored only inaccurate calibrated data: The Grandparent application did not adequately disclose systems configured to output accurate glucose values immediately after correction

of an adverse condition, despite having stored during the adverse condition period only inaccurate calibrated or uncalibrated sensor data.

55. The Grandparent application purported to describe recovering from an “adverse condition” period to retrospectively backfill the display with presumably accurate, calibrated glucose values:

“In this manner, in accordance with the embodiments of the present disclosure, gaps in monitored analyte levels using an analyte monitoring system due to, for example, inability to promptly calibrate the sensor, system malfunction, sensor dislodging, signal errors associated with the sensor, transmitter unit, receiver unit, and the like, or any other variables or parameters that result in the inability of the analyte monitoring system to display or output the real-time monitored analyte level, may be retrospectively filled or reprocessed so that the data gap is closed and the continuously monitored analyte level does not have any or substantially missing data. That is, in embodiments of the present disclosure, upon correction or rectification of the condition or conditions/parameters which resulted in the analyte monitoring system disabling the output results associated with the monitored real time analyte levels, the parameters associated with the correction or rectification may be used to

retrospectively correct or process data or signals so that the missing gaps in analyte related data may be processed and backfilled.”

(Ex1202 [0062]).

56. This paragraph described an aspiration but without describing how to achieve it. It gave no example, algorithm or circuit for this retrospective correction. In particular, it did not describe how to retrospectively correct data when only inaccurate calibrated or uncalibrated sensor data has been stored in the transmitter’s memory during the adverse-condition period. Possibly converting bad calibrated or uncalibrated sensor data into correct calibrated sensor data would require at least determining the nature and extent of the error or corruption of the bad data, in order to reverse it. But the Grandparent application gave no example, algorithm, or circuit for doing this, for any of the 17 adverse conditions. It provided no steps for the ordinarily skilled artisan to follow to make this conversion or to configure a processor to make this conversion, without undue experimentation.

57. If the system stored accurate calibrated or uncalibrated sensor data throughout the adverse condition time period, then a skilled artisan would know how to program the system to later display that data. But these claims encompass situations in which the adverse condition has caused sensor data to be missing, or be inaccurate, or for the calibration of the sensor data to be inaccurate. The

Grandparent application did not describe an algorithm, example, or circuit for outputting accurate backfilled glucose values immediately after correcting for such a condition, absent storage of accurate sensor data during the adverse condition period.

I, Morten O. Jensen, do hereby declare and state, that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: July 21, 2023



/Morten O. Jensen/
Signature

APPENDIX A

Morten Olgaard Jensen, PhD, DrMed

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Civil Status: Married to Hanna Jensen, MD, PhD

Education:

- Doctor of Medical Science (DrMed), School of Medicine / Faculty of Health Sciences, The University of Aarhus, Aarhus, Denmark, March 2015
 - Doctor of Philosophy (PhD), School of Medicine / Faculty of Health Sciences, The University of Aarhus, Aarhus, Denmark, November 2008
 - Master of Science (M.Sc.), Biomedical Engineering (GPA: top 10%), Georgia Institute of Technology / Emory University School of Medicine, Atlanta, GA, USA, May 2000
 - Bachelor of Science (B.Sc.) in Engineering with honors, Electrical and Computer Engineering, The Engineering College of Aarhus, Aarhus, Denmark, July 1997
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Professional Experience:

- Associate Professor of Biomedical Engineering and Arkansas Research Alliance Scholar, Department of Biomedical Engineering, University of Arkansas, Fayetteville, AR, USA (*Aug. '15 – present*)
- Chief Technology Officer, Vivas LLC – Company creates flow model phantoms with synthetic medical gel in partnership with Humimic Medical LLC, sales worldwide (*Nov. '17 – Dec. '20*)
- Associate Professor, Dept. of Cardiothoracic Surg., The Univ. Hosp. of Aarhus, DK (*Jul. '09 – Dec'13, Adjunct Jan '14 - present*)
- Associate Professor and Director of Research, The Scandinavian School of Cardiovascular Technology (*Oct. '09 – Aug. '15*)
- Research Faculty, Department of Biomedical Engineering, Georgia Tech / Emory, Atlanta, GA, USA (*Feb. '14 – Aug. '15*)
- Honorary Senior Lecturer, Department of Mechanical Engineering, University College London, London, UK (*Apr. '13 – Feb. '14*)
- Honorary Clinical Fellow and Senior Lecturer, Cardiology, The Heart Hospital Specialist Board, UCLH, London, UK (*Apr. '13 – Feb. '14*)
- Assistant Professor, Department of Biomedical Engineering, Engineering College of Aarhus, Aarhus, DK (*Oct. '07 – Jul. '09*)
- Consulting Services Unit / Worldwide Business Development Group, National Instruments, Austin, TX, USA (*June '00-Aug. '05*)
- Danish Army Corps of Engineers, Communications Unit, Denmark (*Aug. '92 - Jun. '93*)

Professional Experience Keywords:

- Research Leadership; Biofluids & Medical Devices; Biomaterials & Tissue Engineering; Medical Instrumentation; Patient Specific Heart Valve Therapy; TAVR; TMVR; In Vitro, In Vivo; In Silico Modeling; Biomedical Technology and Research; Experimental Cardiac Surgery; Microelectronics-Photonics Program; Innovative Devices for Improved Interventions; Course Development and Teaching; Customer Education; Engineering Leadership Program; International Collaborations and Student Exchange Agreement; Blood Pressure and Flow Measurement; Cardiovascular Fluid Mechanics; Biomechanics; Heart Valve Surgery; Medical Devices; Ultrasound; Nitinol; Minimally Invasive Devices; Pacemakers; Implantable Electronics; Force Measurement in Tissue; Manage Image Acquisition and Motion Control Group; Course Development and Inaugural Execution: Image Acquisition & Processing; Consulting Services; Business Development; Integrated Systems Design; Subsystem Level Proof of Concept; R&D (Research & Development); Certified Professional Instructor: LabVIEW, Data Acquisition (DAQ), Signal Conditioning, IMAQ Machine Vision & Image Processing, Motion Control, Simulation, System Identification, Control Design, TestStand; Marketing Conventions; Show Captain; Medical Device & Manufacturing; Recruiting Manager; Hemodynamic Performance; Design and Improvement of Mechanical and Tissue Engineered Prosthetic Heart Valve Devices: Flow Visualization, Pressure Drop, and other FDA required device testing measurements on both mechanical and bioprosthetic mitral and aortic heart valves, Measurement, Analysis, and Presentation of Turbulent Blood Flow Distal to Artificial Aortic Valves; Medical Imaging Quality Assurance (MRI, CT, X-Ray, Doppler Ultrasound) and Intra-operative Heart Surgery Monitoring Systems; Entrepreneurship; Grant Proposals; Research Funding

Awards / Nominations

- National Science Foundation Research Experience Award Mentor, April 2019
- American Heart Association Heart Hero, November 2018
- Biomedical Engineering Society / Medtronic Coulter College Design Scholar Award Mentor, August 2018
- Outstanding Mentor, University of Arkansas Office of Nationally Competitive Awards - for Goldwater Scholar "*Nation's most prestigious award for undergraduate students who plan doctoral studies and research careers in the fields of science, mathematics or engineering*" April 2018
- AcademicKeys Who's Who in Engineering Higher Education (WWEHE)
- Excellence in Research Dissemination Award, College of Engineering, University of Arkansas, May 2017
- Outstanding Teaching Award, Department of Biomedical Engineering, University of Arkansas, May 2017
- Southeastern Conference Travel Award 2016
- Arkansas Research Alliance Scholar Award, August 2015
- Young Investigator Award, Leducq MITRAL Transatlantic Network, May 2010
- The Danish Engineering Service Award, June 2009
- The Danish Engineering Service Award, January 2009
- The Danish Society of Engineers Honorary Award of Excellence (Elektroprisen), May 2008
- Faculty of Health Sciences 1st Prize Award for Excellent Scientific Contribution at the University of Aarhus Graduate School of Health Sciences, January 2008, Aarhus, Denmark
- Paper Competition Finalist, The Bioengineering Division of the American Society of Mechanical Engineers, June 2008, Marco Island, Florida, USA
- C. Walton Lillehei / St. Jude Medical Young Investigators Award Presentation Finalist, Fourth Biennial Meeting of the Society for Heart Valve Disease, June 2007, New York, NY, USA
- 1st Prize, Award Presentation Session, 25th Danish Annual Congress in Biomedical Engineering, September 2007, Brædstrup, Denmark
- 1st Prize for Excellent Scientific Contribution at the University of Aarhus Graduate School of Health Sciences, January 2006, Aarhus, Denmark
- Young Investigators Award 2nd Place: The Scandinavian Society for Research in CardioThoracic Surgery, 16th Annual Meeting, February 2006, Geilo, Norway

Intellectual Property / Patent Applications & Publications

- Jensen M, Girardot M: "Venous Valve Bio-prosthesis Prepared from Animal Tissue Optimized for Human Implantation" Provisional Patent Filed.
- Bean M, Jensen M, Uretsky B, Elmer K. "Patient Specific Medical Balloon Forming Machine and System". *Provisional patent application filed with the U.S. Patent and Trademark Office on April 14, 2021, Serial Number 63/174,708*
- "Methods and Systems for Predicting the Effect of Inhaled and Infused Anesthetics". *Provisional patent application filed with the U.S. Patent and Trademark Office on April 17, 2020, Serial Number 63/011,654. PCT International filed with the U.S. Receiving Office on April 13, 2021. Application No. PCT/US2021/026977.*
- Jensen M, Brickey K, Harris N: "Acute Ischemic Stroke Clot Dissolver and Capture Device". Provisional Patent Filed.
- Jensen M, Hestekin J, Maier A, White M: "Inexpensive, Reproducible Vasculature Modeling Process". Trade Secret filed with the University of Arkansas Technology Ventures Office.
- Maigaard, T, Jensen, M: "A device for indicating contamination of the abdominal cavity or the like" Ref. ID# PA2011 702452457DK00. Priority Date May 18th, 2011
- Jensen, Gadgaard, Hoest, Madsen, Rasmussen: "Expandable Diffuser", International Patent Filed on June 25, 2009 under No.: PA 2009 00787, Published Internationally on December 29th, 2010 (WO/2010/149168A1)

- Balent, JS.; Jensen MO: "Signal Analysis Using Image Processing Techniques", U.S. provisional application Serial No. 60/357,691, U.S. utility application Serial No. 10/365,568; U.S. Patent Publications # 2003-0165259 A1, Patents Official Gazette, September 04, 2003

Board of Directors Memberships, Appointments, Committees

- National Institutes of Health (NIH) RO1 Bioengineering, Technology and Surgical Sciences Study Section panel member, Center for Scientific Review (CSR)
- National Defense Science and Engineering Graduate Fellowship
- NIH Fellowship Study Section F30/31/32: ZRG1 F10A, Physiology and Pathobiology of Cardiovascular and Respiratory Systems
- Member of the IEEE Engineering in Medicine and Biology Technical Committee entitled "Cardiopulmonary Systems and Physiology-based Engineering" (IEEE EMB TC CSPE)
- NIH Joint Biomedical Laboratory and Clinical Science Research and Development Services Scientific Merit Review Board – Subcommittee for Cardiovascular Studies. Department of Health and Human Services, National Institutes of Health (NIH)
- National Institutes of Health (NIH) F10A Study Section panel member, Center for Scientific Review (CSR) Special Emphasis Panel (SEP) / Fellowship Grant Applications: Physiology and Pathobiology of Cardiovascular and Respiratory Systems (F30, F31, F32, F33)
- Department of Defense (DoD) National Defense Science and Engineering Graduate (NDSEG) Fellowships Review Committee
- National Institutes of Health (NIH) AREA / R15 Study Section panel member, Center for Scientific Review (CSR): Cardiovascular Differentiation and Development (CDD), Electrical Signaling, Ion Transport, and Arrhythmias (ESTA)
- Mentor at the 2018 American Heart Association Research Leaders Academy, Salt Lake City, Utah
- Appointed to the Danish Academy of Engineers
- Member of the Arkansas Research Alliance Academy of Scholars and Fellows
- The Center for Innovative Cardiovascular Technologies (CICT)
- Board of Directors at the Danish Society for Biomedical Engineering (DMTS) (Member 2009-2014, Consultant 2014-present)
- The Danish Accreditation Council
- Board of Advisors for the Danish Cardiovascular Research Academy
- Board of Directors for the Cardiovascular PhD Education, School of Medicine, University of Aarhus
- Academic Assessment Committee, University of Aalborg
- Academic Assessment Committee, University of Aarhus, Faculty of Health
- Dean of Medicine, UAMS NWA Search Committee

Editor / Editorial Board

- K. Dremstrup, S. Rees, M. Ø. Jensen: Editors, Proceedings of the 15th Nordic-Baltic Conference on Biomedical Engineering and Medical Physics, Volume 34, the International Federation for Medical and Biological Engineering, ISBN 1680-0737, Springer DOI 10.1007/978-3-642-21683-1
- Editorial Board of the American Journal of Cardiovascular Disease (PubMed Indexed, www.ajcd.us)

Reviewer / Journal Referee

- Circulation Heart Failure (American Heart Association)
- Journal of Heart Valve Disease
- Annals of Thoracic Surgery
- Cardiovascular Engineering and Technology
- Journal of Biomechanics
- Annals of Biomedical Engineering
- Medical Engineering & Research

- Journal of Biological Engineering
- Public Library Of Science (PLOS) ONE
- Biomechanics and Modeling in Mechanobiology
- Experimental Mechanics
- International Journal for Numerical Methods in Biomedical Engineering
- Journal of Biomedical Materials Research
- Journal of Biomechanical Engineering (American Society of Mechanical Engineers)
- Journal of Cardiovascular Translational Research
- IEEE Transactions on Biomedical Engineering
- Journal of NeuroInterventional Surgery
- Heart
- Measurement
- Computer Methods in Biomechanics and Biomedical Engineering
- International Journal of Artificial Organs
- Journal of Surgical Research
- Clinical Physiology and Functional Imaging
- Journal of Computational Biology and Bioinformatics Research
- Medical & Biological Engineering & Computing
- Hult International Business School
- University of Bordeaux, IdEx Post-doctoral Fellowships program – evaluate candidates
- Associate Abstract Referee: Danish Annual Congress in Biomedical Engineering

Conference Chairman / Moderator

- Oral Session Chair, Cardiovascular Engineering, Device Technologies and Biomedical Robotics: Vascular Devices and Hemodynamics, Biomedical Engineering Society 2018 Annual Meeting, October 19th, Atlanta, Georgia, USA
- Oral Session Chair, Hemodynamics and Vascular Mechanics, Biomedical Engineering Society 2015 Annual Meeting, October 8th, Tampa, Florida, USA
- Oral Session Moderator, 33rd Annual meeting of the Scandinavian Society of ExtraCorporeal Technology, Aarhus, Denmark August 22nd - 24th, 2013
- Poster Session Moderator, 62nd Annual Meeting of Scandinavian Association for Thoracic Surgery, Aarhus, Denmark August 22nd - 24th, 2013
- Award Presentation Committee Chairman, 31st Danish Annual Congress in Biomedical Engineering, September 18th, 2013, Brædstrup, Denmark
- Award Presentation Committee Chairman, 30th Danish Annual Congress in Biomedical Engineering, September 19th, 2012, Brædstrup, Denmark
- Award Poster Presentation Committee Chairman, 30th Danish Annual Congress in Biomedical Engineering, September 20th, 2012, Brædstrup, Denmark
- Moderator: “Beyond the Limits of Mitral Valve Repair”, Mitral Valve Replacement Symposium, September 29th, 2011, Aarhus University Hospital, Denmark
- Session Chairman, 60th Scandinavian Conference in Cardiothoracic Surgery, Tampere, Finland, 18 - 20 Aug 2011
- International Federation for Medical and Biological Engineering (IFMBE) Young Investigator Awards Committee, June 14-17th, 2011, Aalborg, Denmark
- Panel Discussion Member: “Biomedical Engineering Education”, 15th Nordic – Baltic Conference on Biomedical Engineering and Medical Physics, June 14th - 17th, 2011, Aalborg, Denmark
- Chairman: “Cardiovascular & Pulmonary Engineering”, 15th Nordic – Baltic Conference on Biomedical Engineering and Medical Physics, June 14^h - 17th, 2011, Aalborg, Denmark
- 29^h National Meeting at the Danish Society for Biomedical Engineering, June 14th - 17th, 2011, Aalborg, Denmark
- Session Chairman, 30th Scandinavian Conference in ExtraCorporeal Technology, Oslo, Norway, 26 - 28 Aug 2010
- Session Chairman, PhD-day, Faculty of Health Sciences, Aarhus University, Denmark, January 15^h, 2010

- Award Presentation Session Committee, 27th Danish Annual Congress in Biomedical Engineering, September 22nd, 2010, Brædstrup, Denmark
- Award Poster Presentation Session Committee, 27th Danish Annual Congress in Biomedical Engineering, September 23rd, 2010, Brædstrup, Denmark
- Session Chairman, 19^h World Congress of the World Society of Cardio-Thoracic Surgeons
- Buenos Aires, Argentina, November 4th – 6th, 2009
- Award Presentation Session Committee, 28th Danish Annual Congress in Biomedical Engineering, September 17th, 2009, Brædstrup, Denmark

Conference Organizing / Scientific Committee

- 31st National Meeting at the Danish Society for Biomedical Engineering, September 17th – 19^h, 2013, Braedstrup, Denmark
- 30^h National Meeting at the Danish Society for Biomedical Engineering, September 19th – 20th, 2012, Braedstrup, Denmark
- 15^h Nordic – Baltic Conference on Biomedical Engineering and Medical Physics, June 14th - 17^h, 2011, Aalborg, Denmark
- 29^h National Meeting at the Danish Society for Biomedical Engineering, June 14th - 17th, 2011, Aalborg, Denmark
- 28^h National Meeting at the Danish Society for Biomedical Engineering, September 21st - 23rd, 2010, Braedstrup, Denmark
- 27^h National Meeting at the Danish Society for Biomedical Engineering, September 22nd - 24rd, 2009, Braedstrup, Denmark

Publications Summary

- 74 peer reviewed publications (hereof 56 journal papers and 23 refereed conference proceedings)
- 19 magazine articles
- 11 books / book chapters
- 6 conference keynote addresses
- 81 conference oral presentations
- 55 conference poster presentations
- 28 seminars / invited guest speaker
- 6 patents / patent application publications / trade secrets

Peer Reviewed Paper Publications

- 1) Megan Laughlin, Sam Stephens, Jamie Hestekin, Morten Jensen: "Development of Custom Cardiovascular Flow Phantoms with Tissue-Mimicking Gel", *In press, Cardiovascular Engineering and Technology, May 2021*
- 2) Ali Z. Al-Alawi, Kaylee R. Henry, Lauren D. Crimmins, Patrick C. Bonasso, Md Abul Hayat, Melvin S. Dassinger, Jeffrey M. Burford, Hanna K. Jensen, Jingxian Wu, Kevin W. Sexton, Morten O. Jensen: "Anesthetics Affect Peripheral Venous Pressure Waveforms and the Cross-Talk with Arterial Pressure", *Published online: 19 February 2021, Journal of Clinical Monitoring and Computing, Pages 1-13, <https://doi.org/10.1007/s10877-020-00632-6>*
- 3) Stephens SE, Bean M, Surber H, Ingels NB, Jensen HK, Liachenko S, Wenk JF, Jensen MO: "MicroCT Imaging of Heart Valve Tissue in Fluid", *Experimental Mechanics Sp. Iss. Experimental Advances in Cardiovascular Biomechanics, October 2020, 61(1), 253-261, <https://doi.org/10.1007/s11340-020-00667-5>*

- 4) Hayat MA, Wu J, Bonasso PC, Sexton KW, Jensen HK, Jensen MO: "Unsupervised Anomaly Detection in Peripheral Venous Pressure Signals with Hidden Markov Models" *Biomedical Signal Processing and Control*, Volume 62, September 2020, Pages 1-9, <https://doi.org/10.1016/j.bspc.2020.102126>
- 5) Laughlin M, Stephens S, Jensen H, Jensen M, Millett P: "Fluid-Structure Interaction Modeling and Validation of Idealized Left Ventricular Blood Flow" *Applications of Computational Fluid Dynamics in Medicine and Biomedical Systems 2020*, Vol 3, Paper No: FEDSM2020-20339, V003T05A004; 8 pages, <https://doi.org/10.1115/FEDSM2020-20339>, Published Online: October 12, 2020
- 6) Collins RT; Laughlin M; Lang S; Bolin E; Daily J; Jensen H; Jensen M: "Real-Time Transthoracic Vector Flow Imaging of the Heart in Pediatric Patients" *Progress in Pediatric Cardiology* 2019, Volume 53, June 2019, Pages 28-36. DOI: <https://doi.org/10.1016/j.ppedcard.2019.02.003>
- 7) Easson G, Laughlin M, Jensen H, Haney K, Girardot M, Jensen M: "Performance Changes of Venous Valves following Tissue Treatment with Novel In Vitro System"; *Phlebology*. 2019 Jun;34(5):347-354
- 8) Stephens SE, Tadros MR, Ingels NB, Wenk JF, Jensen MO: "Bonding Mitral Valve Leaflets in the Closed Configuration for High Resolution Micro-CT Imaging" *Structural Heart* 2019, Vol. 3, No. S1, 76 <https://doi.org/10.1080/24748706.2019.1589358>
- 9) Bonasso PC; Sexton KW; Mehl SC; Golinko MS; Jensen MO; Wu J; Smith SD; Burford JM; Dassinger MS: "Lessons learned measuring peripheral venous pressure waveforms in an anesthetized pediatric population." *Biomedical Physics & Engineering Express*, 28 March 2019, Volume 5, Number 3. <https://doi.org/10.1088/2057-1976/ab0ea8>
- 10) Bonasso PC, Sexton KW, Hayat MA, Wu J, Jensen HK, Jensen MO, Burford JM, Smith SD, Dassinger SM: "Venous Physiology Predicts Dehydration in the Pediatric Population" *J Surg Res*. 2019 Feb 15;238:232-239.
- 11) Ilkjaer C, Ropcke DM, Skov SN, Tjornild MJ, Vibaek A, Jensen MO, Nielsen SL: "Functional and Biomechanical Effects of Ring Annuloplasty on Tissue-Engineered Tricuspid Tube-Graft" *The Journal of Heart Valve Disease* 2018-19;27:259-268
- 12) Preut A, Laughlin M, Jensen H, Hestekin J, Jensen M: Novel Method for Emboli Analog Formation Towards Improved Stroke Retrieval Devices" *J Biomech*. October 26, 2018 Volume 80, Pages 121–128
- 13) Jensen MO, Jensen H, Skov SN, Levine RA, Nygaard H, Hasenkam JM, Nielsen SL: "New Mitral Valve Annuloplasty Concept: Optimizing Annular Dynamics and Force Distribution" *J Heart Valve Dis*. 2018 Jan;27(1):38-46.
- 14) Bonasso, PC; Dassinger, MS; Jensen, MO; Smith, SD; Burford, JM; Sexton, KW: "Optimizing peripheral venous pressure waveforms in an awake pediatric patient by decreasing signal interference", *Journal of Clinical Monitoring and Computing*, 2018 Dec;32(6):1149-1153
- 15) Stephens SE, Liachenko S, Ingels NB, Wenk JF, Jensen MO (2017) High resolution imaging of the mitral valve in the natural state with 7 Tesla MRI. *PLoS ONE* 12(8): e0184042. <https://doi.org/10.1371/journal.pone.0184042>

- 16) Easson G, Laughlin M, Jensen H; Haney, K; Girardot M; Jensen MO: "Development of an in Vitro System for Physiological Testing of Native and Prosthetic Venous Valves", *Journal of Phlebology*, Volume 32, Issue 2 Supplement, Dec 2017 p. 33-36
- 17) Skov SN, Ropcke DM, Tjornild MJ, Ilkjaer C, Rasmussen J, Nygaard H, Hasenkam JM, Jensen MO, Nielsen SL: "Remodeling Mitral Annuloplasty Ring Concept with Preserved Dynamics of the Annular Height" *J Heart Valve Dis.* 2017 May;26(3):295-303
- 18) Skov SN, Røpcke DM, Tjørnild MJ, Ilkjær C, Rasmussen J, Nygaard H, Jensen MO, Nielsen SL: "The effect of different mitral annuloplasty rings on valve geometry and annular stress distribution" *Interact CardioVasc Thorac Surg* 2017;24:683–90.
- 19) Skov SN, Ropcke DM, Tjornild MJ, Ilkjaer C, Rasmussen J, Nygaard H, Jensen MO, Nielsen SL: "Semi-rigid Mitral Annuloplasty Rings Improves Myocardial Stress Adaptation Compared to a Rigid Ring", *European Journal of Cardiothoracic Surgery (EJCTS)*, 2017 May 1;51(5):836-843
- 20) Sasa Grbic, Thomas F. Easley, Tommaso Mansi, Charles H. Bloodworth, Eric L. Pierce, Ingmar Voigt, Dominik Neumann, Julian Krebs, David D. Yuh, Morten O. Jensen, Dorin Comaniciu, Ajit P. Yoganathan: "Personalized Mitral Valve Closure Computation and Uncertainty Analysis from 3D Echocardiography" *Medical Image Analysis Volume 35*, January 2017, Pages 238–249
- 21) Pantoja JL, Morgan AE, Grossi EA, Jensen MO, Weinsaft JW, Levine RA, Ge L, Ratcliffe MB: "Undersized Mitral Annuloplasty Increases Strain in the Proximal Lateral Left Ventricular Wall". *Cover Article in Ann Thorac Surg.* 2016 Oct 5 (8 pages).
- 22) Charles H. Bloodworth IV, B.S.; Eric L. Pierce, B.S.; Thomas F. Easley, M.S.; Andrew Drach, Ph.D.; Amir H. Khalighi, M.S.; Milan Toma, Ph.D.; Morten Ø. Jensen, Ph.D., Dr.Med.; Michael S. Sacks, Ph.D., Ajit P. Yoganathan, Ph.D.: "Ex Vivo Methods for Informing Computational Models of the Mitral Valve", *Ann Biomed Eng.* 2017 Feb;45(2):496-507. doi: 10.1007/s10439-016-1734-z. Epub 2016 Oct 3.
- 23) Eric L. Pierce, Jean Pierre M. Rabbah, Karl Thiele, Qifeng Wei, Brani Vidakovic, Morten O. Jensen, Judy Hung, Ajit P. Yoganathan: "Three-Dimensional Field Optimization Method: Gold-Standard Validation of a Novel Color Doppler Method for Quantifying Mitral Regurgitation" *Journal of the American Society of Echocardiography (JASE)* 2016 Oct;29(10):917-925
- 24) Søren Nielsen Skov, Diana Mathilde Røpcke, Christine Ilkjær, Jonas Rasmussen, Marcell Juan Tjørnild, Jorge H. Jimenez, Ajit P. Yoganathan, Hans Nygaard, Sten Lyager Nielsen, Morten Olgaard Jensen: "New mitral annular force transducer optimized to distinguish annular segments and multi-plane forces", *Journal of Biomechanics*, Volume 49, Issue 5, 21 March 2016, Pages 742–748.
- 25) Eric L. Pierce, Andrew W. Siefert, Deborah M. Paul, Sarah K. Wells, Charles H. Bloodworth, IV, Satoshi Takebayashi, Chikashi Aoki, Morten O. Jensen, Matthew J. Gillespie, Robert C. Gorman, Joseph H. Gorman, III, Ajit P. Yoganathan: "How Local Annular Force and Collagen Density Govern Mitral Annuloplasty Ring Dehiscence Risk" *Annals of Thoracic Surgery (ATS)*, August 2016, Volume 102, Issue 2, Pages 518–526.
- 26) DM Ropcke, C Ilkjær, T Hejslet, AV Sørensen, H Jensen, MOJ Jensen, VE Hjortdal, SL Nielsen: "Functional and Biomechanical Performance of Stentless Extracellular Matrix Tricuspid Tube Graft: An Acute Experimental Porcine Evaluation" *The Annals of Thoracic Surgery*, 2016 Jan;101(1):125-32.

- 27) Toma M, Jensen MØ, Einstein DR, Yoganathan AP, Cochran RP, Kunzelman KS.: "Fluid-Structure Interaction Analysis of Papillary Muscle Forces Using a Comprehensive Mitral Valve Model with 3D Chordal Structure." *Annals of Biomedical Engineering* 2016, Apr;44(4):942-53
- 28) Robert Levine, Albert Hagege, Daniel Judge, Muralidhar Padala, Jacob Dal-Bianco, Elena Aikawa, Jonathan Beaudoin, Joyce Bischoff, Nabila Bouatia-Naji, Patrick Bruneval, Jonathan Butcher, Alain Carpentier, Miguel Chaput, Adrian Chester, Catherine Clusel, Francesca Nesta Delling, Harry Dietz, Christian Dina, Ronen Durst, Leticia Fernandez, Mark Handschumacher, Morten Jensen, Xavier Jeunemaitre, Hervé Le Marec, Thierry Le Tourneau, R Markwald, Jean Mérot, Emmanuel Messas, David Milan, Tui Neri, Russell Norris, David Peal, Maelle Perrocheau, Vincent Probst, Michael Puceat, Nadia Rosenthal, Jorge Solis-Martin, Jean-Jacques Schott, Ehud Schwammenthal, Susan Slaughter, Jae-Kwan Song, and Magdi Yacoub: "Unifying Concepts of Mitral Valve Disease: From Morphology to Mechanisms and Beyond" *Nature Reviews Cardiology* 2015 Dec; 12(12),689–710
- 29) Eric L. Pierce, Charles H. Bloodworth IV, Ajay Naran, Thomas F. Easley, Morten O. Jensen, Ajit P. Yoganathan: "Novel Method to Track Soft Tissue Deformations by Micro-Computed Tomography: Application to the Mitral Valve" *Annals of Biomedical Engineering* 2015 Nov 9. 2016 Jul;44(7):2273-81.
- 30) Søren N. Skov, Diana M. Røpcke, Kristine Telling, Christine Ilkjær, Marcell J. Tjørnild, Hans Nygaard, Sten L. Nielsen, Morten O. Jensen: "Simultaneous in- and out-of-plane Mitral Valve Annular Force Measurements" *Cardiovascular Engineering and Technology 2015 special issue on Mitral Valve Function, Pathology, and Therapeutic Options*, Page 185-192.
- 31) Drach A., Khalighi A.H., ter Huurne F.M., Lee C.H., Bloodworth C., Pierce E.L., Jensen M.O., Yoganathan A.P., Sacks M.S.: "Population-Averaged Geometric Model of Mitral Valve from Patient-Specific Imaging Data" *Journal of Medical Devices*, September 2015, Vol.9, 030952:1-3
- 32) Henrik Jensen, Morten O. Jensen, Sten L. Nielsen: "Surgical Treatment of Functional Ischemic Mitral Regurgitation" *Review paper, J. Heart Valve Dis.* 2015 Jan;24(1):30-42.
- 33) Bechsgaard T, Hønge JL, Nygaard H, Jensen MO: "In Vivo Wireless Monitoring System of Cardiovascular Force Data" *Cardiovascular Engineering and Technology Volume 6, Issue 1 (2015)*, p. 2-7.
- 34) Diana M Ropcke, Morten OJ Jensen, Henrik Jensen, Tine Hejslet, Sten L Nielsen: "Papillary Muscle Force Distribution following Total Tricuspid Reconstruction using Porcine Extracellular Matrix" *The Journal of Heart Valve Disease* 2014;23:788-794.
- 35) Andrew Siefert, Eric Pierce, Madonna Lee, Morten Jensen, Chikashi Aoki, Satoshi Takebayashi, Robert Gorman, Joseph Gorman, Ajit Yoganathan: "Suture Forces in Undersized Mitral Annuloplasty: Novel Device and Measurements" *Ann Thorac Surg* 2014;98:305–9.
- 36) Morten O. Jensen, Jesper L. Hønge, Jon A. Benediktsson, Andrew W. Siefert, Henrik Jensen, Ajit P. Yoganathan, Teresa K. Snow, J. Michael Hasenkam, Hans Nygaard, DMSc, Sten L. Nielsen: "Mitral valve annular downsizing forces: Implications for annuloplasty device development", *J Thorac Cardiovasc Surg.* 2014 Jul;148(1):83-9.
- 37) Henrik Jensen; Morten O Jensen; Farhad Waziri; Jesper L Hønge; Erik Sloth; Morten Fenger-Grøn; Sten L Nielsen: "Transapical Neochord Implantation: Is Tension of Artificial Chordae Tendineae Dependent on Insertion Site?" *J Thorac Cardiovasc Surg.* 2014 Jul;148(1):138-43.

- 38) Morten O. Jensen, Albert A. Hagège, Yutaka Otsuji, Robert A. Levine: "The Unsaddled Annulus: Biomechanical Culprit in Mitral Valve Prolapse?" *Circulation Editorial*, 2013 Feb 19;127(7):766-8
- 39) ES Kraghnaes, JL Hønge, JB Askov, SL Nielsen, H Nygaard, MO Jensen: "In-plane Tricuspid Valve Force Measurements: Development of Strain Gauge Instrumented Annuloplasty Ring" *Cardiovascular Engineering and Technology*, June 2013, Volume 4, Issue 2, pp 131-138.
- 40) Rahmani A, Rasmussen AQ, Hønge JL, Ostli B, Levine RA, Hagège AA, Nygaard H, Nielsen SL, Jensen MO: "In Vitro Simulation Model Shows Adverse Mitral Valve Mechanics Following Leaflet Patch Augmentation" *The Journal of Heart Valve Disease*, 2013;22:28-35.
- 41) H Jensen, MO Jensen, S Vind-Kezunovic, R Vestergaard, S Ringgaard, MH Smerup, JL Hønge, JM Hasenkam, SL Nielsen: "Surgical Relocation of the Papillary Muscles in Functional Ischemic Mitral Regurgitation - What are the Forces of the Relocation Stitch Acting on the Myocardium?" *The Journal of Heart Valve Disease* 2013 Jul;22(4):524-31.
- 42) Røpcke DM, Hjortdal VE, Toft GE, Jensen MO, Kristensen SD: "Remote ischemic preconditioning reduces thrombus formation in the rat", *Journal of Thrombosis and Haemostasis*, Volume 10, Issue 11, 2013, 2405-2406.
- 43) JB Askov, JL Hønge, MO Jensen, H Nygaard, JM Hasenkam, SL Nielsen: "Significance of Force Transfer in Mitral Valve - Left Ventricular Interaction: In Vivo Assessment" *The Journal of Thoracic and Cardiovascular Surgery*, 2013 Jun;145(6):1635-41.
- 44) Morten O. Jensen, Henrik Jensen, Hans Nygaard, J. Michael Hasenkam, Sten L. Nielsen: "External Approach to In Vivo Force Measurement On Mitral Valve Traction Suture", *Journal of Biomechanics*, 45, (2012): 908–912.
- 45) Ostli B, Vester-Petersen J, Askov JB, Hønge JL, Levine RA, Hagege AA, Nielsen SL, Hasenkam JM, Nygaard H, Jensen MO: "In Vitro System for Measuring Chordal Force Changes Following Mitral Valve Patch Repair", *Cardiovascular Engineering and Technology*: Volume 3, Issue 3 (2012), Page 263-268.
- 46) Jensen MO, Jensen H, Levine RA, Yoganathan AP, Andersen NT, Nygaard H, Hasenkam JM, Nielsen SL "Saddle-shaped mitral valve annuloplasty rings improve leaflet coaptation geometry", *The Journal of Thoracic and Cardiovascular Surgery* 2011 September;142(3):697-703.
- 47) Mathieu Granier*, Morten O. Jensen*, Jesper L. Hønge, Alain Bel, Philippe Menasché, Sten L. Nielsen, Alain Carpentier, Robert A. Levine, Albert A. Hagège: "Consequences of mitral valve prolapse on chordal tension: Ex vivo and in vivo studies in large animal models" *The Journal of Thoracic and Cardiovascular Surgery*, 2011 Dec;142(6):1585-7.
- 48) JB Askov, JL Hønge, H Nygaard, JM Hasenkam, SL Nielsen, MO Jensen: "Papillary Muscle Force Transducer for Measurement In Vivo", *Cardiovascular Engineering and Technology*, September 2011, Volume 2; Issue 3; p196-202.
- 49) A Stigo, P Johansen, M Jensen, K Sivesgaard, H Nygaard, E Sloth: An automated in-vitro model for the evaluation of Ultrasound modalities measuring myocardial deformation. *Cardiovasc Ultrasound* 2010 Sep 7;8:40.

- 50) Henrik Jensen, Morten Ølgaard Jensen, Morten H. Smerup, Steffen Ringgaard, Niels Trolle Andersen, Per Wierup, J. Michael Hasenkam, Sten Lyager Nielsen: Does down-sized ring annuloplasty induce papillary muscle relocation in ischemic mitral regurgitation? *J Heart Valve Dis.* 2010 Nov;19(6):692-700.
- 51) Henrik Jensen, Morten Ølgaard Jensen, Morten H. Smerup, Steffen Ringgaard, Thomas S. Sørensen, Per Wierup, J. Michael Hasenkam, Sten Lyager Nielsen: Three-dimensional Assessment of Papillary Muscle Displacement in Ischemic Mitral Regurgitation in Pigs. *The Journal of Thoracic and Cardiovascular Surgery* 2010 Dec;140(6):1312-8.
- 52) Henrik Jensen, Morten Ølgaard Jensen, Sten Lyager Nielsen; Morten Smerup; Stefan Vind-Kezunovic; Rikke Vestergaard; Niels Trolle Andersen; Michael Hasenkam; Steffen Ringgaard; Per Nils Johan Fredrik Wierup; "Impact of Papillary Muscle Relocation as Adjunct Procedure to Mitral Ring Annuloplasty in Functional Ischemic Mitral Regurgitation" *Circulation* 2009;120:S92-S98.
- 53) Jeppe H. Christensen, Mads B. T. Soerensen, Zhong Linghui, Sun Chen, Morten O. Jensen: Pre-diagnostic digital imaging prediction model to discriminate between malignant melanoma and benign pigmented skin lesion, *Skin Research and Technology* 2009, Volume 16, Issue 1, Pages 98 – 108
- 54) Morten O. Jensen, Henrik Jensen, Morten Smerup, Robert A. Levine, Ajit P. Yoganathan, Hans Nygaard, J. Michael Hasenkam, Sten L. Nielsen: Saddle-shaped Mitral Valve Annuloplasty Rings Provide Superior Annular Force Distribution Compared with Flat Rings. *Circulation* 2008;118(suppl 1):250-255.
- 55) Jensen, M. O., Jensen, H., Nielsen, S.L., Smerup, M., Johansen, P., Yoganathan, A. P., Nygaard, H., Hasenkam, J. M.: What Forces Act on a Flat Rigid Mitral Annuloplasty Ring. *J Heart Valve Dis* 2008;17:267-275.
- 56) Nielsen PF, Funder JA, Jensen MO, Nygaard H: Influence of Venous Reservoir Level on Microbubbles in Cardiopulmonary Bypass, *Perfusion* 2008, Vol. 23, No. 6, 347-353.
- 57) Henrik Jensen, Morten Ø. Jensen, Steffen Ringgaard, Morten H. Smerup, Thomas S. Sørensen, Won Y. Kim, Erik Sloth, P. Wierup, J. Michael Hasenkam, Sten L. Nielsen "Geometric Determinants of Chronic Functional Ischemic Mitral Regurgitation: Insights from Three-Dimensional Cardiac Magnetic Resonance Imaging" *The Journal of Heart Valve Disease* 2008 Jan;17(1):16-22; discussion 23.
- 58) Jensen MO, Lemmon JD, Gessaghi VC, Conrad CP, Levine RA, Yoganathan AP. Harvested porcine mitral xenograft fixation: impact on fluid dynamic performance. *J Heart Valve Dis* 2001 Jan;10(1):111-24.
- 59) Jensen MO, Fontaine AA, Yoganathan AP. Improved *in vitro* quantification of the force exerted by the papillary muscle on the left ventricular wall: three dimensional force vector measurement system. *Ann Biomed Eng.* 2001 May;29(5):406-13.
- 60) He S, Weston MW, Lemmon J, Jensen M, Levine RA, Yoganathan AP. Geometric distribution of chordae tendineae: an important anatomic feature in mitral valve function. *J Heart Valve Dis.* 2000 Jul;9(4):495-501; discussion 502-3.
- 61) He S, Lemmon JD Jr, Weston MW, Jensen MO, Levine RA, Yoganathan AP. Mitral valve compensation for annular dilatation: in vitro study into the mechanisms of functional mitral regurgitation with an adjustable annulus model. *J Heart Valve Dis.* 1999 May;8(3):294-302.

Refereed Conference Publications

- 62) Elmer KM, Bean MJ, Uretsky BF, Jensen MO: "Balloon Forming Machine for Customizing Treatment of Coronary Artery Disease" *SB3C2021 Summer Biomechanics, Bioengineering and Biotransport Conference, June 14 – 18, 2021: Virtual Conference*
- 63) Stephens SE, Ingels NB, Wenk JF, Jensen MO: "Semi-Automatic Removal of Known-Geometry Elements from Image Stack Represented 3D Datasets" *SB3C2021 Summer Biomechanics, Bioengineering and Biotransport Conference, June 14 – 18, 2021: Virtual Conference*
- 64) Bean MJ, Jiang D, Manoharan F, Nowell AE, Uretsky B, Jensen HK, Timmins LH, Jensen MO: "Modeling Percutaneous Intervention of Coronary Artery Bifurcations", *SB3C2020 Summer Biomechanics, Bioengineering and Biotransport Conference, June 17 – 20, 2020: Virtual Conference*
- 65) Crimmins LD, Henry KR, Hayat MA, Bonasso PC, Wu J, Jensen HK, Sexton KW, Jensen MO: "Dehydration and Anesthesia Influence on The Relationship Between Arterial and Venous Pressure Waveforms", *SB3C2020 Summer Biomechanics, Bioengineering and Biotransport Conference, June 17 – 20, 2020: Virtual Conference*
- 66) Jiang D, Zimmerman BK, Bean MJ, Maas SA, Jensen MO, Ateshian GA, Timmins LH: "Towards the Establishment of Lesion-Specific Stenting Strategies: Validation of a Coupled Balloon-Stent Finite Element Framework for Vascular Stent Deployment", *SB3C2020 Summer Biomechanics, Bioengineering and Biotransport Conference, June 17 – 20, 2020: Virtual Conference*
- 67) Kaylee R. Henry, Ali Z. Al-Alawi, Md Abul Hayat, Hanna K. Jensen, Jingxian Wu, Patrick C. Bonasso, Kevin W. Sexton, and Morten O. Jensen: "Isoflurane Effect on Peripheral Venous Pressure" *SB3C2019 Summer Biomechanics, Bioengineering and Biotransport Conference June 25 -28, Seven Springs, PA, USA*
- 68) Bean MJ, Jiang D, Stephens SE, Laughlin ME, Jensen HK, Uretsky B, Timmins LH, Jensen MO: "Experimental Modeling of Coronary Intervention: Towards Computational Simulation", *Proceedings of the SB3C2019 Summer Biomechanics, Bioengineering and Biotransport Conference, June 25-28, 2019, Seven Springs, PA, USA*
- 69) Henson JC, Batta-Mpouma J, Chivers C, Sinha A, Jensen H, Kim J, Jensen M, Kim JW: "Nanopatterned Polycaprolactone/Cellulose Nanocrystal Composite Scaffold for Cardiovascular Tissue Engineering"; *IEEE NANOMED 2018, December 2-5, Waikiki Beach, Hawaii*
- 70) Easson G, Laughlin M, Jensen H; Haney, K; Girardot M; Jensen MO: "Development of an in Vitro System for Physiological Testing of Native and Prosthetic Venous Valves", *Journal of Phlebology, Volume 32, Issue 2, Dec 2017 p. 33-36*
- 71) Stephens SE, Liachenko S, Wenk JF, Jensen MO: "In vitro left heart system with 7T MRI provides high resolution mitral valve 3D imaging datasets for computational modeling", *Proceedings of the SB³C2017 Summer Biomechanics, Bioengineering and Biotransport Conference, June 21-24, 2017, Tucson, Arizona, USA*
- 72) Wenk JF, Jensen MO: "Finite Element Modeling of Mitral Valve Patch Augmentation and Effects on Chordal Force Distribution", *Proceedings of the SB³C2017 Summer Biomechanics, Bioengineering and Biotransport Conference, June 21-24, 2017, Tucson, Arizona, USA*

- 73) Qusay Alfaori, Ashok Saxena, Hanna Jensen and Morten Jensen: "Rupture in Abdominal Aortic Aneurysm", *Proceedings of First Structural Integrity Conference and Exhibition (SICE-2016)*, Bangalore, India, July 4-6, 2016
- 74) Eric L. Pierce, Charles H. Bloodworth IV, Ajay Naran, Thomas F. Easley, Morten O. Jensen, Ajit P. Yoganathan: "Novel Medical Imaging Technique for Soft Tissue Deformation Tracking – Application to The Mitral Valve" *Proceedings of the SB³C2015 Summer Biomechanics, Bioengineering and Biotransport Conference*, June 17-20, 2015, Snowbird Resort, Utah, USA.
- 75) Milan Toma, Morten O. Jensen, Daniel R. Einstein, Ajit P. Yoganathan, Richard P. Cochran, Karyn S. Kunzelman: "Fluid-Structure Interaction Analysis of Mitral Valve Forces Using a Comprehensive Model With 3D Chordal Structure: Synergy of Modeling and Experiments" *Proceedings of the SB³C2015 Summer Biomechanics, Bioengineering and Biotransport Conference (Podium Presentation)*, June 17-20, 2015, Snowbird Resort, Utah, USA.
- 76) C. H. Bloodworth IV, E. L. Pierce, T. F. Easley, M. Toma, A. Khalighi, C-H. Lee, M. Sacks, A. W. Siefert, M. Ø. Jensen, A. P. Yoganathan: "Design of an In Vitro Simulation Pipeline for the Development of Computational Mitral Valve Modeling", *Proceedings of the SB³C2015 Summer Biomechanics, Bioengineering and Biotransport Conference*, June 17-20, 2015 (Podium), Snowbird Resort, Utah, USA.
- 77) Khalighi A.H., Drach A., ter Huurne F.M., Lee C.H., Bloodworth C., Pierce E.L., Jensen M.O., Yoganathan A.P., Sacks M.S.: "A Complete Framework for the Charactrization of Complete Mitral Valve Geometry for the Development of A Population-averaged Model", *8th International Conference on Functional Imaging and Modeling of the Heart*, June 25-27, 2015, Maastricht, Netherlands. ISBN: 978-3-319-20308-9 (Print) 978-3-319-20309-6 (Online): page 164-171, 2015.
- 78) Andrew Drach, Amir H. Khalighi, Fleur M. ter Huurne, Chung-Hao Lee, Charles Bloodworth, Morten O. Jensen, Ajit P. Yoganathan, Michael S. Sacks: "Population-Averaged Geometric Model of Mitral Valve from Patient-Specific Imaging Data" *Proceedings of the Design of Medical Devices Conference April 13-16, 2015, Minneapolis, MN, Technical Brief in the June 2015 issue of ASME Journal of Medical Devices*.
- 79) Sasa Grbic, Thomas F. Easley, Tommaso Mansi, Charles H. Bloodworth, Eric L. Pierce, Ingmar Voigt, Dominik Neumann, Julian Krebs, David D. Yuh, Morten O. Jensen, Dorin Comaniciu, and Ajit P. Yoganathan: "Multi-modal Validation Framework of Mitral Valve Geometry and Functional Computational Models" *Proceedings of the Medical Image Computing and Computer Assisted Intervention Society 2014 Annual Meeting*.
- 80) JB Askov, MO Jensen, JL Honge, H Nygaard, JM Hasenkam, SL Nielsen: "Miniature Transducer for Chordal Force Measurements In Vivo" *Proceedings of the ASME Summer Bioengineering Conference June 16, 2010, Proc. ASME. 44038, ASME ID SBC2010-19181, p 617-618*.
- 81) Morten O. Jensen, Peter Johansen, Hans Nygaard: Development of an Implantable Heart Valve Force Transducer. *Proceedings of the ASME Summer Bioengineering Conference June 25, 2008, Proc. ASME. 43215, ASME ID SBC2008-192309, p 247-248*.

Magazine Articles

- 82) "Collaborative Heart: A Q&A with Cardiovascular Researcher Morten Jensen", Arkansas Money & Politics Magazine and Online (<https://armoneyandpolitics.com>), August 12th, 2020.

- 83) Megan Laughlin, Jamie Hestekin, Morten Jensen: "Inno-vein-tion: How U of A researchers are creating new technology that simulates human blood vessels" *Arkansas Engineer*, October 2018
- 84) Jensen, Morten; Chitney, Anton: "Measuring forces in a beating heart" *VPG Micro-Measurements Case Study*, December 2017
- 85) Kim Dremstrup, Morten Jensen: "Forty, Fresh and Ready". *Editorial for the 40-year anniversary of the Danish Biomedical Engineering Society, Medical Technology and Informatics*, No. 5, November 2013, p. 4.
- 86) Morten Jensen: "Students in Focus". *Editorial, Medical Technology and Informatics*, No. 1, March 2012, p. 4.
- 87) Naia Bang (Featured Article): "Trækker i trådene, når klappen går ned". *Medical Technology and Informatics*, No. 4, August 2011, p. 16.
- 88) Besenbacher Bente, Johansen Peter, Jensen Morten: "Health Technology in Aarhus". *Medical Technology and Informatics*, No. 2, April 2011, p. 4-6.
- 89) Engineers for a Better World: "Help to Heart Patients" *Genius Issue #3*, Nov '10 (www.iha.dk/genius and <http://magazine.heyday.dk/ihagenius3/>).
- 90) Jesper Askov and Morten Jensen: "Materials Science in Analyzing Forces in the Heart." *Medical Technology and Informatics*, No. 3, June 2009, p. 10-12.
- 91) Morten Jensen: Force balance in the mitral valve annulus: How to interpret the function of annuloplasty devices. *Medical Technology and Informatics supplement for the 25th Danish annual congress in biomedical engineering*, 2009.
- 92) Mette Stougaard (Featured Article) "Intelligent Hjertering med Lang Levetid" *Hjertenyt*, (Danish Heart Association Magazine), Nov. '08 pg. 12-13.
- 93) Morten Jensen: Kraftbalancen i mitralklappen og venstre ventrikel. *Ugeskrift for Læger* 2008;170(47):3877.
- 94) Jensen, Morten: Collaboration between Engineers and Doctors can save lives. *Medical Technology and Informatics*, No. 7, October 2006, p. 38-41.
- 95) Ben Black, Morten Jensen, Wayne Book: Georgia Tech Intelligent Machine Dynamics Laboratory Utilizing National Instruments Platform for Developing Haptic Devices. *National Instruments Academia*, Jan 2005.
- 96) Morten Jensen: Using National Instruments System Identification, Control Design and Simulation Products for Designing and Testing a Controller for an Unidentified System. *NI Developer Zone*, Jan 2005.
- 97) Jensen, Morten: SISO Plant Simulator for Evaluating the NI LabVIEW Control Design and Simulation Bundle for Designing and Testing a Controller to an Unidentified System. *NI Developer Zone*, May 2005.
- 98) Morten Jensen, Ash Prabala, Doug Benson, William Bridson, Joseph Corsi: Automating Fluorescent Imaging Techniques. *National Instruments Online Developer Zone*, July 2004.

- 99) Guettler RD, Saxena R, Jensen MO. Bacterial Colony and Plaque Picking: An Automated Solution for DNA sample preparation (Cover Article). *Scientific Computing and Instrumentation Sep. 2002 pg. 12-22.*
- 100) Min J. Yang, Ph.D., Ron Bonner, Ph.D., Morten Jensen: Vision in Mass Spectrometry. *Scientific Computing and Instrumentation Sep. 2002 pg. 18-24.*
- 101) Jensen, Morten: Calculating Camera Sensor Resolution and Lens Focal Length. *National Instruments Developer Zone, October 2001.*

Books and Book Chapters

- 1) Henson J, Jensen H, Balachandran K, Rao R, Kim J-W, Jensen M: "Cues from the Nano-environment: The role of Nanomaterials in Stem Cell Differentiation and Stem Cell Tissue Engineering" *Soft Matter and Biomaterials in the Nanoscale, Copyright 2020, p. 361-400*
- 2) Jensen M, Siefert A, Okafor I, Yoganathan AP: "Measurement technologies for heart valve function", Chapter in "Advances in Heart Valve Biomechanics: Valvular Physiology, Mechanobiology, and Bioengineering", 1st Edition released on February 14, 2019. P 1-Xs ISBN-10: 3030019918
- 3) Raghav V, Jensen M, Arjunon S, Teoh SH, Yoganathan AP: "Heart Valve Prostheses and Repair Devices", *Materials Science and Materials Engineering - Comprehensive Structural Integrity, 2018(2017), by Editors-in-Chief: I. Milne, R. O. Ritchie, and B. Karihaloo. ISBN: 978-0-08-043749*
- 4) Alfaori Q, Saxena A, Jensen HA, Jensen MO: "Collagen Degradation Effect on Rupture in Abdominal Aortic Aneurysm", *Advances in Structural Integrity 2017, ISBN 978-981-10-7197-3*
- 5) Jensen H, Martin E, Jensen M, Rome F, Di Carlo A, Kim JW, Mehta JL. "Nanotechnology-Based Stem Cell Applications and Imaging". In: "Imaging in Stem Cell Transplant and Cell-based Therapy (In: Stem Cell Biology and Regenerative Medicine)". *Springer Book Series. June 2017, ISBN 978-3-319-51831-2, DOI 10.1007/978-3-319-51833-6*
- 6) Sasa Grbic, Thomas F. Easley, Tommaso Mansi, Charles H. Bloodworth, Eric L. Pierce, Ingmar Voigt, Dominik Neumann, Julian Krebs, David D. Yuh, Morten O. Jensen, Dorin Comaniciu, Ajit P. Yoganathan: "Multi-modal Validation Framework of Mitral Valve Geometry and Functional Computational Models" *Statistical Atlases and Computational Models of the Heart - Imaging and Modeling Challenges 2015, pp 239-248.*
- 7) Dremstrup, Kim; Rees, Steve; Jensen, Morten Ølgaard (Eds.): "15th Nordic-Baltic Conference on Biomedical Engineering and Medical Physics", 1st Edition., 2011, XVI, 280 p. 245 illus. (Springer eBook link: <http://dx.doi.org/10.1007/978-3-642-21683-1>).
- 8) Jensen, Morten: "Ensemble Averaging of Physiologic Signals: A LabVIEW based Software Package Assisting the Analysis of Cyclic Data", *Book Chapter in "Virtual Bio-Instrumentation" by Jon B. Olansen and Eric Rosow, Prentice Hall 2002.*
- 9) Jensen Morten: "Stentless Mitral Valve Fixation: Impact on Hemodynamic Performance", *Master's Thesis 2000.*
- 10) Jensen Morten: "Mitral Valve Force Balance: The Left Ventricular Tug of War", *PhD Thesis 2008.*

- 11) Jensen Morten: "Biomechanical Aspects of Mitral Valve Function and Repair", *DMSc (Dr.Med.) Thesis 2015*.

Conference Keynote Addresses / Invited Lectures

- 1) Jensen, M: "Biomechanical Aspects of FMR". *2019 Annual Meeting of the Heart Valve Society (HVS), Apr 11 - 13, 2019, Sitges, Barcelona, Catalonia, Spain. Mitral Valve Session Discussant Panel with Discussants: Jerry Braun, MD, PhD, Morten O. Jensen, DrMed, PhD, Resham Barauh, MD, Michael Borger, MD, Vinod Thourani, MD, Mark Ratcliffe, MD*
- 2) Jensen, M (f. Yoganathan, A): "Cardiovascular Devices: From the Bench and Computer to Bedside/Bassinet" *2014, BMES Annual Meeting October 22-25, 2014, San Antonio, Texas.*
- 3) Morten Jensen, PhD; Jesper Hønge, MD: "Cardiac Dynamics", *15th Nordic – Baltic Conference on Biomedical Engineering and Medical Physics, June 14th - 17th, 2011, Aalborg, Denmark.*
- 4) Morten Jensen: "Inspiration and Recognition of Science and Technology", *(FIRST) LEGO League, Herning, Denmark, October 1st 2010.*
- 5) Morten Jensen: "Computer based Measurements in Experimental Heart Surgery", *National Instruments Annual Conference, Hørsholm, Denmark, May 6th 2010.*
- 6) Morten O. Jensen: What Forces Act on Rigid Mitral Annuloplasty Rings? Implications for Annuloplasty Ring Designs. *Keynote Address at the Robert Levine Symposium on New Frontiers in Mitral Valve Repair.*
- 7) *Targeting the Natural History of Mitral Valve Regurgitation, Tuesday January 20th, 2009, Aarhus, Denmark.*

Conference Abstracts: Oral Presentations

- 1) Elmer KM, Bean MJ, Uretsky BF, Jensen MO: "Balloon Forming Machine for Customizing Treatment of Coronary Artery Disease" *SB3C2021 Summer Biomechanics, Bioengineering and Biotransport Conference, June 15, 2021: Virtual Conference Session: Device, Design and Rehabilitation II*
- 2) Gal DB, Stephens S, MacMillen K, Jensen HK, Bolin E, Daily J, Millett P, Jensen M, Collins RT: "A Patient-based Computational Model that Predicts Pressure Drop in Supravalvar Aortic Stenosis in Patients with Williams Syndrome", *American Association of Pediatrics, San Diego, CA, Oct. 2-6, 2020 (Virtual Conference)*
- 3) Gal DB, MacMillen K, Jensen M, Jensen H, Bolin E, Daily J, Collins RT: "Percent Change in Diameter from Aortic Annulus to Sinotubular Junction Predicts Supravalvar Aortic Stenosis Gradient in Williams Syndrome" *American Society of Echocardiography, Denver, Colorado, June 19-22, 2020 (Virtual Conference)*
- 4) Lauren D. Crimmins, Kaylee R. Henry, Md Abul Hayat, Patrick C. Bonasso, Jingxian Wu, Hanna K. Jensen, PhD, Kevin W. Sexton, Morten O. Jensen: "Dehydration and Anesthesia Influence on the Relationship Between Arterial and Venous Pressure Waveforms", *SB3C2020 Summer Biomechanics, Bioengineering and Biotransport Conference June 17-20, Vail, CO, USA (Virtual Conference)*

- 5) Maxwell J. Bean, David Jiang, Ragul Manoharan, Abigail E. Nowell, Barry Uretsky, Hanna K. Jensen, Lucas H. Timmins, Morten Ø. Jensen: "Modeling Percutaneous Intervention of Coronary Artery Bifurcations", *SB3C2020 Summer Biomechanics, Bioengineering and Biotransport Conference June 17-20, Vail, CO, USA (Virtual Conference)*
- 6) David Jiang, Brandon K. Zimmerman, Maxwell J. Bean, Steve A. Maas, Morten Ø. Jensen, Gerard A. Ateshian, Lucas H. Timmins: "Towards the Establishment of Lesion-Specific Stenting Strategies: Validation of a Coupled Balloon-Stent Finite Element Framework For Vascular Stent Deployment", *SB3C2020 Summer Biomechanics, Bioengineering and Biotransport Conference June 17-20, Vail, CO, USA (Virtual Conference)*
- 7) Megan Laughlin, Sam Stephens, Hanna Jensen, Morten Jensen, Paul Millett: "Fluid-Structure Interaction Modeling and Validation of Idealized Left Ventricular Blood Flow". *American Society of Mechanical Engineers FEDS Meeting, Orlando, FL July 12-16*
- 8) Joseph Batta-Mpouma, Cody Chivers, Garrett Huffstutler, Hanna K. Jensen, Morten O. Jensen, Jangho Kim, and Jin-Woo Kim: "Hybrid Composites of Cellulose Nanocrystal and Polycaprolactone as Scaffold Materials for Cardiomyocyte Regeneration" *13th IEEE International Conference on Nano/Molecular Medicine & Engineering (IEEE-NANOMED 2019), 21-24 November 2019, Gwangju, Korea.*
- 9) Jensen M, Wenk J: "Optimizing Imaging and Force Validation for Computational Modeling of Cardiac Valve Function and Intervention" *15th U.S. Congress on Computational Mechanics, Minisymposium: Computational Modeling of Cardiac Valve Function and Intervention, Austin, Texas, USA, July 28-August 1, 2019*
- 10) Bonasso, PC; Sexton, KW; Hayat MA; Al-Alawi A; Jingxian W; Jensen, HK; Jensen, MO; Smith SD; Burford, JM; Dassinger, MS: "Venous physiology predicts anesthetic induced hypotension in infants" *American College of Surgeons Clinical Congress, Boston MA, October 2018*
- 11) Stephens SE, Liachenko S, Wenk JF, Jensen MO: "In vitro left heart system with 7T MRI provides high resolution mitral valve 3D imaging datasets for computational modeling", *SB³C2017 Summer Biomechanics, Bioengineering and Biotransport Conference, June 21, 2017, Tucson, Arizona, USA*
- 12) Qusay Alfaori, Ashok Saxena, Hanna Jensen, Morten Jensen: "Rupture Prediction in Abdominal Aortic Aneurysms". *43rd Annual Symposium on Vascular and Endovascular Issues, November 15 - 19, 2015, New York, NY, USA.*
- 13) Skov SN, Ropcke DM, Tjornild MJ, Ilkjaer C, Rasmussen J, Nygaard H, Jensen MO, Nielsen SL: "Semi-rigid Mitral Annuloplasty Rings Improves Myocardial Stress Adaptation Compared to a Rigid Ring" *30th Annual Meeting of The European Association for Cardio-Thoracic Surgery, October 1-5, 2016, Barcelona, Spain*
- 14) Qusay Alfaori, Ashok Saxena, Hanna Jensen and Morten Jensen: "Rupture in Abdominal Aortic Aneurysm", *Proceedings of First Structural Integrity Conference and Exhibition (SICE-2016), Bangalore, India, July 4-6, 2016*
- 15) Pantoja JL, Morgan AE, Ge L, Grossi EA, Weinsaft JW, Jensen MO, Levine RA, Ratcliffe MB: "Undersized Ring Annuloplasty Increases Strain in the Left Ventricle: Finite Element Analysis", *2nd Annual Meeting of the Heart Valve Society, March 17-19, 2016, New York City, NY.*

- 16) Skov SN, Ropcke DM, Ilkjaer C, Rasmussen J, Tjoernild MJ, Nygaard H, Jensen MO, Nielsen SL: "What are the Remodelling Forces of a Rigid Mitral Annuloplasty Ring – A Potential Risk Factor for Ring Dehiscence in Mitral Valve Repair?", *2nd Annual Meeting of the Heart Valve Society, March 17-19, 2016, New York City, NY.*
- 17) DM Røpcke, C Ilkjær, T Hejslet, AV Sørensen, H Jensen, MO Jensen, VE Hjortdal, SL Nielsen: "Functional and biomechanical performance of stentless extracellular matrix tricuspid tubegraft in pigs" *26th annual meeting of the Scandinavian Society for Research in Cardiothoracic Surgery, Geilo, Norway, February 11th –13th, 2016.*
- 18) SN Skov, DM Røpcke, C Ilkjær, J Rasmussen, MJ Tjørnild, H Nygaard, MO Jensen, SL Nielsen: "What are the remodelling forces of a rigid mitral annuloplasty ring – a potential risk factor in mitral valve repair?" *26th annual meeting of the Scandinavian Society for Research in Cardiothoracic Surgery, Geilo, Norway, February 11th –13th, 2016.*
- 19) C Ilkjær, DM Røpcke, SN Skov, MJ Tjørnild, AV Sørensen, MO Jensen, SL Nielsen: "Functional and biomechanical effects of conventional ring annuloplasty on a novel tissue engineered tricuspid tube graft prosthesis–preliminary results" *26th annual meeting of the Scandinavian Society for Research in Cardiothoracic Surgery, Geilo, Norway, February 11th –13th, 2016.*
- 20) Qusay Alfaori, Ashok Saxena, Hanna Jensen, Morten Jensen: "Rupture in Abdominal Aortic Aneurysms". *42nd Annual Symposium on Vascular and Endovascular Issues, November 17 - 21, 2015, New York, NY, USA.*
- 21) C.H. Lee, C.H. Bloodworth, M.O. Jensen, A.P. Yoganathan, M.S. Sacks: "Effects of leaflet microstructure and constitutive model on the closing behavior of the mitral valve" *Summer Biomechanics, Biongingeering and Biotransport Conference (SB3C2015), Snowbird, UT, Jun 17-20, 2015.*
- 22) Skov, Søren Nielsen; Røpcke, Diana Mathilde; Ilkjær, Christine; Rasmussen, Jonas; Tjørnild, Marcell Juan; Nygaard, Hans; Jensen, Morten Ølgaard Jegstrup; Nielsen, Sten Lyager: "Biomechanical Features of a Rigid Remodeling Versus a Fully Flexible Mitral Annuloplasty Ring" *33rd National Meeting at the Danish Society for Biomedical Engineering, September 17th, 2015, Braedstrup, Denmark.*
- 23) Amir H. Khalighi, Andrew Drach, Chung-Hao Lee, Charles Bloodworth, Eric L. Pierce, Morten O. Jensen, Robert C. Gorman, Joseph H. Gorman, Ajit P. Yoganathan, and Michael S. Sacks: "Development of a Population-Averaged Model of the Complete Mitral Valve Geometry", *Biomedical Engineering Society 2015 Annual Meeting, October 7-9, Tampa, Florida, USA.*
- 24) Skov, Søren Nielsen; Røpcke, Diana Mathilde; Ilkjær, Christine; Rasmussen, Jonas; Tjørnild, Marcell Juan; Nygaard, Hans; Jensen, Morten Ølgaard Jegstrup; Nielsen, Sten Lyager: "Rigid Remodelling Versus Fully Flexible Mitral Annuloplasty Rings - A Novel Assessment Tool for Biomechanical Characterization" *29th Annual Meeting of the European Association For Cardio-Thoracic Surgery (EACTS), Amsterdam, The Netherlands, 3 - 7 October 2015.*
- 25) Milan Toma, Morten O. Jensen, Daniel R. Einstein, Ajit P. Yoganathan, Richard P. Cochran, Karyn S. Kunzelman: "Fluid-Structure Interaction Analysis of Mitral Valve Forces Using a Comprehensive Model With 3D Chordal Structure: Synergy of Modeling and Experiments", *SB3C2015 Summer Biomechanics, Bioengineering and Biotransport Conference June 17-20, 2015, Snowbird Resort, Utah, USA.*

- 26) Charles H. Bloodworth, Eric L. Pierce, Thomas F. Easley, Milan Toma, Morten O. Jensen, Ajit P. Yoganathan: "Capturing Detailed 3D Mitral Valve Geometry for Computational Valve Modeling" *SB3C2015 Summer Biomechanics, Bioengineering and Biotransport Conference June 17-20, 2015, Snowbird Resort, Utah, USA.*
- 27) Toma M; Jensen MO; Einstein DR; Yoganathan AP; Cochran RP; Kunzelman KS: "Validating Fluid Structure Interaction in Medical Device Design with Force Measurements", *2015 BMES Frontiers in Medical Devices Conference: Innovations in Modeling and Simulation, May 18-20, 2015, Washington DC.*
- 28) Chung-Hao Lee, Charles H. Bloodworth, Morten O. Jensen, Ajit P. Yoganathan, Michael S. Sacks: "Predictive Computational Simulations of the Functioning Mitral Valve" *2015 BMES Frontiers in Medical Devices Conference: Innovations in Modeling and Simulation, May 18-20, 2015, Washington DC.*
- 29) Skov, Søren Nielsen; Røpcke, Diana Mathilde; Ilkjær, Christine; Tjørnild, Marcell Juan; Nygaard, Hans; Jensen, Morten Ølgaard Jegstrup; Nielsen, Sten Lyager: "How to measure the Forces in Mitral Annuloplasty Rings" *3rd Iranian Cardiovascular Joint Congress, 3rd-6th of March 2015, Teheran, Iran.*
- 30) Skov, Søren Nielsen; Røpcke, Diana Mathilde; Siefert, Andrew W; Ilkjær, Christine; Tjørnild, Marcell Juan; Nygaard, Hans; Nielsen, Sten Lyager; Jensen, Morten Ølgaard Jegstrup: "New concept for quantifying two-dimensional forces acting on an implanted mitral annuloplasty ring" *3rd Iranian Cardiovascular Joint Congress, 3rd-6th of March 2015, Teheran, Iran.*
- 31) SN Skov, DM Røpcke, AW Siefert, C Ilkjær, MJ Tjørnild, A Yoganathan, H Nygaard, SL Nielsen, M Jensen: "New concept for quantifying two-dimensional forces acting on an implanted mitral annuloplasty ring" *25th annual meeting of the Scandinavian Society for Research in Cardiothoracic Surgery, Geilo, Norway, February 12th –14th, 2015.*
- 32) DM Røpcke, C Ilkjær, T Hejslet, AV Sørensen, H Jensen, MOJ Jensen, VE Hjortdal, SL Nielsen: "Functional and biomechanical performance of stentless extracellular matrix tricuspid tubegraft in pigs", *25th annual meeting of the Scandinavian Society for Research in Cardiothoracic Surgery, Geilo, Norway, February 12th –14th, 2015.*
- 33) J Grønlund, N Telinius, SN Skov, MO Jensen, VE Hjortdal: "A validation study of near infrared fluorescence imaging of lymphatic vessels in humans", *25th annual meeting of the Scandinavian Society for Research in Cardiothoracic Surgery, Geilo, Norway, February 12th –14th, 2015.*
- 34) Sasa Grbic, Thomas Easley, Tommaso Mansi, Dominik Neumann, Eric Pierce, Morten Jensen, Charlie Bloodworth, Andrew W. Siefert, Julian Krebs, David D. Yuho, Ajit P. Yoganathan, Dorin Comaniciu: "Multi-Modal Validation Framework of Mitral Valve Geometry and Biomechanical Models", *2014 BMES Annual Meeting October 22-25, 2014, San Antonio, Texas.*
- 35) C. H. Bloodworth IV, E. L. Pierce, T. F. Easley, M. Toma, A. Khalighi, C-H. Lee, M. Sacks, A. W. Siefert, M. Ø. Jensen, A. P. Yoganathan: "Design of an In Vitro Simulation Pipeline for the Development of Computational Mitral Valve Modeling", *2014 BMES Annual Meeting October 22-25, 2014, San Antonio, Texas.*
- 36) DM Ropcke, T Hejslet, AV Sørensen, C Ilkjær, H Jensen, MOJ Jensen, SL Nielsen: "Characterization of Extracellular Matrix Tricuspid Tubegrafts with Comparison to Native Tricuspid Valves in a Porcine Model", *28th EACTS Annual Meeting, Milan, Italy 2014 11-15 October 2014.*

- 37) Søren N. Skov, Diana M. Røpcke, Andrew W. Siefert, Christine Ilkjær, Marcell J. Tjørnild, Ajit Yoganathan, Hans Nygaard, Sten L. Nielsen, Morten Jensen: "New Concept For Measuring The Forces In Mitral Valve Annuloplasty Rings" *32nd National Meeting at the Danish Society for Biomedical Engineering, September 17th, 2014, Braedstrup, Denmark.*
- 38) Madonna Lee, Andrew Siefert, Eric Pierce, Chikashi Aoki, Satoshi Takebayashi, Morten Jensen, Robert Gorman, Ajit Yoganathan, Joseph Gorman: "Mitral Annuloplasty Cyclic Suture Forces: True-sized Versus Undersized Rings", *AATS Cardiovascular Valve Symposium, Istanbul, Turkey, September 4-6 2014.*
- 39) Jensen MO; Siefert AW; Toma M; Gorman RC; Gorman III JH; Yoganathan AP: "Utilizing Computational and Experimental Tools in Tandem for Development and Evaluation of Mitral Valve Devices" *FDA Medical Device and Innovation Consortium Annual Meeting, Washington, DC, June 2014.*
- 40) SN Skov, K Telling, D Røpcke, C Ilkjær, MJ Tjørnild, H Nygaard, SL Nielsen, MØ Jensen: "Simultaneous in- and out-of-plane Mitral Valve Annular Force Measurements" *24th annual meeting of the Scandinavian Society for Research in Cardiothoracic Surgery, Geilo, Norway, February 13th –15th, 2014.*
- 41) C Ilkjær, MO Jensen, JL Hønge, ES Kragh, SL Nielsen: "Effect of annuloplasty ring implantation on the tricuspid valvular complex dynamics and geometry" *24th annual meeting of the Scandinavian Society for Research in Cardiothoracic Surgery, Geilo, Norway, February 13th –15th, 2014.*
- 42) H Jensen, MO Jensen, F Waziri, JL Hønge, E Sloth, M Fenger-Gron, SL Nielsen: "Transapical neochoord implantation: Is tension of artificial chordae tendineae dependent on insertion site?", *62nd Annual Meeting of Scandinavian Association for Thoracic Surgery, Aarhus, Denmark August 22nd - 24th, 2013.*
- 43) Diana M. Ropcke, Sten L. Nielsen, Henrik Jensen, Morten Ø. J. Jensen, Jesper L. Hønge, Vibeke E. Hjortdal.: "Total Tricuspid Valve Reconstruction Using Porcine Extracellular Matrix: Functional and Biomechanical Aspects" *7th Biennial Congress of the Society for Heart Valve Disease and the Heart Valve Society of America, June 25th, 2013, Venice, Italy.*
- 44) CH Ilkjær, JL Hønge, MO Jensen, SL Nielsen: "Effect of ring annuloplasty on tricuspid valvular complex dynamics and geometry" *23rd annual meeting of the Scandinavian Society for Research in Cardiothoracic Surg., Saturday, Feb 9th, 2013, Geilo, Norway.*
- 45) H Jensen, MO Jensen, F Waziri, JL Hønge, E Sloth, M Fenger-Gron, SL Nielsen: "Transapical neochoord implantation: Is tension of artificial chordae tendineae dependent on insertion site?" *23rd annual meeting of the Scandinavian Society for Research in Cardiothoracic Surg., Friday, Feb 8th, 2013, Geilo, Norway.*
- 46) DM Røpcke, VE Hjortdal, GE Toft, MO Jensen, SD Kristensen: "Remote ischemic preconditioning reduces thrombus formation in the rat" *23rd annual meeting of the Scandinavian Society for Research in Cardiothoracic Surg., Friday, Feb 8th, 2013, Geilo, Norway.*
- 47) Røpcke DM, Hjortdal VE, Toft GE, Jensen MO, Kristensen SD "Remote Ischemic Preconditioning Reduces Thrombus Formation In The Rat", *49th annual Meeting of The Society of Thoracic Surgeons, January 26-30 2013, Los Angeles, California, USA.*

- 48) TH Jorgensen, IJ Nielsen, JL Hønge, H Nygaard, SL Nielsen, MO Jensen: "Mitral Valve Leaflet Patch Augmentation Reduces Regurgitant Orifice Area" *30th National Meeting at the Danish Society for Biomechanics, October 26th, 2012, Aarhus, Denmark.*
- 49) TH Jorgensen, IJ Nielsen, JL Hønge, H Nygaard, SL Nielsen, MO Jensen: "Mitral Valve Leaflet Patch Augmentation Reduces Regurgitant Orifice Area" *30th National Meeting at the Danish Society for Biomedical Engineering, September 19th, 2012, Braedstrup, Denmark.*
- 50) MO Jensen, JA Benediktsson, JL Hønge, H Nygaard, SL Nielsen: "Downsizing the Mitral Valve Annulus: Impact on Tissue Biomechanics" *30th National Meeting at the Danish Society for Biomedical Engineering, September 19th, 2012, Braedstrup, Denmark.*
- 51) Røpcke DM, Hjortdal VE, Toft GE, Jensen MO, Kristensen SD "Remote arterial preconditioning reduces thrombus formation in the rat", *4th Joint Scandinavian Conference in Cardiothoracic Surgery, Vilnius, Lithuania, August 16th-18th 2012.*
- 52) Henrik Jensen, Morten O. Jensen, Stefan Vind-Kezunovic, Rikke Vestergaard, Steffen Ringgaard, Morten H. Smerup, Jesper L. Hønge, J. Michael Hasenkam, Sten L. Nielsen: "Papillary Muscles Relocation Stitches – What are the Cyclic Tension Alterations Imposed on the Myocardium?" *Fourth Annual Joint Scientific Meeting of the Heart Valve Society of America and Society for Heart Valve Disease, April 12th, 2012, New York, NY, USA.*
- 53) Hønge JL, Askov JB, Jensen MOJ, Hasenkam JM, Nielsen SL: "Effect of Mitral Ring Flexibility on Chordal Force balance and Mitral Annular Geometry", *Fourth Annual Joint Scientific Session of the Heart Valve Society of America and Society for Heart Valve Disease, Valves in the Heart of the Big Apple VII, April 12-14, 2012, New York, NY, USA.*
- 54) A Rahmani, AQ Rasmussen, B Ostli, J Vester-Petersen, JB Askov, JL Hønge, RA Levine , A Hagège, SL Nielsen, H Nygaard, MO Jensen: "Mitral valve mechanics following posterior leaflet patch augmentation", *21st meeting of the Scandinavian Society for Research in Cardiothoracic Surg., Thursday, Feb 3rd, 2011, Geilo, Norway.*
- 55) H Jensen, MO Jensen, MH Smerup, S Ringgaard, NT Andersen, P Wierup, JM Hasenkam, SL Nielsen: "Does down-sized ring annuloplasty induce papillary muscle relocation in ischemic mitral regurgitation?" *21st meeting of the Scandinavian Society for Research in Cardiothoracic Surg., Thursday, Feb 3rd, 2011, Geilo, Norway.*
- 56) JB Askov, JL Hønge, MO Jensen, H Nygaard, JM Hasenkam, SL Nielsen: "Novel Papillary Muscle Force Transducer: Tests and Results" *28th National Meeting at the Danish Society for Biomedical Engineering, September 23rd, 2010, Braedstrup, Denmark.*
- 57) JB Askov, JL Hønge, MO Jensen, H Nygaard, JM Hasenkam, SL Nielsen: Novel Papillary Muscle Force Transducer: Initial Tests and Results. *6th World Congress on Biomechanics, Aug. 1-6, 2010, Singapore.*
- 58) JB Askov, JL Hønge, MO Jensen, H Nygaard, JM Hasenkam, SL Nielsen: Novel Papillary Muscle Force Transducer: Initial Tests and Results. *Biomedical Engineering Society 2010 Annual Meeting, October 6-9, Austin, Texas, USA.*
- 59) Jensen, MO; Nielsen, JVD; Amstrup, M; Jensen, SH; Rasmussen, M: Optimization of Flow Conditions for Aortic Cannulas. *30th Scandinavian Conference in ExtraCorporal Technology, Oslo, Norway, 27th Aug, 2010.*

- 60) JB Askov, MO Jensen, J Hønge, H Nygaard, JM Hasenkam, SL Nielsen: "New Miniature Chordal Force Transducer for Measurements In Vivo", *4th Biennial Heart Valve Biology and Tissue Engineering Meeting, Monday, March 8th, 2010, Hilton Head Island, SC, USA.*
- 61) Albert Hagege and Morten Jensen: "Surgical Models of Mitral Valve Prolapse", Leducq MITRAL Transatlantic Network of Excellence, Nantes, France, May 2010.
- 62) MOJ Jensen, H Jensen, RA Levine, AP Yoganathan, H Nygaard, SL Nielsen, JM Hasenkam: "What Forces are Transmitted from the Mitral Valve Apparatus to the Papillary Muscles In Vivo". *19th World Congress of the World Society of Cardio-Thoracic Surgeons, Buenos Aires, Argentina, November 4th, 2009.*
- 63) JB Askov, MO Jensen, H Nygaard, JM Hasenkam, SL Nielsen: "New Miniature Chordal Force Transducer for In Vivo Measurements" *27th National Meeting at the Danish Society for Biomedical Engineering, September 23rd, 2009, Braedstrup, Denmark.*
- 64) Nielsen, PF; Funder, JA; Jensen, MO; Nygaard, H: Influence of Venous Reservoir Level on Microbubbles in Cardiopulmonary Bypass, *13th European Congress on Extracorporeal Circulation Technology, June 17th-20th, 2009, Aarhus, Denmark.*
- 65) Morten Ø. Jensen, Henrik Jensen, Jesper B. Askov, Robert A. Levine, Ajit P. Yoganathan, Hans Nygaard, Sten L. Nielsen, J. Michael Hasenkam: Flexible Mitral Valve Annuloplasty Rings Provide Superior Annular Dynamics and Force Distribution. *19th Annual Meeting of The Scandinavian Society for Research in Cardio Thoracic Surgery, February 5th – 7th, 2009, Geilo, Norway.*
- 66) Jesper B. Askov, Morten Ø. Jensen, Lyager, Hasenkam, Nygaard: Impact of Mitral Annuloplasty Ring Flexibility on 3D Geometry and Stress distribution of the Mitral Valve Annulus and Leaflets. *The Robert Levine Symposium on New Frontiers in Mitral Valve Repair Targeting the Natural History of Mitral Valve Regurgitation, Tuesday January 20th, 2009, Aarhus, Denmark.*
- 67) Morten Ø. Jensen, Henrik Jensen, Morten Smerup, Robert A. Levine, Ajit P. Yoganathan, Hans Nygaard, J. Michael Hasenkam, Sten L. Nielsen: Saddle-shaped Mitral Valve Annuloplasty Rings Provide Superior Annular Force Distribution. *18th annual meeting of The Scandinavian Society for Research in Cardio Thoracic Surgery, February 2nd, 2008, Geilo, Norway.*
- 68) Morten Ø. Jensen, Henrik Jensen, Robert A. Levine, Ajit P. Yoganathan, Hans Nygaard, Sten L. Nielsen, J. M. Hasenkam: Left Ventricular Force Balance. *26th Danish Annual Congress in Biomedical Engineering, September 17, 2008, Brædstrup, Denmark.*
- 69) Jensen, Henrik; Jensen, Morten Ølgaard Jegstrup; Ringgaard, Steffen; Smerup, Morten Holdgaard; Sørensen, Thomas Sangild; Wierup, Per; Hasenkam, John Michael; Nielsen, Sten Lyager: "Geometric Culprits of Papillary Muscle Displacement in Functional Ischemic Mitral Regurgitation assessed by 3D Magnetic Resonance Imaging" *18th World Conference of the World Society of Cardio-Thoracic Surgeons (WSCTS 2008), May 3rd, 2008, Kos Island, Greece, Abstract published in Heart Surgery Forum, Vol. 11, Nr. Suppl. 1, 2008, s. 358.*
- 70) Jensen, Morten; Jensen, Henrik; Levine, Robert; Yoganathan, Ajit; Nygaard, Hans; Nielsen, Sten Lyager; Hasenkam, J. Michael: In Vivo Force Measurement on Mitral Valve Traction Suture: Insights to Left Ventricular Force Balance. *18th World Conference of the World Society of Cardio-Thoracic Surgeons (WSCTS 2008), May 3rd, 2008, Kos Island, Greece.*

- 71) Jensen, Henrik; Jensen, Morten Ølgaard Jegstrup; Ringgaard, Steffen; Smerup, Morten Holdgaard; Sørensen, Thomas Sangild; Wierup, Per; Hasenkam, John Michael; Nielsen, Sten Lyager: "Geometric culprits of papillary muscle displacement in functional ischemic mitral regurgitation assessed by 3D magnetic resonance imaging" *57th Annual Meeting of the Scandinavian Society of Thoracic Surgery and the 28th Annual Meeting of Scandinavian Society of Extra Corporeal Technology, Aug 21-23, 2008, Copenhagen, Denmark.*
- 72) Henrik Jensen, Morten Ø. Jensen, Steffen Ringgaard, Morten H. Smerup, Thomas S. Sørensen, Per Wierup, J. Michael Hasenkam, Sten Lyager Nielsen: Geometric Culprits of Papillary Muscle Displacement in Functional Ischemic Mitral Regurgitation Assessed by 3D Magnetic Resonance Imaging. *18th annual meeting of The Scandinavian Society for Research in Cardio Thoracic Surgery, Feb. 2008, Geilo, Norway.*
- 73) Morten O. Jensen, Henrik Jensen, Morten Smerup, Robert A. Levine, Ajit P. Yoganathan, Hans Nygaard, J. Michael Hasenkam, Sten L. Nielsen: Saddle-shaped Mitral Valve Annuloplasty Rings Provide Superior Annular Force Distribution. *American Heart Association Scientific Sessions, Nov. 5, 2007, Orlando, FL, USA.*
- 74) Morten O. Jensen, Henrik Jensen, Morten Smerup, Robert A. Levine, Ajit P. Yoganathan, Hans Nygaard, J. Michael Hasenkam, Sten L. Nielsen: Saddle-shaped Mitral Valve Annuloplasty Rings Improve Leaflet Coaptation Geometry. *American Heart Association Scientific Sessions, Nov. 7, 2007, Orlando, FL, USA.*
- 75) Morten Jensen: Force balance in the mitral valve annulus: How to interpret the function of annuloplasty devices. *25th Danish Annual Congress in Biomedical Engineering, Sept. 19th-20th, 2007, Brædstrup, Denmark.*
- 76) Morten Ø. Jensen, Henrik Jensen, Sten L. Nielsen, Morten Smerup, Peter Johansen, Ajit P. Yoganathan, Hans Nygaard, J. M. Hasenkam: Force Balance In The Mitral Valve Annulus: How To Interpret The Function Of Annuloplasty Devices. *Fourth Biennial Meeting of the Society for Heart Valve Disease, June 17th 2007, New York, NY, USA.*
- 77) Henrik Jensen, Morten Ø. Jensen, Morten Smerup, Won Yong Kim, Steffen Ringgaard, J. Michael Hasenkam, Sten Lyager Nielsen: 3d Cardiac MRI Assessment Of Posterior Papillary Muscle Displacement In Chronic Functional Ischemic Mitral Regurgitation. *Fourth Biennial Meeting of the Society for Heart Valve Disease, June 18th 2007, New York, NY, USA.*
- 78) M. Ø. Jensen, S. L. Nielsen, M. Smerup, P. Johansen, H. Jensen, A. P. Yoganathan, J. M. Hasenkam, H. Nygaard: New Insight into the Mitral Valve Force Balance. *Biomedical Engineering Society Annual Meeting, October 2006, Chicago, Illinois, USA.*
- 79) Morten Jensen, Jeff Buterbaugh, PhD: Recent Advancements in Fluorescence Imaging. *PittCon, March 2nd, 2005, Orlando, Florida, USA.*
- 80) Jensen, Morten: Using NI Vision and Motion for Automated Inspection of Medical Devices and Pharmaceutical Processes. *PittCon, March 7th 2004, Chicago, IL, USA.*
- 81) Morten Oelgaard Jensen: Advances in Analytical Techniques for High Throughput Screening Applications. *AOAC INTERNATIONAL Annual Meeting & Exposition, Sept. 19th-23rd, 2004, St. Louis, Missouri, USA.*
- 82) Yoganathan, A.P. and Jensen, M., Harvested Porcine Mitral Xenograft Fixation: Impact on Fluid Dynamic Performance. *4th International Symposium on Stentless Bioprostheses, May 2001, San Diego, CA, USA.*

- 83) M. Jensen, J. Lemmon, S. He, M. Weston, V. Gessaghi, R. Levine, A. Yoganathan: Bioprosthetic Valve Fixation: Adverse Hemodynamic Impact. *World Congress on Medical Physics and Biomedical Engineering, July 2000, Chicago, Illinois, USA.*
- 84) Morten O. Jensen, Ajit P. Yoganathan: Bioprosthetic Heart Valve Fixation: Adverse Hemodynamic Impact. *VIII International Symposium Cardiac Bioprostheses, Friday, November 3rd, 2000, Cancun, Mexico.*
- 85) He S., Lemmon J.D., Weston M.W., Jensen M.O., Levine R.A., and Yoganathan A.P. Functional Characteristics of the Natural Mitral Valve: An In Vitro Assessment. *Third International Symposium on Stentless Bioprostheses, May 1999, Grand Cayman Island.*
- 86) He S., Lemmon J.D., Weston M.W., Jensen M.O., Fontaine A.A., Levine R.A., and Yoganathan A.P. Mechanism of Persistent Functional Mitral Regurgitation Despite Annuloplasty: In Vitro Studies. *American Society of Echocardiography 10th Annual Scientific Sessions, June, 1999, Washington, DC, USA.*
- 87) He S., Lemmon J.D., Weston M.W., Jensen M.O., Yoganathan A.P., Levine R.A.: Mechanism of Mitral Regurgitation In Patients With Annuloplasty: In Vitro Study. *American Society of Echocardiography 10th Annual Scientific Sessions, June, 1999, Washington, DC, USA.*
- 88) He S., Lemmon J.D., Weston M.W., Jensen M.O., Fontaine A.A., Levine R.A. and Yoganathan A.P. In Vitro Engineering Study of Mitral Regurgitation. *International Forum on Ischemic Mitral Valve Regurgitation, March 1999, Nice, France.*

Conference Abstracts: Poster Presentations

- 89) Stephens SE, Ingels NB, Wenk JF, Jensen MO: "Semi-Automatic Removal of Known-Geometry Elements from Image Stack Represented 3D Datasets" *SB3C2021 Summer Biomechanics, Bioengineering and Biotransport Conference, June 16th, 2021: Virtual Conference MS Finalists Poster Session*
- 90) Gal DB, MacMillen K, Jensen HK, Millett P, Bolin E, Daily J, Jensen MO, Collins RT: "Percent Change in Diameter from Aortic Annulus to Sinotubular Junction Predicts Supravalvar Aortic Stenosis Gradient in Williams Syndrome" *American Society of Echocardiography Annual Conference – "Virtual Experience" – August 8-10, 2020*
- 91) Maxwell J. Bean, David Jiang, Sam E. Stephens, Megan E. Laughlin, Hanna K. Jensen, Barry Uretsky, Lucas H. Timmins, Morten O. Jensen. "Experimental Modeling of Coronary Intervention: Towards Computational Simulation". *SB3C2019 Summer Biomechanics, Bioengineering and Biotransport Conference June 25 -28, Seven Springs, PA, USA*
- 92) Kaylee R. Henry, Ali Z. Al-Alawi, Md Abul Hayat, Hanna K. Jensen, Jingxian Wu, Patrick C. Bonasso, Kevin W. Sexton, and Morten O. Jensen: "Isoflurane Effect on Peripheral Venous Pressure" *SB3C2019 Summer Biomechanics, Bioengineering and Biotransport Conference June 25 -28, Seven Springs, PA, USA*
- 93) Megan Laughlin, Mohamed Almadi, John Moore II, Jamie Hestekin, Wei-Chiang Lin, Morten Jensen: "Characterization of a New Commercially Available Medical Gel for Phantoms" *Biomedical Engineering Society 2019 Meeting, October 16-19, Philadelphia, PA*
- 94) Megan Laughlin, Mason Belue, Hanna Jensen, R. Thomas Collins, Elijah Bolin, Joshua Daily, Morten Jensen: "Analysis of Blood Flow in the Pediatric Left Ventricle Using Vector Flow Imaging" *Biomedical Engineering Society 2019 Meeting, October 16-19, Philadelphia, PA*

- 95) Sam E. Stephens, Marinna R. Tadros, Neil B. Ingels, Jonathan F. Wenk, Morten O. Jensen: "Bonding Mitral Valve Leaflets in The Closed Configuration for High Resolution Micro-CT Imaging" *2019 Annual Meeting of the Heart Valve Society (HVS), Apr 11 - 13, 2019, Sitges, Barcelona, Catalonia, Spain*
- 96) Ali AlAlawi, Kaylee Henry, Md Abul Hayat, Hanna K. Jensen, Melvin S. Dassinger, Jeffrey M. Burford, Patrick C. Bonasso, Kevin W. Sexton, Jingxian Wu, Morten O. Jensen: "Propofol affects peripheral venous tone in anesthetized patients" *16th Annual Midsouth Computational Biology & Bioinformatics Society (MCBIOS) Conference 2019 at Mississippi State University, Starkville, MS.*
- 97) Collins II RT, Laughlin M, Jensen H, Lang S, Bolin E, Daily J, Jensen M: "Vector Flow Imaging for Cardiovascular Applications in Pediatric Patients and Models", *Biomedical Engineering Society 50th Annual Meeting, Thursday, October 18th, 2018, Atlanta, Georgia*
- 98) Preut A, Laughlin M, Jensen H, Hestekin J, Jensen M: "Novel Method for Emboli Analog Formation Towards Improved Stroke Retrieval Devices". *Biomedical Engineering Society 50th Annual Meeting, Thursday, October 18th, 2018, Atlanta, Georgia*
- 99) Al-Alawi A, Hayat A, Bonasso P, Burford JM, Dassinger MS, Jensen HK, Wu J, Sexton KW, and Jensen MO: "Hydration Level Assessment with Peripheral Venous Pressure Waveform Analysis", *Biomedical Engineering Society 50th Annual Meeting, Thursday, October 18th, 2018, Atlanta, Georgia*
- 100) Brazhkina O, Laughlin M, Jensen H, Haney K, Girardot M, Jensen M: "Development of a Model for Accelerated Fatigue Testing of Venous Valves". *Biomedical Engineering Society 50th Annual Meeting, Saturday, October 20th, 2018, Atlanta, Georgia*
- 101) Henson J, Kim J-W, Jensen H, Jensen M: "Size, Concentration, And Time Dependent Effects of PEGylated Gold Nanoparticles on Cardiovascular Cell Viability", *Biomedical Engineering Society 50th Annual Meeting, Thursday, October 18th, 2018, Atlanta, Georgia*
- 102) Bonasso PC, Sexton KW, Hayat MDA, Al-Alawi A, Wu J, Jensen HK, Jensen MO, Smith SD, Burford JM, Dassinger MS: "Venous physiology predicts anesthetic induced hypotension in infants" *American College of Surgeons, Boston, Massachusetts, October 21-25, 2018. doi: 10.1007/s10877-018-0124-5*
- 103) Hayat MD, Wu J, Jensen HK, Jensen MO, Dassinger MS, Burford JM, Bonasso PC, Sexton KW: "Predicting Dehydration in Pediatric Patients with Peripheral Venous Waveforms" *15th Annual Midsouth Computational Biology & Bioinformatics Society (MCBIOS) Conference 2018 at Mississippi State University, Starkville, MS.*
- 104) Wenk JF, Jensen MO: "Finite Element Modeling of Mitral Valve Patch Augmentation and Effects on Chordal Force Distribution", *SB³C2017 Summer Biomechanics, Bioengineering and Biotransport Conference, June 22, 2017, Tucson, Arizona, USA*
- 105) Easson G, White M; Jensen H, Girardot M, Jensen M: "Development of an In Vitro Model for Physiological Testing Native and Prosthetic Venous Valves" *International Vein Congress, April 20-22, 2017. Miami Beach, FL*
- 106) Easson G; Laughlin M; Jensen H; Haney K; Girardot M; Jensen M: "New System for Evaluation of Biomechanical Properties and Performance of Glutaraldehyde Fixed Versus Fresh Venous Valves: Towards a Biomechanically Optimal Replacement Device" *2017 Annual Congress of the American College of Phlebology, Austin, TX, Nov. 2nd-5th, 2017*

- 107) Morten O Jensen, Henrik Jensen, Søren S Nielsen, Robert A Levine, Hans Nygaard, J M Hasenkam, Sten L Nielsen: "New Mitral Valve Annuloplasty Concept: Optimizing Annular Dynamics and Force Distribution" *American Heart Association Scientific Sessions 2016, New Orleans, LA, USA, 12 - 16 NOV., 2016* http://circ.ahajournals.org/content/134/Suppl_1/A15744
- 108) Skov SN, Ropcke DM, Tjørnild MJ, Ilkjaer C, Rasmussen J, Nygaard H, Hasenkam JM, Jensen MO, Nielsen SL: "Novel Intelligent Mitral Annuloplasty Ring that Preserves the Dynamic Saddle Shaped Annulus while Fixating the Septal-lateral Dimension" *American Heart Association Scientific Sessions 2016, New Orleans, LA, USA, 12 - 16 NOV., 2016* http://circ.ahajournals.org/content/134/Suppl_1/A19419
- 109) Skov, Søren Nielsen; Røpcke, Diana Mathilde; Ilkjær, Christine; Rasmussen, Jonas; Tjørnild, Marcell Juan; Nygaard, Hans; Jensen, Morten Ølgaard Jegstrup; Nielsen, Sten Lyager: "Remodelling Forces of a Rigid Mitral Annuloplasty Ring - A Potential Risk Factor for Ring Dehiscence in Mitral Valve Repair? 2nd Annual Meeting, Heart Valve Society, March 17-19, New York, NY, United States.
- 110) Eric L. Pierce, Charles H. Bloodworth IV, Ajay Naran, Thomas F. Easley, Morten O. Jensen, Ajit P. Yoganathan: "Novel Micro-Computed Tomography Technique for Soft Tissue Deformation Tracking – Application to the Mitral Valve" *SB3C2015 Summer Biomechanics, Bioengineering and Biotransport Conference June 17-20, 2015, Snowbird Resort, Utah, USA.*
- 111) E. L. Pierce, D. D. Spragan, C. H. Bloodworth, T. Kawamura, T. Takayama, M. O. Jensen, A. W. Siefert, R. C. Gorman, J. H. Gorman, A. P. Yoganathan: "Can Optimized Annuloplasty Ring Size and Shape Mitigate Risk of Dehiscence?" *American Association of Thoracic Surgery Mitral Conclave, NY, NY, USA April 23-24 2015.*
- 112) Amir H. Khalighi, Andrew Drach, Fleur M. ter Huurne, Chung-Hao Lee, Charles Bloodworth, Eric L. Pierce, Morten O. Jensen, Ajit P. Yoganathan, Michael S. Sacks: "On the Characterization of Mitral Valve Geometry and Development of a Population-Averaged Model", *SB3C2015 Summer Biomechanics, Bioengineering and Biotransport Conference June 17-20, 2015, Snowbird Resort, Utah, USA.*
- 113) Amir H. Khalighi, Andrew Drach, Fleur M. ter Huurne, Chung-Hao Lee, Charles Bloodworth, Eric Pierce, Morten O. Jensen, Ajit P. Yoganathan, and Michael S. Sacks: "Multi-Scale Geometric Framework for Population-Averaging of the Mitral Valve Apparatus", *2015 BMES Frontiers in Medical Devices Conference: Innovations in Modeling and Simulation, May 18-20, 2015, Washington DC.*
- 114) Eric L. Pierce, Deborah M. Paul, Sarah K. Wells, Charles H. Bloodworth, Morten O. Jensen, Andrew W. Siefert, Robert C. Gorman, Joseph H. Gorman, Ajit P. Yoganathan: "Why is Annuloplasty Ring Dehiscence More Common on the Posterior Mitral Valve Annulus?" *Inaugural Meeting of New International Heart Valve Society, 6-9 May, 2015, Grimaldi Forum, Monte Carlo, Monaco.*
- 115) A. Drach, A.H. Khalighi, C.H. Lee, M.O. Jensen, C.H. Bloodworth, A.P. Yoganathan, M.S. Sacks. "Population-averaged geometric model of mitral valve from patient-specific imaging data" *14th Annual Design of Medical Devices Conference, Minneapolis, MN, Apr 13-16, 2015.*
- 116) Røpcke, Diana Mathilde; Jørgensen, Tine Hejslet; Jensen, Morten Ølgaard Jegstrup; Nielsen, Sten Lyager: "Total tricuspid valve reconstruction using porcine extracellular matrix. An in vitro characterization" *2014 Annual meeting of the Danish Society of Thoracic Surgery, Nyborg, Denmark.*

- 117) S. Nielsen Skov, D. Mathilde Røpcke, A. W. Siefert, C. Ilkjær, M. Juan Tjørnild, A. Yoganathan, H. Nygaard, S. Lyager Nielsen, and M. Jensen: "New Concept for Measuring the Forces in Mitral Valve Annuloplasty Rings" *2014 BMES Annual Meeting October 22-25, 2014, San Antonio, Texas.*
- 118) Jean-Pierre M. Rabbah, Eric Pierce, Qifeng Wei, Karl Thiele, Morten Jensen, Ajit P. Yoganathan: "Validated, Accurate Quantification of Mitral Regurgitation Through 3D Echocardiography Using an Automated Field Optimization Method", *American Society of Echocardiography 25th Annual Scientific Sessions, June 20-24, 2014, Portland, Oregon, USA.*
- 119) Claudio Capelli, Claus Rath, Francesco Ruffini, Dario Biscarini, Francesco Migliavacca, Spyros Tzamtzis, Morten Jensen, Gaetano Burriesci, Martin Andreas, Silvia Schievano, Alfred Kocher: "Evaluation of a Novel Aortic Valve Prosthesis: Integration of Clinical Data With Experimental And Computational Tools" *7th World Congress of Biomechanics, July 6-11, 2014, Boston, Massachusetts, USA.*
- 120) TH Jorgensen, IJ Nielsen, JL Hønge, H Nygaard, SL Nielsen, MO Jensen: "Mitral Valve Posterior Leaflet Patch Augmentation Reduces Regurgitant Orifice Area", *62nd Annual Meeting of Scandinavian Association for Thoracic Surgery, Aarhus, Denmark August 22nd - 24th, 2013.*
- 121) Skov, Søren Nielsen; Jensen, Morten Ølgaard Jegstrup; Jensen, Henrik; Askov, Jesper Brink; Nygaard, Hans; Levine, Robert; Yoganathan, Ajit; Hasenkam, J. Michael" New Mitral Valve Annuloplasty Concept Minimize Out-of-plane Force Distribution" *31st National Meeting at the Danish Society for Biomedical Engineering, September 17th - 19th, 2013, Braedstrup, Denmark.*
- 122) C Ilkjaer, JL Hønge, MO Jensen, SL Nielsen: "Effect of Annuloplasty Ring Implantation on Tricuspid Valvular Complex Dynamics and Geometry – a Clinical Experiment in Pigs", *62nd Annual Meeting of Scandinavian Association for Thoracic Surgery, Aarhus, Denmark August 22nd - 24th, 2013.*
- 123) ES Kragssnaes, JL Hønge, JB Askov, SL Nielsen, H Nygaard, MO Jensen: "In-plane Tricuspid Valve Force Measurements: Development of Strain Gauge Instrumented Annuloplasty Ring" *Biomedical Engineering Society 2012 Annual Meeting, October 27th 2012, Georgia World Congress Center, Atlanta, Georgia, USA.*
- 124) T Bechsgaard, JL Hønge, H Nygaard, MO Jensen: "In Vivo Wireless Transmission of ECG and Force Data" *30th National Meeting at the Danish Society for Biomedical Engineering, September 19th, 2012, Braedstrup, Denmark.*
- 125) A Rahmani, AQ Rasmussen, B Ostli, J Vester-Petersen, JB Askov, JL Hønge, RA Levine, A Hagège, SL Nielsen, H Nygaard, MO Jensen: "Mitral valve mechanics following posterior leaflet patch augmentation", *5th Biennial Meeting on Heart Valve Biology and Tissue Engineering, May 18th – 20th, 2012, Mykonos Island, Greece.*
- 126) Jesper B. Askov, Jesper L. Hønge, Morten O. Jensen, Hans Nygaard, J. Michael Hasenkam, Sten L. Nielsen: "Mitral Valve Replacement with Total Chordal Preservation Increases Force Transmission to the Papillary Muscle-Left Ventricular Wall Complex", *Society For Heart Valve Disease & Heart Valve Society of America, 6th Biennial Meeting, 25-28 June, 2011, Barcelona, Spain.*
- 127) JB Askov, JL Hønge, H Nygaard, JM Hasenkam, SL Nielsen, MO Jensen, "Novel Papillary Muscle Force Transducer: Tests and Results", *21st Scientific Meeting of the Scandinavian Society for Research in Cardiothoracic Surgery Geilo, Norway, February 3–5, 2011.*

- 128) Henrik Jensen, Morten O. Jensen, Farhad Waziri, Jesper L. Hønge, Erik Sloth, Niels T. Andersen, Per Wierup, J. Michael Hasenkam, Sten L. Nielsen, "Is Tension Alterations of Transapical Artificial Chordae Tendineae Potentially Detrimental for Mitral Repair Durability?" American College of Cardiology Scientific Sessions, April 3-5, 2011, New Orleans, Louisiana, USA.
- 129) Morten Jensen, Jesper Langhoff Hønge, Sten Lyager Nielsen, J. Michael Hasenkam, Robert R. Levine, Mathieu Granier, Albert Hagege: "In Vitro Simulation of Mitral Valve Prolapse and Chordal force balance", *Leducq MITRAL Transatlantic Network Meeting, Nantes, France, May 2010*
- 130) J.B. Askov, J.L. Hønge, M.O. Jensen, H. Nygaard, J.M. Hasenkam, S.L. Nielsen, "Novel Papillary Muscle Force Transducer: Initial Tests And Results", *University of Aarhus Graduate School of Medicine Annual PhD Day, January 16th 2009, Aarhus, Denmark.*
- 131) JB Askov, MO Jensen, JL Hønge, SL Nielsen, H Nygaard, JM Hasenkam: "Effect of Mitral Valve Ring Annuloplasty on in vivo Chordal Tension" *19th World Congress of the World Society of Cardio-Thoracic Surgeons November 4th, 2009, Buenos Aires, Argentina.*
- 132) A Stigo, K Sivesgaard, P Johansen, M Jensen, H Nygaard, E Sloth: "Reliability of Speckle Tracking Ultrasound for assessment of myocardial strain", *Third International Conference on Mechanics of Biomaterials and Tissues, 13 – 17 December 2009, Clearwater Beach, Florida, USA.*
- 133) Morten Ølgaard Jensen, Henrik Jensen, Jesper Brink Askov, Robert A. Levine, Ajit P. Yoganathan, Hans Nygaard, Sten Lyager Nielsen, J. Michael Hasenkam: "Flexible Mitral Valve Annuloplasty Rings Provide Superior Annular Dynamics And Force Distribution" *Society for Heart Valve Disease, Fifth Biennial Meeting of The Society for Heart Valve Disease, June 27-30, 2009, Berlin, Germany.*
- 134) S. Vind-Kezunovic, H. Jensen, A. Rutz, R. Vestergaard, S. Ringgaard, M.Ø. Jensen, M. Smerup, S.L. Nielsen, J.M. Hasenkam: Does papillary muscle relocation surgery affect regional wall motion? *19th annual meeting of The Scandinavian Society for Research in Cardio Thoracic Surgery, February 2009, Geilo, Norway.*
- 135) Askov, J.B., Jensen, M.O., Nielsen, S.L., Nygaard, H., Hasenkam, J.M.: New Miniature Transducers for in vivo Chordae Tendineae Force Measurements. *University of Aarhus Graduate School of Medicine Annual PhD Day, January 16th 2009, Aarhus, Denmark.*
- 136) A. Stigo, K. Sivesgaard, M. Ø. Jensen, H. Nygaard, E. Sloth: Reliability of Speckle Tracking and Doppler Tissue Velocity Imaging for Assessment of Myocardial Strain. *19th annual meeting of The Scandinavian Society for Research in Cardio Thoracic Surgery, February 2009, Geilo, Norway.*
- 137) J.B. Askov, M.O. Jensen, S.L. Nielsen, H. Nygaard, J.M. Hasenkam: New Miniature Transducers for In Vivo Chordae Tendineae Force Measurements. *19th annual meeting of The Scandinavian Society for Research in Cardio Thoracic Surgery, February 2009, Geilo, Norway.*
- 138) E Hansen, JB Askov, H Jensen, MØ Jensen, JA Funder, JM Hasenkam, SL Nielsen: The impact of complete and partial mitral ring annuloplasty on mitral and aortic annular dynamics and interactions. *19th annual meeting of The Scandinavian Society for Research in Cardio Thoracic Surgery, Feb. 2009, Geilo, Norway.*

- 139) Henrik Jensen, Morten Ø Jensen, Morten H Smerup, Stefan Vind-Kezunovic, Steffen Ringgaard, Rikke Vestergaard, Per Wierup, J Michael Hasenkam, Sten L Nielsen: Impact of Papillary Muscle Relocation as Adjunct Procedure to Mitral Ring Annuloplasty in Functional Ischemic Mitral Regurgitation. *American Heart Association Scientific Sessions, November 10, 2008, New Orleans, Louisiana, USA.*
- 140) Morten O. Jensen, Peter Johansen, Hans Nygaard: Development of an Implantable Heart Valve Force Transducer. *ASME 2008 Summer Bioengineering Conference (SBC2008), June 25-29, Marriott Resort, Marco Island, Florida, USA.*
- 141) M. Ø. Jensen, H. Jensen, S. Lyager Nielsen, M. Smerup, P. Johansen, A. P. Yoganathan, H. Nygaard, J. M. Hasenkam: Force Balance in the Mitral Valve Annulus: New Results from Novel Modalities and Measurement Techniques. *17th annual meeting of The Scandinavian Society for Research in Cardio Thoracic Surgery, February 2007, Geilo, Norway.*
- 142) H. Jensen, M. Smerup, M. Jensen, M. Bjerre, J. D. Andersen, E. Sloth, W.Yong Kim, S. Ringgaard, J. M. Hasenkam, S. Lyager Nielsen: Papillary muscle relocation in addition to downsized ring annuloplasty improves mitral valve coaptation geometry in chronic functional ischemic mitral valve regurgitation. *17th annual meeting of The Scandinavian Society for Research in Cardio Thoracic Surgery, February 2007, Geilo, Norway.*
- 143) Morten O. Jensen, Henrik Jensen, Morten Smerup, Robert A. Levine, Ajit P. Yoganathan, Hans Nygaard, J. Michael Hasenkam, Sten L. Nielsen: Saddle-shaped Mitral Valve Annuloplasty Rings Improve Leaflet Coaptation Geometry. *American Heart Association Scientific Sessions, Nov. 7th, 2007, Orlando, Florida, USA.*
- 144) MO Jensen, H Jensen, SL Nielsen, M Smerup, P Johansen, AP Yoganathan, H Nygaard, JM Hasenkam: Force Balance in the Mitral Valve Annulus: New Results from Novel Modalities and Measurement Techniques. *17th annual meeting of The Scandinavian Society for Research in Cardio Thoracic Surgery, February 2007, Geilo, Norway.*
- 145) M. Ø. Jensen, S. L. Nielsen, M. Smerup, P. Johansen, H. Jensen, A. P. Yoganathan, J. M. Hasenkam, H. Nygaard: Stress Distribution and 3D Geometry in Mitral Valve Annuloplasty Rings: Ring Selection Implications. *Advances in Innovative Technologies and Tissue Engineering For the Treatment of Heart Valve Disease, 10th Annual Meeting February, 2006, Hilton Head, South Carolina, USA.*
- 146) M. Ø. Jensen, S. L. Nielsen, M. Smerup, P. Johansen, H. Jensen, A. P. Yoganathan, J. M. Hasenkam, H. Nygaard: New Insight into the Mitral Valve Force Balance. *55th Annual Meeting of the Scandinavian Association for Thoracic Surgery and the 26th Annual Meeting of the Scandinavian Society for Extracorporeal Technology, August 2006, Reykjavík, Iceland.*
- 147) M. Ø. Jensen, S. L. Nielsen, M. Smerup, P. Johansen, H. Jensen, A. P. Yoganathan, J. M. Hasenkam, H. Nygaard: 3D Geometry and Stress Distribution in Mitral Valve Annuloplasty Rings. *16th annual meeting of The Scandinavian Society for Research in Cardio Thoracic Surgery, February 2006, Geilo, Norway.*
- 148) MØ Jensen, SL Nielsen, M Smerup, P Johansen, AP Yoganathan, JM Hasenkam, H Nygaard: The Effect of Mitral Annuloplasty Rings on Mitral Valve 3D Geometry and Stress Distribution. *University of Aarhus Graduate School of Medicine Annual PhD Day, January 16th 2006, Aarhus, Denmark.*

Seminars / Invited Guest Lecturer & Speaker

- 149) Inaugural Project Scope Speaker for the Arkansas Research Alliance: “Research and work with technology to advance development of medical devices; Efforts to assist community with clinical partners fight COVID-19; Support of engineering students in creating economic impact from their design coursework” *ARA Project Scope, Arkansas, September 23rd, 2020*
- 150) Invited Speaker / Discussant in the Mitral Valve session titled Functional Mitral Regurgitation: The Ongoing Controversy. Title of talk “Biomechanical Aspects of Functional Mitral Regurgitation”, *the Heart Valve Society Annual Scientific Meeting, Sitges, Spain, April 12th, 2019*
- 151) Collins RT, Laughlin M, Lang S, Bolin E, Daily J, Jensen H, Jensen M: “Vector Flow Imaging for Surgical Decision-Making in Pediatric Cardiology” *Arkansas Exercise and Nutrition Research Symposium: The Science of Diet and Exercise 2nd Annual Center for Human Nutrition Research Symposium. Feb 22, 2019.*
- 152) Invited speaker at the Fayetteville, Arkansas Rotary Club: “Cardiovascular Disease and Research in Arkansas”, Fayetteville, Arkansas, February 18th, 2016.
- 153) Invited keynote speaker at the Sixth Nanotechnology for Health Care Conference “Nanoscale Materials and Sensors in Cardiovascular Medicine”, Winthrop Rockefeller Institute, Morrilton, Arkansas, December 2nd, 2015.
- 154) Invited guest lecturer at the National Center for Toxicological Research “A Team of Hearts, Jensen Cardiovascular Research; the Past, the Present and the Future”, November 19th, 2015.
- 155) Invited guest lecturer at the Georgia Institute of Technology Biomedical Engineering BMED 6784 Cardiovascular Biomechanics, April 2nd, 2015.
- 156) Invited seminar speaker at the University of Texas, Austin ICES Center for Cardiovascular Simulation: “Utilizing Computational and Experimental Tools in Tandem for Development and Evaluation of Cardiovascular Devices” October 27th, 2014.
- 157) Invited Panelist at the NIH “Broadening Experiences in Scientific Training” (BEST) Program. Emory University and the Georgia Institute of Technology. July 23rd, 2014.
- 158) Invited Speaker at the Department of Engineering, Cambridge University: “The Left Heart Tug of War: Engineering and Medicine Joining Forces, January 21st, 2013, Cambridge, UK.
- 159) Invited Speaker at the Department of Bioengineering, Imperial College London: “The Left Heart Tug of War: Engineering and Medicine Joining Forces, December 10th, 2012, London, UK.
- 160) Invited Speaker at Imaging Sciences & Biomedical Engineering, Kings College London / St. Thomas Hospital: “The Left Heart Tug of War: Engineering and Medicine Joining Forces, July 31st, 2012, London, UK.
- 161) Invited Speaker at the Institute of Biomedical Engineering, University of Oxford: “The Left Heart Tug of War: Engineering and Medicine Joining Forces, February 29th, 2012, Oxford, UK.
- 162) Invited Speaker at the Danish Biomechanical Society: “Biomechanical Approaches in Mapping the Left Heart Force Balance”, DBS Annual Meeting, October 14th, 2011, Odense, Denmark.
- 163) BioPeople Innovation Tour 2011: “Requirements for Design, Function, Materials, and Communication”, Invited Speaker for Cluster of Health and Life Sciences companies (Novo Nordisk, Delta, Coloplast etc.) Nov. 29th, 2011.

- 164) Invited Speaker at the Danish Engineering Foundation: "Coupling between Research and Industry: Why, How?" Health Technology Potential Workshop, Viborg, Denmark, September 27^h, 2011.
- 165) 2011 Biomedical Engineering Invited Guest Presentation: "The Left Heart Tug of War: Engineering and Medicine Joining Forces", Auspices at the Center for Innovative Cardiovascular Technologies, Atlanta, Georgia, July 28th, 2011.
- 166) Morten Jensen: "Experimental Heart Surgery in Denmark", Division of Adult Cardiothoracic Surgery and Cardiac Biomechanics, University of California, San Francisco, CA, USA, August 2nd, 2011.
- 167) Morten Jensen: "Experimental Heart Surgery in Denmark", Department of Biomedical Engineering, University of Oulu, Oulu, Finland, August 10th, 2011.
- 168) Morten Ø. Jensen: "Engineering in Experimental Heart Surgery", Danish Institute for Study Abroad (DIS, Copenhagen), September 2009.
- 169) Morten Ø. Jensen: "Repairing the Heart", The Danish Society of Engineers, (Aarhus, Denmark), October 20th, 2009.
- 170) Morten Ø. Jensen: "Repairing the Heart", 19th Danish Biomedical Engineering Society Annual Conference, Denmark September 22nd – 24th, 2009.
- 171) Morten Ø. Jensen: "Repairing the Heart", iNANO: The interdisciplinary nanoscience center at Aarhus University, March 10th, 2009.
- 172) Guest Lecturer: "Engineering in Experimental Heart Surgery", Technical University of Denmark (DTU, Copenhagen), September 2008.
- 173) Guest Lecturer: "Engineering in Experimental Heart Surgery", The Danish Society of Engineers (Copenhagen), September 2008.
- 174) Jensen, M. O: "Mitral Valve Biomechanics and Fluid Dynamics", Department of Cardiology, April 2008, Aarhus University Hospital, Skejby, Aarhus, Denmark.
- 175) Jensen, M. O. J., Bering, J., "Vision Analysis: Techniques and Applications", Virtual Instrumentation Seminar, Engineering College of Aarhus, Denmark, Dec. 6th, 2006.
- 176) Jensen, M. O. J.: "Image Acquisition and Analysis", Virtual Instrumentation Seminar, Engineering College of Aarhus, Denmark, April 1st, 2006.
- 177) Virtual Bioinstrumentation and Industry Discussion Panelist Partnership for Educational Bioengineering Laboratories (PEBEL), Lansdowne, VA, June 4-6, 2004.
- 178) "LabVIEW Control Design and Simulation", NI Symposium, Cape Town, South Africa, Nov. 24^h 2004.
- 179) Jensen, Morten: "Microscope Control with LabVIEW and IMAQ Vision" National Instruments Scientific Imaging Symposium, Boston, MA, November 13, 2003.

Public Media Appearances:

- "Animal Science and Engineering Researchers Partner to Improve Veterinary Procedure", news.uark.edu, February 11th, 2021
- "3D-printed spoon might improve small-animal cystotomies", Veterinary Medicine Update in Animal Health SmartBrief, February 13th, 2021
- "Morten Jensen to Give Inaugural ARA Project Scope Presentation" September 21st, 2020: <https://news.uark.edu/articles/54704/morten-jensen-to-give-inaugural-ara-project-scope-presentation>
- Alliance-recruited researchers doing COVID-19 work in Arkansas, talkbusiness.net, April 30^h, 2020
- UA researchers customize 'aerosol boxes' to protect workers at Washington Regional, www.nwahomepage.com (KNWA/Fox24), newsbreak.com, Aerosol boxes created to protect clinicians from COVID-19, April 17th, 2020
- Researchers Customize 'Aerosol Boxes' for Washington Regional, news.uark.edu, researchfrontiers.uark.edu, April 17th, 2020
- UA Engineering Researchers Unite to Save Precious Time in Medical Emergencies <https://electrical-engineering.uark.edu/news/ua-engineering-researchers-unite-to-save-precious-time-in-medical-emergencies.php>, February 2020
- NIH Supports Engineering Researchers to Improve Heart Procedures and Surgeries, news.uark.edu, Jan. 24, 2020
- "Vector Flow Imaging Helps Visualize Blood Flow in Pediatric Hearts", [Week in BioE \(May 31, 2019\)](http://www.weekinbioe.com), Penn Bioengineering Blog
- "Researchers Test New Imaging Method for First Time on Human Patients" - Article news story on radiologybusiness.com, [www.HealthDataManagement.com](http://www.healthdatamanagement.com), news.uark.edu, www.dotmed.com, www.auntminnie.com etc.
- "American Heart Association Heart Hero" – AHA websites, University of Arkansas Websites, November 1st, 2018,
- "U of A Student Named as 2018 Barry M. Goldwater Scholar", news.uark.edu April 17th, 2018
- "UA professors aid medical field", Democrat Gazette front page of Business Section and www.arkansasonline.com
- "New Biomedical Company Helps Train Clinicians and Test Medical Equipment", news.uark.edu April 16th, 2018.
- "UA researchers form new medical testing venture, receive help from Fort Smith company" talkbusiness.net, April 16th, 2018. As of April 19th, 2018: 325 views and 56 shares.
- "Two Biomedical Engineering Faculty Receive Grants from the American Heart Association" news.uark.edu April 5th, 2018
- "Increasing Numbers of Engineering Students Take Advantage of Semester Study Abroad Opportunities" news.uark.edu June 7th, 2017
- "Brazilian Students and Biomedical Engineering Professors Collaborate on Summer Research". news.uark.edu August 3rd, 2016
- "Happy, Healthy Heart Advice", KNWA-TV and Fox 24 News, February 10th, 2016
- "American Heart Awareness Month Heart Health Advice", www.nwahomepage.com, February 10th, 2016
- "Healthy Heart Tips for Valentine's Day", www.publicnow.com, February 10th, 2016
- "Healthy Heart Tips for Valentine's Day", news.uark.edu, February 9th, 2016
- "Alliance recruits 2 more scholars" Front page article of the Business Section of Northwest Arkansas Democrat Gazette and www.arkansasonline.com, Arkansas, August 14th, 2015
- "Research Alliance Brings Two Bright Minds To Arkansas" [UALR Public Radio](http://ualrpublicradio.com), News & Culture for Arkansas, August 13th, 2015
- "ARA Scholars Program Introduces Newest Researchers" Arkansas Business Online, August 13th, 2015
- "Research Alliance Brings Two Bright Minds To State" Talk Business & Politics, August 13th, 2015

- "Arkansas Research Alliance Scholars Join University of Arkansas Faculty" news.uark.edu, August 13th, 2015
- "ARA Scholars announced" *Article, thecabin.net*, August 13th, 2015
- "ARA Scholars Program Strengthened by New Research Leaders: Scholars drive innovation through research and discovery" *Article, aralliance.org*, August 13th, 2015
- "2 professors joining UA through alliance grant" *Article, thv11.com*, August 13th, 2015
- "Computer heart can save pigs" *Machine Magazine (online)*, Denmark, April 10th, 2013
- "Computer model can speed up heart research" *Natural and Technical Science (online)*, Aarhus University, April 10th, 2013
- "Danske ingeniørstuderende og forskere bag succesfuld teknik til hjerteoperationer", *Interview, ing.dk*, July 5th, 2012
- "Danske ingeniører bag banebrydende hjerteteknologi" *Interview, teknikogviden.dk*, June 8th, 2012
- "Danske ingeniører bag banebrydende hjerteteknologi" *Altinget / Forskning og Innovation*, June 6th, 2012
- "Danske ingeniører bag banebrydende hjerteteknologi" *Interview, iha.dk*, June 6th, 2012
- "New Danish Invention Limits Turbulence in the Aorta" *Article, ing.dk*, December 16th, 2011
- "Engineering College files for patent on heart canula" *Interview, iha.dk*, December 15th, 2011
- "Aarhus-delegation til international konference om sundhedsteknologi" *Interview, iha.dk*, June 14th, 2011
- "Helping Heart Patients" *GENIUS Issue #3*, November 2010
- "International Collaboration and Student Exchange Agreement Established" *iha.dk*, 10th September 2010
- "Researchers use Pigs" *TV2 Østjylland News*, 22nd February 2010
- "Århus-ingeniører hjælper hjertepatienter" ("Aarhus-Engineers help heart patients") *holme-net.dk*,
nyheder.tdconline.dk, *nyhederne.org*, *news.dk*, *jp.dk*, *iha.dk* 31st August 2009
- "Engineers Strengthen Weak Hearts" *Århus Stiftstidende*, 6th July 2009
- "Århus-studerende vinder pris for hjerteteknologi" *Jyllandsposten*, 6th July 2009
- "Big price to Århus-students for landmark heart technology" *presswire.dk*, 6th July 2009
- "Ingeniørstuderende fra Århus hjælper hjerter" *Lokalavisen/Århus*, 6th July 2009
- "Stor pris til Århus-studerende for skelsættende hjerteteknologi" *iha.dk*, 6th July 2009
- "Heart Valve Research" *NEXT no. 6 Conference, Innovation Lab, Aarhus, Denmark*, April 2-3 2009
- "Ny hjertekanyale reducerer blodpropper" *Ingeniøren*, Feb 27th, 2009
- "Ny hjertekanyale giver færre blodpropper" www.hjerteforeningen.dk, Feb 2nd, 2009
- "To unge får pris for kanyale" *Århus Stiftstidende*, Feb. 1st, 2009, Pg. 16
- "Danish discovery could help cardiac patients" *Biotech Scandinavia*, www.idg.se, Dec. 1st, 2009
- "Studerende får pris for hjertekanyale" www.tv2oj.dk, January 27th, 2009
- "Maskiningeniørstuderende udvikler hjertekanyale" www.jernindustri.dk, January 27th, 2009
- "Studerende får pris for kanyale" www.stiften.dk, January 27th, 2009
- "Studerende bag banebrydende hjerteteknologi" www.jp.dk, January 27th, 2009
- "Ny dansk hjertekanyale skal nedsætte risiko for blodpropper" www.dagensmedicin.dk, January 27th 2009
- "Studerende vandt pris for banebrydende hjertekanyale" www.iha.dk, January 27th 2009
- "Studerende opfinder banebrydende hjertekanyale" www.iha.dk, January 22nd 2009
- "Verdenskendt hjertemediciner besøger Ingeniørhøjskolen" www.iha.dk, January 16th 2009
- "Ingeniører og læger udvikler hjertering" *Annual Report, Engineering College of Aarhus*, 2008, p 16
- "Studerende bag banebrydende hjerteteknologi" *Jyllandsposten* s. 7, *Urban* s. 8, January 28th, 2008
- "The Danish Society of Engineers annual Honorary Award of Excellence, May 2008" *Featured in Århus Stiftstidende* (May 7th 2008 p. 22), *TV2 Østjylland*, Aarhus Universitet (www.au.dk), *Dagens Medicin*, www.ida.dk, Aarhus University Hospital (www.sundhed.dk), *Engineering*

College of Aarhus (www.iha.dk), Nordjyske Stiftstidende (May 7th 2008 p. 12), Fyns Amts Avis, Fredericia Dagblad, Vejle Amts Folkeblad, Horsens Folkeblad, Stiften.dk, The Danish Heart Foundation (www.hjerteforeningen.dk)

- "Help to Heart Patients" *Frederiksborg Amts Newspaper*, October 17th 2008, 1st section, pg. 5
- "New Research Helps Heart Patients" *Ritzaus Bureau* October 16th, 2008
- "Breakthrough in Heart Valve Defect Surgery Research" October 16th, 2008, TV2 News
- "Heart valve patients can look forward to better treatment" October 2008, *Denmarks Radio News*
- "New research can improve the treatment for patients with leaking mitral heart valves" October 2008, www.sundhed.dk
- "New Research Helps Heart Patients" October 18th 2008, *Aarhus Stiftstidende*, section 1, page 5
- "Ny forskning til hjælp for hjertepatienter" October 20th 2008, *Nordjyske Stiftstidende*, page 26
- "Intelligent hjertering med lang levetid" *Hjertenyt*, (Danish Heart Association Magazine), Nov. '08 pg. 12-13
- "Ny Intelligent Hjertering" P4 *Danmarks Radio*, *Radioavisen*, 3:00PM, December 15th, 2008
- "Aarhus Engineer and Skejby Professor Invents New Heart Ring" www.jp.dk, December 15th, 2008
- "Engineers & Medical Doctors Invents Intelligent Heart Ring" www.iha.dk, December 15th, 2008
- "Engineers & Medical Doctors Invents Intelligent Heart Ring" www.dr.dk, December 15th, 2008
- "Ingeniører og læger udvikler intelligent hjertering" Radio Interview (in Danish): <http://jp.dk/radio/>, Length: 5min 45sec., December 15th, 2008
- "Flexible Rings Improves Lives for Heart Patients" *Aarhus Stiftstidende*, Friday November 28th, 2008, p. 21
- "Mitral Valve Force Balance: The Left Ventricular Tug of War" Publication of PhD defense, *Jyllandsposten*, Friday November 28th, 2008, p. 20
- "Den intelligente hjertering på størrelse med en køkkenelastik" *24 Timer*, December 16th, 2008, pg. 22
- "Perspectives in Collaboration between Doctors and Engineers, July 2006" *Featured in TV2 News, Jyllandsposten, Politiken, Hjertenyt, (Danish Heart Association), Urban Newspaper, IHA News, etc.*
- "Eyes for Machines" *Interview in J&M/Industry-Technique*, Week 32, 2003, page 30

Academic Courses Taught and Developed

- Cardiovascular Biomechanics (graduate level)
- Blood Pressure and Flow Measurement (PhD Level, including course development)
- Hemodynamics (BS, MS, and PhD Level, including course development)
- Biofluids (BS, MS, and PhD Level, including course development)
- Cardiovascular Modelling (MS, and PhD Level, including course development)
- Biomechanics (BS and MS Level, including course development)
- Physics (BS Level)
- Medical Instrumentation (BS Level)
- Medical Research and Presentation Techniques (BS and MS Level, including course development)

Industry Customer Education Courses Taught and Developed

- Advanced Graphical Programming in LabVIEW
- Virtual Instrumentation, Data Acquisition (DAQ)
- Signal Conditioning
- Machine Vision & Image Processing (including course development)
- Motion Control
- System Identification and Simulation (including course development)
- Control Design (including course development)
- LabVIEW TestStand

Professional Society Memberships

- Biomedical Engineering Society (BMES)
- The Danish Heart Foundation
- The Danish Society of Engineers (IDA)
- American Heart Association (AHA)
- Institute of Electrical and Electronics Engineers (IEEE)
- Engineering in Medicine and Biology Society (EMBS)
- U S Association for Computational Mechanics (USACM)
- Danish Society for Biomedical Engineering (DMTS)
- Cardiothoracic Surgery Network (CTSNet)
- Danish Cardiovascular Research Academy (DaCRA)
- The Society for Heart Valve Disease (SHVD)
- The Scandinavian Society for Research in Cardiothoracic Surgery (SSRCTS)
- International Federation for Medical and Biological Engineering (IFMBE) - *affiliated*
- European Alliance for Medical and Biological Engineering & Science (EAMBES) - *affiliated*

**Case / Report / Deposition / Trial / Court Appearances Summary
Morten Jensen, Jexpert LLC**

Patent Litigation Cases, Submitted Declarations / testify in Depositions / Court Appearances (all within the last 5 years):

Topics covered: Infringement, Invalidity, Improper Inventorship, Obviousness type Double Patenting

Boston Scientific Corp. v Micro-Tech Endoscopy USA - C.A. No. 18-1869-CFC/CJB

- In the United States District Court for the District of Delaware (invalidity declarations and deposition).
Supporting: Defendant Micro-Tech Endoscopy USA. Multiple patents. Case **ongoing**, expecting trial Fall 2021.

Edwards Lifesciences Corp. and Edwards Lifesciences LLC v Abbott Cardiovascular Systems, Inc. and Evalve, Inc. - C.A. No. 19-149 (MN) - In the United States District Court for the District of Delaware (non-infringement and invalidity declarations and depositions).

Supporting: Defendant Edwards Lifesciences Corp. and Edwards Lifesciences LLC. Case **Successfully Settled**

Inter Partes Review of US Patent No. 8,956,371 B2 - Attorney Docket No. 68890-286961 –
Cardiovascular Systems Inc. v Shockwave Medical Inc. (declaration supporting petition and deposition)
Supporting: Petitioner Cardiovascular Systems Inc.
IPR Instituted, *PTAB's Final decision: **Success: Determining Some Challenged Claims Unpatentable***

Inter Partes Review of US Patent No. 8,728,091 B2 - Attorney Docket No. 68890-286960 –
Cardiovascular Systems Inc. v Shockwave Medical Inc. (declaration supporting petition and deposition)
Supporting: Petitioner Cardiovascular Systems Inc.
IPR Instituted, *PTAB's Final decision: **Success: Determining All Challenged Claims Unpatentable***

Inter Partes Review of US Patent No. 9,642,673 B2 - Attorney Docket No. 68890-286962 –
Cardiovascular Systems Inc. v Shockwave Medical Inc. (declaration supporting petition and deposition)
Supporting: Petitioner Cardiovascular Systems Inc.
IPR Instituted, *PTAB's Final decision: **Success: Determining All Challenged Claims Unpatentable***

Composite Resources, Inc. v. Combat Medical Systems, LLC and Alphapointe No. 3:17-cv-00072-MOC-DSC - In the United States District Court for the Western District of North Carolina (Claim Constructions opinions and deposition).
Supporting: Defendant Combat Medical Systems, LLC and Alphapointe. Case **Successfully Settled**.

Inter Partes Review of US Patent Nos. Patent 9,937,097; 9,849,061; 9,976,851 / Cases IPR2019-01302, IPR2020-00007, IPR2019-01444: EIS GMBH (Petitioner) v. NOVOLUTO GMBH (Patent Owner). (declarations supporting patent owner)
Supporting: Defendant, Patent Owner NOVOLUTO GMBH
*Institution initially Denied by PTAB board (Success). Final decision on '097 patent **successful**, '061 and '851 decisions to be made during Summer 2021*

Inter Partes Review of US Patent No. 9,089,362 B2 - Attorney Docket No. 68890-280125 –
Cardiovascular Systems Inc. v Cardio Flow, Inc. (declaration supporting petition)
Supporting: Petitioner Cardiovascular Systems Inc. Case **on hold**

Inter Partes Review of US Patent No. 9,788,853 B2 - Cardiovascular Systems Inc. v Cardio Flow, Inc. (declaration supporting petition)
Supporting: Petitioner Cardiovascular Systems Inc. Case **on hold**

Submitted Reports / Consulting Services / Depositions / Court Appearances provided (all within the last 5 years):

Report Title: “**Memorandum of Implantable Cardioverter Defibrillator (ICD) interrogation at Medtronic’s Rice Creek East facility, Fridley, Minnesota.**”

Defendant: Medtronic

Report submitted to Colling Gilbert Wright & Carter, LLC in Orlando, Florida.

Supporting Plaintiff. Case **settlement** discussions ongoing.

Report Title: “**Inspection of Cyberonics VNS Therapy System**”

Case No. 2017-80166 in the District Court of Harris County, Texas

Defendant: Cyberonics, Inc.; Livanova, Inc.

Report submitted to Harrison Davis Steakley Morrison, P.C. in Waco, Texas.

Supporting Plaintiff. Case **settlement** discussions ongoing.

Title: “**ON-Q Pain Relief System Failure**”

Case No. 04CV-18-3435, C19WD06 Circuit Court of Benton County, Arkansas, Civil Division

Defendant: Taylor Plastic Surgery Institute

Report submitted to Nolan, Caddell & Reynolds, PA, Fort Smith, Arkansas

Supporting: Plaintiff. Case status: **On hold** / unknown.

Report Title: “**Evaluation of [redacted] Injury from Piggly Wiggly Entry Sliding Door**”

Case Numbers: NO. 40CV-2018-32

Submitted to Baker, Schulze, Murphy Law Firm in Little Rock, Arkansas. Report was served to Defendants Houchens Food Group Inc. D/B/A; Piggly Wiggly and Food Giant Supermarkets, Inc; Food Giant Supermarkets, Inc; Automatic Door Sales & Service, Inc

Supporting Plaintiff, **case settled**.

Report Title: “**Evaluation of [redacted] Injury from Moving a Heavy Surgical Table with Defective Wheels**”

Case Number: 02-CV-2017-900434.00, Civil Action No.: CV-2017-900434

Submitted to Andy Citrin Injury Attorneys in Daphne, Alabama. Report was served to Defendant Gulf Health Hospitals, Inc. D/B/A * Thomas Hospital. Deposition is being scheduled.

Supporting Plaintiff, **case settled**.

Title: [No Report Submitted] – Inspected device on-site with Shook, Hardy & Bacon L.L.P.

Plaintiff: [Redacted]

Defendants: University of Washington Medical Center; Stryker Corporation

Case No.: 18-2-10531-5 SEA

Supporting: Defendants. Case status: **On hold** / unknown.

Title “Regarding: **Evaluation of Sorin / LivaNova Heat Exchanger System**”.

Has been served at the following cases by Saxton & Stump Lancaster, PA:

Karst v. Sorin Group Deutschland, GmbH, et al.

Portz v. Sorin Group Deutschland, GmbH, et al.

Sanger v. Sorin Group Deutschland, GmbH, et al.

Palladino v. Sorin Group Deutschland, GmbH, et al.

Inners v. Sorin Group Deutschland, GmbH, et al.

Sweitzer v. Sorin Group Deutschland, GmbH, et al.

Smith v. Sorin Group Deutschland, GmbH, et al.

v. Sorin Group Deutschland, GmbH, et al.

Supporting: Saxton & Stump is representing York Hospital and WellSpan Health in York, Pennsylvania.

Plaintiff are both York Hospital and Sorin Group. Some of the cases **successfully** settled, others are on hold.