

新視野  
藝術節

NEW VISION  
ARTS FESTIVAL  
19.10-18.11.2018

丹麥 | Denmark  
音與樂之間  
Between Music

亞洲首演  
ASIA  
PREMIERE

# 馭水之音 AQUASONIC



Co-produced by

AARHUS  
—2017—  
EUROPEAN CAPITAL  
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CITY OF AARHUS

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丹麥 | Denmark

音與樂之間 Between Music

# 駁水之音

## AQUASONIC

**26-27.10** 五 Fri - 六 Sat 8pm

**28.10** 日 Sun 3pm

沙田大會堂演奏廳

Sha Tin Town Hall Auditorium

節目全長約1小時，不設中場休息

The programme runs for approximately 1 hour without intermission

10月27日設演後藝人談，歡迎觀眾留步參與

There will be a meet-the-artist session after the 27 October performance

All are welcome to attend

# 音與樂之間 Between Music

製作跨越多個範疇，集音樂、表演、視藝與科技於一身。成員通曉多種美學、技巧和藝術類型，卻認為它們之間的浮游空間最有潛力。

團隊上下好奇心滿滿，渴望在藝術、技術與科學上拉闊人們的體驗，透過獨特音聲及超現實意象，探索人類世界運作背後的動力、機制和謎團。

「音與樂之間」的成員來自世界各地不同界別，包括音樂家、物理學家、工程師、樂器工匠、神經科學家等。他們互相啟發，以保持作品的質素及完整性。

Between Music create and produce innovative concerts in a hybrid of music, live performance, visual arts and new technology. The group masters a huge range of aesthetics, skills and genres, but finds the most potential in the fluctuating spaces between them.

Driven by an endless curiosity and desire to push the boundaries of the human experience – artistically, technically, scientifically – their work explores the driving forces, mechanisms and mysteries of human nature, through a distinctive sound and rich imagery, often with surreal undertones.

Between Music's creative output involves an international multidisciplinary network of musicians, physicists, engineers, instrument makers, neuroscientists and others, who inspire and ensure the high quality and integrity that characterises their artistic work.

## 創作團隊 / 表演者 Creative Team/Performers

藝術總監 / 作曲 / 主唱 / 水壓風琴  
Artistic Director / Composer / Vocals / Hydraulophone

萊拉·斯科曼德 Laila Skovmand

創意總監 / 小提琴 / 水晶琴  
Innovation Director / Violin / Crystallophone

羅伯特·卡爾森 Robert Karlsson

主唱 / 手搖六弦琴 Vocals / Rotacorda

南娜·貝卓 Nanna Bech

敲擊 Percussion

迪亞·琪積遜 Dea Marie Kjeldsen

鼓 Drums

莫頓·波爾森 Morten Poulsen

## 製作團隊 Production Team

音效設計 Sound Designer

安德斯·波爾 Anders Boll

音效設計及工程 Sound Designer and Sound Engineer

羅馬·哥馬爾 Roman Komar

燈光設計 Lighting Designer

阿道斯頓·史提芬遜 Adalsteinn Stefansson

燈光設計及工程 Lighting Designer and Light Engineer

溫·凱根·杜拿斯 Rune Haiken Tønnes

舞台監督 Stage Manager

克勞斯·馬德森 Claus Madsen

巡演監督 International Manager

西格里德·阿克維克 Sigrid Aakvik

《馭水之音》先由 FuturePerfect production 製作  
AquaSonic was originally produced by FuturePerfect production

視覺監督 Visual Supervisor

基斯頓·特荷馬  
Kirsten Dehlholm

音樂總監 Musical Supervisor

西蒙·史迪恩·安特遜  
Simon Steen-Andersen

聲學監督 Acoustic Supervisors

普雷斯頓·威爾遜教授、亨歷·溫特爾  
Prof. Preston Wilson and Henrik Winther



## 藝術總監的話

### 人的聲音 在水中尋

一切的關鍵在於求知——試圖打破我們自以為是的，顛覆世界，開闢新視野。

《馭水之音》的誕生源於好奇：「我們人類為何物」——我們的起源和存在、發明、適應、生存和進化的能力；以及「我們如何與周遭建立關係」。《馭水之音》來自懸浮在不同領域之間的問題，包括既定的體裁之間、藝術和科學之間、舊有的舒適區與新的可能之間。這些「之間」容不下二元的狹隘思維，鼓吹多元、好奇和求知。

「聲音」一直是我用來通向「之間」的大門。這個不經過濾又直接的媒介，讓我接觸超越文字、超越知性、超越已知的領域。我花了十五年時間以歌唱、絮語、尖叫、低吟和大叫的方式闖進藝術，然而某刻，我發現自己正在製造一個巨大的障礙，令我幾乎發不出聲音——那就是在水底唱歌。

作為初步實驗，我把頭探進大碗裡，用避孕套包著麥克風。儘管佈局簡陋，我卻發現了一種由心底發出的聲音、一種表意方式。第一次整個人在水底唱歌時，我就像走入未知的世界，卻出奇地有著似曾相識的震撼。在水中張開嘴巴，讓水流進喉嚨的最深處，然後發聲，感覺竟是自然不過。完全沉浸在水中時，沒有一絲佯裝，沒有任何過渡——只有強烈的存在感和歸屬感。恐懼同時充斥著我，生怕緊閉的喉頭一鬆，水就會湧入肺部。

作為液態元素，水有著無限的可塑性，不斷挑戰理性及線性思維；《馭水之音》讓我們在水中創作。若停留在概念，不可能孕育實實在在的作品，我們必須與水直接接觸，過程中擁抱各種感覺：著迷、恐懼、孤獨，享受無法駕馭它的無力感。

十年生成的《馭水之音》本身已是一趟進化的旅程，也是持續探索的征途上的第一步，而這趟征途走到最後，猶如走過了人類進化的四部曲——我們的起源、本能、情感和知性。

**萊拉·斯科曼德**  
藝術總監 / 作曲 / 主唱 / 水壓風琴



# Artistic Director's Note

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## Searching for the Human Voice at the bottom of the sea

To me it's always been about the ability to wonder. To seek out opportunities that take us beyond or beneath what we think we know, to turn the world upside down and offer new perspectives.

*AquaSonic* was created out of curiosity about who we are as human beings – our origin, our existence, our ability to invent, adapt, survive and evolve as species – and how we relate to our surroundings. It was shaped by questions emerging from a space in-between; between genres, between art and science, between the old comfort zone and possible new answers. A space where dualistic thinking falls short, in favour of complexity, curiosity and wonder.

My door into this has always been through the voice. As an unfiltered and direct tool to get in touch with things that lie beyond words, beyond intellect, beyond known structures. For 15 years I sang, whispered, screamed, hummed and yelled my way into art. And at a certain point I found myself creating an obstruction so big, that I could hardly make a sound – to sing underwater.

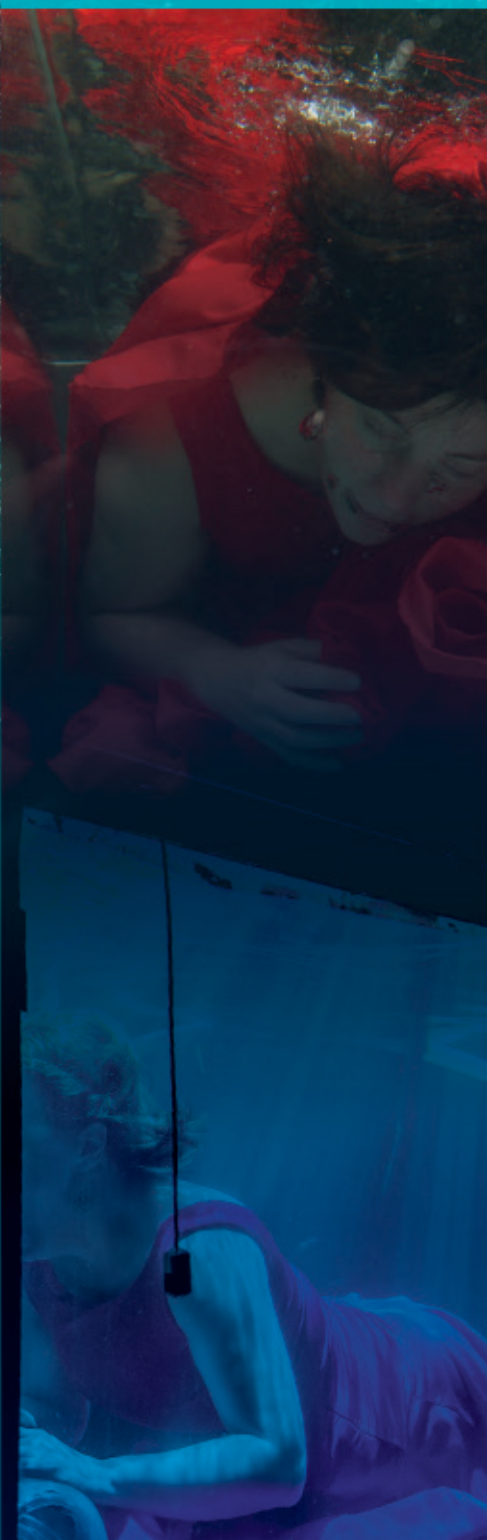
I did my first try-outs with my head in a bowl and a microphone wrapped in a condom. In spite of the primitive set-up I found something there – a sound, an expression – that resonated deep within. When I first tried singing entirely underwater, I had a mind-blowing experience of entering a completely unknown world – that was somehow also strangely familiar. It felt like the most natural thing to open my mouth and let the water flow as far down the throat as possible – and then to make a sound. When immersed completely in water there is no pretending, no filter – just a strong sense of being and belonging. But at the same time I was overwhelmed by fear of that same element; fear that the closure of the throat should suddenly give in, so water would fill my lungs.

In *AquaSonic* we work in a boundless, fluid element that constantly challenges any rational, linear way of thinking. *AquaSonic* could not have come to life on a conceptual basis alone. It had to be created in the direct encounter with the water – in the fascination, fear, solitude, beauty and impossibility of truly engaging with this element.

*AquaSonic* was created over the course of a decade and is an evolutionary journey in itself. It is also the first step of an ongoing exploration that will eventually manifest as a Quadrology about Human Evolution; our origins, our instincts, emotions and intellect.

**Laila Skovmand**

**Artistic Director / Composer / Vocals / Hydraulophone**





# 創意總監的話

## 超越極限

說實話，我從來都不大喜歡水。我不愛游泳，即使泡浴也有幽閉的感覺。但當我獲邀參與這個水底音樂會時，好奇心戰勝了不安。

發掘全新的音樂元素是個驚喜不斷又考驗重重的過程，探索新領域時接觸到不同範疇的知識，令我獲益最多。《馭水之音》的創作過程需要各種專門知識，包括電子工程、樂器製作、生物科學及許多其他範疇。這些專家畢生都在自己的領域上力臻完美，與我們攜手創造了高度專門的樂器和演奏技巧。

創作過程涉及其他範疇，則是我力所能及的。我學過金工、玻璃製作、水管工程、電工、加熱系統；接觸過不同種類的水、水底聲學等。熾熱的好奇心和一手一腳工作的喜悅，驅使我不斷由零開始創作，學習新詞彙。

我最喜歡的新詞彙大概是「防蝕消耗陽極」。把兩種不同的金屬放入水中，總有一種較強、一種較弱。較弱的卑金屬會有腐蝕反應，而較強的貴金屬則不會，這關乎金屬的電位值高低。也就是說，把銀和銅放入水中，銅會腐蝕；但把金和銀放入水中，銀就會腐蝕。因此，為避免某種金屬在水中腐蝕，可把另一種較弱的放入水中，作為防蝕消耗陽極。這個有著活生生反應、會改變既定互動的概念，正與《馭水之音》完美契合。

多年來不少人在問：在水底創作音樂不是複雜得有點荒謬嗎？的確是。例如項目開展初期，我們想用玻璃碗並尋遍二手店，最後找到五個合適的，在水底音色清純而準確。問題是，它們的音色每次都不盡相同。我們試過把碗放在墊子上、焊接金屬支架或在碗上鑽洞把它掛起來，但無一可行。最後我們發現問題原來出自氣泡！往水箱注水時，裡面會有很多空氣，小氣泡鋪滿四周，以致聲音暗啞。現在每次演出前，我們必須確保水箱沒有空氣。

除此以外，我們還遇上很多障礙。我奏的是水晶琴。初到手時，我們已在敲擊樂專用的水箱裡試過所有玻璃碗，更找到一套音色良好又準確的，但翌日在我的水箱裡試奏卻走音了！怎會這樣？莫非是因為我的正方形水箱不是長方形，就影響了音準？我們不得不再為樂器調音，過程嚴謹，須找出在水底準確的音高，不但要用鑽石打磨器批削玻璃碗，還需要精密的計算。某天我重組碗的次序時，偶然發現只要改變它們之間的距離便可以調音，打磨工夫都白花了！現在，水晶琴的音準無誤。不過我還沒在長方形的水箱測試過，不知道水箱的形狀會否影響音準。

《馭水之音》是十年奮鬥的成果，其間經過種種困難、研究、試驗和新發現，還有進進退退的過程，剛開始時聲音更是不堪入耳。我為何要繼續呢？或許因為這個演出讓我同時做到兩樣我最喜愛的事：玩音樂、憑著創意解決問題；我畫圖樣製造水箱，改良樂器，並學習如何演奏。

《馭水之音》要我們以不利發聲的媒介創作音樂。它真的超越了很多極限——不只是水底聲學或音聲，還有自己的局限。今天，我在水箱裡玩樂器不但沒有不適，反而如魚得水。

羅伯特·卡爾森  
創意總監 / 小提琴 / 水晶琴

# Innovation Director's Note

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## Pushing the limits

To be honest, I was never very fond of water. I didn't like swimming and even bathing in a bathtub could be a claustrophobic experience. But when I was asked to join this project and play an instrument underwater my curiosity conquered my discomfort.

Exploring a whole new element musically is a continuously surprising and challenging process. What I find most rewarding is all the knowledge from diverse fields that circulates when entering new territory. Parts of the creation of *AquaSonic* required specific expertise from electro engineers, instrument builders, bio-scientists and many others. People who have spent a lifetime developing and perfecting their skills, and with whom we've developed our highly specialised instruments and techniques.

Other areas of the work were within my own reach. I learned about metal work, glass work, plumbing, electricity, heating systems, different kinds of water, acoustics in water and much more. Always driven by an unwavering curiosity and joy in working with my own hands, creating something from scratch, learning new vocabularies.

My favourite new word is probably Sacrificial Anode. When you put two different kinds of metal in water there will always be one stronger and one weaker. The less noble will react with corrosion, while the stronger will not react. It's a matter of how much electrochemical potentials they have. So if I put one piece of silver and one piece of steel in water, the steel would corrode. But if I put a piece of gold and a piece of silver, the silver would react. So to avoid corrosion for a certain metal, you pair it with a weaker metal in the water to act as a Sacrificial Anode. The notion of metal as a living material that reacts, changes and interacts is for me a beautiful image that fits this project perfectly.

Over the years people have asked, isn't it ridiculously complicated to make music underwater? Yes. It is. At an early stage of the project, for example, we wanted to work with glass bowls. We searched every second-hand store we could find, and eventually found five that had a clean sound underwater and were in pitch. The problem was: they didn't sound the same every time. We tried placing them on pads, we welded a metal stand, drilled holes in them so they would hang. Nothing worked. Until we found out that the issue was... bubbles! When you fill a tank with fresh water it contains a lot of air. This causes tiny air bubbles that cover everything and dampen the sound. So now of course we make sure to rid the tanks of air before we perform.

And there were many other obstacles along the way. I play a glass instrument called Crystallophone. When we first got it we tested all the glass bowls inside our percussion tank. We found a set that sounded good and was in pitch. But the following day when we tried them in my tank they were suddenly out of tune! How could this be? Did the square shape of my tank really change the pitch from that of the rectangular tank? Anyway, we had to tune the instrument, which was a meticulous process involving a wet diamond grinder and a lot of math to find the right pitch underwater. Then by chance, one day I was rearranging the order of the bowls and I discovered that I could actually tune the instrument just by changing the distance between the bowls. All this grinding for nothing! Now it works fine and is in tune. But I haven't tried it in the rectangular tank since, so I still don't know if the shape of the tank has an impact on the pitch.

*AquaSonic* is the culmination of 10 years of challenges, research, tests, new discoveries and small steps – both forward and backward. And in the beginning it sounded like crap too. So why did I keep on? I guess *AquaSonic* offered me a chance to combine the two things I love the most – playing music and building and inventing creative solutions; drawing the tanks before getting them built, improving the instruments and learning how to play them.

In *AquaSonic* we meet the challenge of creating music in a medium that, technically speaking, doesn't even support sound. It has definitely pushed a lot of limits – not only of underwater acoustics and sonic possibilities, but on a personal level as well. Nowadays when I sit at the bottom of my tank, playing, there is no discomfort. I feel completely safe and in my right element.

**Robert Karlsson**

Innovation Director / Violin / Crystallophone





# 萊拉·斯科曼德

藝術總監 / 作曲 / 主唱 / 水壓風琴

萊拉畢業於丹麥阿胡斯皇家音樂學院及法國洛伊·赫特藝術中心，成功結合傳統歌唱技巧與實驗風格強烈的洛伊·赫特音聲。萊拉的音樂建基於實驗搖滾，近年卻一直研習古典音樂作曲。她不但熱衷於不同音樂類型，更善用它們的優勢，發展出獨一無二的創作意念，如《馭水之音》。

作為「音與樂之間」的藝術總監，萊拉現正創作以人類進化史為靈感的四部曲，首部曲即《馭水之音》。她連同深海潛水員、樂器工匠和科學家進行了無數實驗，研發全新水底樂器和發聲技巧，試圖開拓聲音的可能性。

經過十年努力，《馭水之音》於 2016 年在荷蘭首演，大受歡迎，並獲邀到世界各地演出。萊拉同時為如歌 2、格朗傑舞團等國際知名的劇團和舞團作曲。



## Laila Skovmand

Artistic Director / Composer / Vocals / Hydraulophone

A performative composer and singer, Laila Skovmand graduated from the Royal Academy of Music, Aarhus (Denmark) and Centre Artistique International Roy Hart (France), where she developed her unique combination of a more traditional way of singing with the expressive and experimental Roy Hart voice work. Her own music is based on experimental rock, but over the last few years she has been studying classical music composition. Her passion for investigating, learning and using the strengths from different genres reflects in the constant evolving of original ideas, such as the underwater project *AquaSonic*.

As the Artistic Director of Between Music, she is now writing a quadrology inspired by human evolution. Its first part is *AquaSonic*. The artists have conducted countless experiments in collaboration with deep-sea divers, instrument makers and scientists to develop entirely new, highly specialised subaqueous instruments. They have also perfected a distinctive vocal technique for underwater singing. The result is a concert experience completely out of the ordinary, an exciting glance into the future possibilities of sound.

After 10 years of work, *AquaSonic* had its world premiere in the Netherlands in 2016 and is now requested all over the world. Skovmand also composes for internationally known theatre and dance companies including Cantabile 2 and Granhøj Dans.





# 羅伯特·卡爾森

創意總監 / 小提琴 / 水晶琴

羅伯特畢業於丹麥阿胡斯皇家音樂學院，精通多種音樂類型，如古典、前衛搖滾和簡約主義劇場音樂等。羅伯特演奏的中提琴極具辨識度，在丹麥藝壇建立了獨特地位。除了作為「音與樂之間」創意總監，他也是搖滾三重奏樂隊 SheppardKarlsson 的成員，經常參與演出暗黑聖歌。

羅伯特以自由人身份為劇團、交響樂團、合奏團演奏，並經常獲邀到錄音室演奏，參與灌錄超過二十五張唱片。他與格朗傑舞團一同於歐洲、中國、秘魯和加拿大巡演，三部製作已演出超過五百場，其中包括 2013 年在加拿大蒙特利爾公演三十二場的《與我舞到底（開／關了愛）》。

自 2016 年舉行世界首演後，《馭水之音》迅即風靡全球。其片段不但在社交媒體錄得超過三千萬次點擊瀏覽，更在歐洲、澳洲和亞洲巡演。

© Jens Peter Engedal, Jamie Simpson @ Herald and Times Group

## Robert Karlsson

Innovation Director / Violin / Crystallophone

Graduated from the Royal Academy of Music, Aarhus, Robert Karlsson works with such different genres as classical music, avant-garde rock and minimalistic theatre music. He has created his own niche and sound in the Danish scene as a multi-violist. Besides being the head of Between Music, he also plays in the rock trio SheppardKarlsson (dark hymns).

As a freelancer Karlsson plays in theatres, symphony orchestras, ensembles and is used to studio recording. He has contributed to over 25 CDs.

With the contemporary dance company Granhøj Dans he has been touring Europe, China, Peru and Canada in three different productions, with over 500 performances in total. To be mentioned are 32 performances of *Dance Me to the End ON/OFF Love* in Montréal, Canada in 2013.

*AquaSonic* has since its 2016 world premiere become a viral phenomenon with over 30 million views in social media, touring Europe, Australia and Asia.



## 南娜·貝卓

主唱 / 手搖六弦琴

南娜修畢日德蘭音樂學院作曲碩士、節奏音樂與樂章演唱學士，從事作曲、獨奏及合奏。2018 年春季推出首張專輯；擔任音樂會 Svæveflyverpilot 的作曲家及總監，該項目獲阿胡斯音樂週資助。

南娜自 2012 年起擔任「音與樂之間」的歌手及表演者。她是《Aarhus simpelthen》的主唱者，作品於 2017 年由二人組合 Apperaat 為「歐洲文化之都阿胡斯 2017」創作。她也是電子即興二人組合 Morten Klit Karma 的主音。

「在水中唱歌完全是另一回事。在水裡會呼出氣泡，擴音器發出巨大聲浪……最重要是放鬆，慢慢將泡泡呼出，動作越慢，聲音越長。」

"Singing under the water is really something else than singing above. When you sing close to the underwater mic and you make a bubble, it will be extremely loud... The best thing is we need to relax and to very slowly move the bubble out. So the slower you can move the bubble, the longer tone you can make."

## Nanna Bech

Vocals / Rotacorda

Nanna Bech holds an MA in song writing and a BA in singing from RMB (Rhythmic Music and Movement) at Jutland's Musical Conservatorium. She is a performing musician and songwriter and performs both solo as well as with a band. Her debut album was released in spring, 2018. She is the composer and director of the concert-performance Svæveflyverpilot, funded by the Aarhus Festival Week (Aarhus Festuge).

Bech has been a singer and performer for Between Music since 2012. She is the singer of *Aarhus simpelthen*, written by the duo Apperaat for Aarhus 2017 – European Culture Capital. She is also vocalist of the electronic improvisation duo Morten Klit Karma.



「我打鼓多年，掌握了很多運棒的技巧。這裡，所有技巧都不管用，我要構思全新的鼓棒。」

"I have been playing drums for many years, so I got lots of techniques when I play with my drumsticks. But here, none of those techniques work, so I have to figure out some new type of drumsticks as well."

## 莫頓·波爾森

### 鼓

莫頓是來自丹麥的鼓手、作曲家及聲音藝術家，以各種形式實踐自己對聲音的興趣，致力探尋人與聲音的關係。他自 2014 年起便以自己的錄音品牌 Outrovaert 推出多個項目，包括以互聯網為本的音樂作品《暗黑網絡》。莫頓一直以《DADADOIT》系列和《無題》挑戰傳統音樂會形式，並創作了《奧紹熙神殿》及《ÉT》等多聲道聲音裝置。他亦為當代舞作品作曲，並與即興合奏團巡迴多國。他曾親自設計電子樂器，藉此登上《The Wire Tapper》地下音樂專輯系列，並為影視製作提供四聲道作品。

© Charlotte de Miranda, Kaita Engel

## Morten Poulsen

### Drums

Morten Poulsen is a Danish drummer, composer and sound artist, who, through a wide range of formats, has pursued his interest in sounds and our relations to them. Since 2014, Morten has released several projects under his own record label Outrovaert, including the internet-based music release *Dark Web*. He continues to challenge the traditional concert-formats in the *DADADOIT* series and *Untitled*. He has also created multichannel sound installations like *Temple for Oxóssi* and *ÉT*, composed music for contemporary dance productions, and toured internationally with improvisational ensembles. He has been featured on *The Wire Tapper* with electronic instruments of his own design and composed quadrophonic works for audiovisual performances.

「在水底奏樂的要領是精準，只有這樣，音色才美。處理磬的時候，我們要仔細考量該把它放在水缸哪個位置。」

"My main focus when I'm playing underwater is to be precise. You really need to be precise to make it sound good. To make these singing bowls sound good, we had to figure out where to put them in the tank."

## 迪亞·琪積遜

### 敲擊

迪亞在 2017 年推出首張專輯，並於丹麥舉辦音樂會。2013 年，她以敲擊樂手身份與現代大型樂隊「近似生命體驗」在北歐國家巡演，她也聯同來自不同宗教背景的全女班樂團「燦爛桃源」巡迴演出。自 2010 年起，迪亞與多個流行、薩爾薩、民歌及即興音樂樂團合作，演出各式音樂會。她於 2015 年開始參與《馭水之音》的演出。

迪亞持有丹麥阿胡斯皇家音樂學院碩士學位，現正修讀音樂研究院課程。她主要以敲擊樂器表演，在學期間曾於畿內亞和古巴夏灣拿研習敲擊樂，並從學於奧斯卡·華迪斯等名家。

© Jens Peter Egeblad, Charlotta de Miraldis



## Dea Marie Kjeldsen

### Percussion

Dea Marie Kjeldsen is the percussionist, singer, composer, leader of project and producer in her own project *Dea Marie*, releasing the first album in 2017 and staging concerts in Denmark. In 2013 she was touring the Nordic countries as a percussionist with the modern bigband, Koskelainen/Andreasen Near Life Experience. Also, she has been touring with Radiant Arcadia, an all-female band from different religious backgrounds. Since 2010 she has been playing a large number of concerts with different bands from pop, salsa, folk to improvised music. Since 2015 she has become a part of *AquaSonic* as musician and performer.

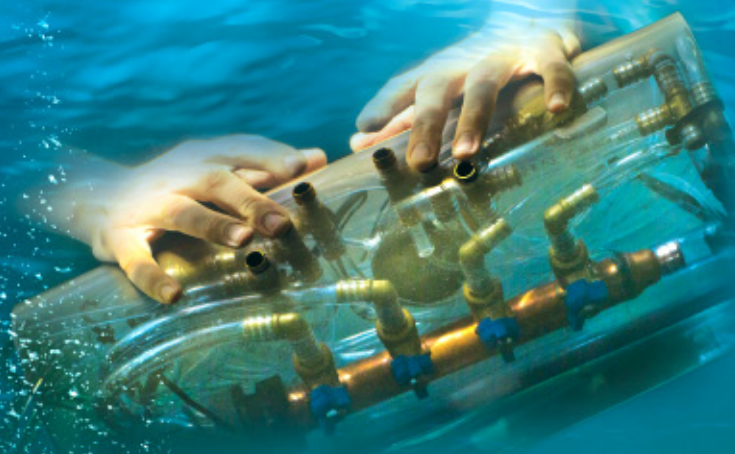
Kjeldsen holds an MA from the Royal Academy of Music, Aarhus. She is currently pursuing her postgraduate studies in music. Her main instrument is percussion. During her school years, she studied percussion in Guinea and Havana, Cuba, and took classes with Oscar Valdés, among others.



## 水壓風琴 Hydraulophone

世上首件利用水流而非空氣震動來發聲的樂器，並由不同的管道構建而成。透過控制水柱，演奏者巧妙地刺激和引導流向樂器內發聲機制的紊流，呈現多樣的音色。

The world's first instrument that uses water rather than air to produce sound. By manipulating water jets through a variable system of tubes and flow vessels, the performer stimulates and directs subtle changes in water turbulence to the sounding mechanism inside the instrument to create different sounds.



## 碳纖維小提琴 Carbon-fibre Violin

放在水中不消數天，傳統木製小提琴便會解體。這個特製版本以碳纖維打造而成，可以長時間在水中演奏；琴弓則以碳纖維及合成纖維毛髮組成。

A wooden violin disintegrates in water in a few days. This custom-made violin can be played underwater for a long time. The bow is made of carbon fibre and synthetic hair.

## 水晶琴 Crystallophone

一種旋轉樂器，由一系列從大至小的玻璃容器組成，演奏者用手指摩擦容器邊緣產生聲音。

A spinning instrument that uses a series of glass vessels graduated in size to produce musical tones by means of friction. Usually played with the fingers rubbing against the bowls' rims.

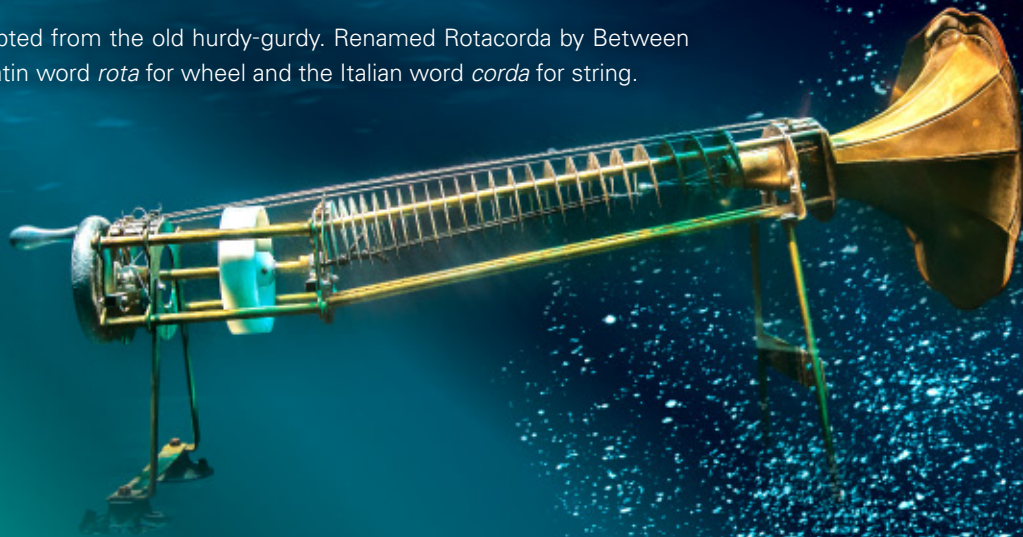




## 手搖六弦琴 Rotacorda

按照傳統手搖琴製造的弦樂器。「音與樂之間」將之命名為 Rotacorda —— *rota*（拉丁文）意即「滾輪」，*corda*（意大利文）代表「弦」。

A special string instrument adapted from the old hurdy-gurdy. Renamed Rotacorda by Between Music – a combination of the Latin word *rota* for wheel and the Italian word *corda* for string.



## 敲擊 Percussion

包括片鐘、鑼、三角鐵、非洲鼓等。在水中演奏時，音調和音色經常改變，極不穩定，須精密計算水箱裡的擺放位置，才可確保每次演奏音色一致。

Namely bell plates, gongs, triangles, darboukha and more, percussion instruments become very unstable when played underwater, their pitch and timbre changing frequently. They have to be placed precisely in specific locations of the tanks to get the same sound every time.

