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## **ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS**

### **ΠΡΟΚΗΡΥΞΗ 2ΟΥ ΠΑΝΕΛΛΗΝΙΟΥ** **ΣΥΝΕΔΡΙΟΥ ΨΗΦΙΟΠΟΙΗΣΗΣ** **ΠΟΛΙΤΙΣΤΙΚΗΣ ΚΛΗΡΟΝΟΜΙΑΣ -** **ΠΟΛΙΤΙΣΜΟΣ, ΠΑΙΔΕΙΑ, ΕΡΕΥΝΑ,** **ΚΑΙΝΟΤΟΜΙΑ, ΨΗΦΙΑΚΕΣ ΤΕΧΝΟΛΟΓΙΕΣ,** **ΤΟΥΡΙΣΜΟΣ, ΒΟΛΟΣ, ΠΑΝΕΠΙΣΤΗΜΙΟ** **ΘΕΣΣΑΛΙΑΣ, ΠΑΡΑΛΙΑΚΟ ΣΥΓΚΡΟΤΗΜΑ** **"ΠΑΠΑΣΤΡΑΤΟΥ", 1-3 ΔΕΚΕΜΒΡΙΟΥ 2017**

Αρχισαν οι Εγγραφές Εισηγητών και Συνέδρων για τη μεγάλη συνάντηση της Επιστήμης με την Πολιτιστική Κληρονομιά .

Υπό την Αιγίδα

του Υπουργείου Ψηφιακής Πολιτικής, Τηλεπικοινωνιών και Ενημέρωσης,  
του Υπουργείου Τουρισμού και  
της Πρεσβείας της Κύπρου στην Αθήνα

Στις εργασίες θα συμμετέχει και ο Υπουργός Παιδείας και Πολιτισμού της Κύπρου κ. Κων. Καδής

#### **Αγαπητοί Συνάδελφοι,**

Ανακοινώνεται η διοργάνωση του «2ου Πανελλήνιου Συνεδρίου Ψηφιοποίησης Πολιτιστικής Κληρονομιάς – 2017», ("2nd Pan-Hellenic Conference on Digital Cultural Heritage-EuroMed 2017"), που θα γίνει στην Ελλάδα, στην όμορφη πόλη του Βόλου, στα αμφιθέατρα του κτιρίου "ΠΑΠΑΣΤΡΑΤΟΣ" του Πανεπιστημίου Θεσσαλίας, κατά το χρονικό διάστημα από την Παρασκευή 1 έως και Κυριακή 3 Δεκεμβρίου 2017.

Το 1ο Πανελλήνιο Συνέδριο Ψηφιοποίησης , που ήταν αποτέλεσμα της συνεργασίας του Τεχνολογικού Πανεπιστημίου Κύπρου-ΤΕΠΑΚ (Εργαστήριο Ψηφιακής Πολιτιστικής Κληρονομιάς - Διευθυντής Dr Μαρίνος Ιωαννίδης), του Παγκόσμιου Δικτύου "ΠΕΡΡΑΙΒΙΑ", ενός πολυβραβευμένου Δευτεροβάθμιου Φορέα Πολιτισμού και Επιστημών, και του ΑΕΙ Πειραιά Τ.Τ., θεωρήθηκε από όλους τους επιστήμονες υψηλής εξειδίκευσης , ως πρωτοπόρο και καινοτόμο για την Ελλάδα και στέφθηκε με απόλυτη επιτυχία, αφού συγκέντρωσε 500 Συνέδρους από την Ελλάδα , και όλο τον κόσμο , έγινε θεσμός για τη χώρα από την πρώτη στιγμή και αγκαλιάστηκε από όλη την επιστημονική Κοινότητα Ελληνικών και ξένων Πανεπιστημίων, που είχε και έχει ανάγκη από μια τέτοια διοργάνωση που αποτελεί, πλέον, τη μεγάλη συνάντηση όλων των επιστημονικών ειδικοτήτων που εμπλέκονται με κάθε τρόπο στην έρευνα, μελέτη, καταγραφή, διάσωση, ανάδειξη και ψηφιοποίηση της Πολιτιστικής μας Κληρονομιάς.

Για το 2ο Πανελλήνιο Συνέδριο Ψηφιοποίησης της Πολιτιστικής Κληρονομιάς 2017, που θα γίνει στις 1-3 Δεκ. 2017, συνεργάζονται Πανεπιστημιακοί Φορείς, Πολιτεία

,ερευνητικά κέντρα, εργαστήρια, εκατοντάδες επιστήμονες και μεγάλες Οργανώσεις της Κοινωνίας των Πολιτών, Ελλάδας και Κύπρου, συνδυάζεται αυτό με τα παγκόσμια Συνέδρια EuroMed που διοργανώνει το Τ.Ε.Π.Α.Κ. στην Κύπρο κάθε δύο χρόνια, και φέτος διοργανώνεται για 2η φορά στην Ελλάδα, από τους Φορείς, που το θεσμοθέτησαν για τη χώρα από το έτος 2015 και είναι:

- **Τεχνολογικό Πανεπιστήμιο Κύπρου -Λεμεσός Κύπρου**
- **ΑΕΙ ΠΕΙΡΑΙΑ Τ.Τ. -Πειραιάς -ΕΛΛΑΔΑ**
- **Πανεπιστήμιο Θεσσαλίας- Θεσσαλία-ΕΛΛΑΔΑ**
- **Παγκόσμιο Δίκτυο "ΠΕΡΡΑΙΒΙΑ"- Θεσσαλία -ΕΛΛΑΔΑ**

και υποστηρίζεται από εκατοντάδες επιστήμονες και δεκάδες εθνικούς και διεθνείς Φορείς.

### **Ένα Συνέδριο Εθνικής σημασίας για τη διάσωση της Πολιτιστικής Κληρονομιάς**

Το Συνέδριο , μπορεί να χαρακτηριστεί **εθνικής σημασίας και αξίας**, αφού έχει ως σκοπό την ψηφιοποίηση και ανάδειξη της Πολιτιστικής μας κληρονομιάς σε όλο τον κόσμο , με τη χρήση των τελευταίων τεχνολογιών, ήδη έχει την υποστήριξη του **Υπουργείου Ψηφιακής Πολιτικής, Τηλεπικοινωνιών και Ενημέρωσης (Αιγίδα), του Υπουργείου Τουρισμού (Αιγίδα), του Υπουργείου Παιδείας και Πολιτισμού της Κύπρου, της Πρεσβείας της Κυπριακής Δημοκρατίας στην Αθήνα (Αιγίδα),**

πολλών Κρατικών Φορέων, Κρατικών Υπηρεσιών, Πανεπιστημίων, της Περιφέρειας Θεσσαλίας, του ICOMOS Ελλάδος και Κύπρου, της επιστημονικής κοινότητας από την Ελλάδα και την Κύπρο, του Πανεπιστημίου Θεσσαλίας, του Τεχνολογικού Πανεπιστημίου Κύπρου (Λεμεσός ), του ΑΕΙ Πειραιά Τ.Τ., του Δικτύου "ΠΕΡΡΑΙΒΙΑ", πολλών Ιδρυμάτων, το Ινστιτούτο Έρευνας και Τεχνολογίας Θεσσαλίας (ΙΕΤΕΘ), της CIPA Heritage Documentation ,το Εθνικό Κέντρο Έρευνας και Τεχνολογικής Ανάπτυξης (ΕΚΕΤΑ), Ερευνητικών Κέντρων, Φορέων Πανελληνίας εμβέλειας, του Δικτύου Μη Κυβερνητικών Οργανώσεων Θεσσαλίας, αλλά και πολλών άλλων Ιδρυμάτων και συλλογικών Φορέων από όλη την Ελλάδα και το εξωτερικό (Επιμελητήρια, Μητροπόλεις, Αναπτυξιακές Εταιρίες, Βιβλιοθήκες, Επιστημονικές Ενώσεις κ.ά.).

Πέρα από την άμεση θετική απάντηση, του **Υπουργείου Ψηφιακής Πολιτικής, Τηλεπικοινωνιών και Ενημέρωσης, του Υπουργείου Τουρισμού, του Υπουργείου Παιδείας και Πολιτισμού της Κύπρου και της Πρεσβείας της Κυπριακής Δημοκρατίας στην Αθήνα**, αναμένονται οι απαντήσεις από το **Υπουργείο Παιδείας, Έρευνας και Θρησκευμάτων, το Υπουργείο Πολιτισμού και Αθλητισμού**, ενώ έχει σταλεί Πρόσκληση στην Α.Ε. Πρόεδρο της Ελληνικής Δημοκρατίας **κ. Προκόπη Παυλόπουλο**, στην **Α.Θ. Παναγιώτατο Πατριάρχη Κων/πόλεως κ. Βαρθολομαίο**, όπως επίσης και στους **Α.Θ.Μ. Πατριάρχες Ιεροσολύμων και Αλεξανδρείας**, που εξεδήλωσαν το ενδιαφέρον να συμμετέχουν στη μεγάλη αυτή συνάντηση για τον Ελληνικό Πολιτισμό.

### **Η Πρόσκληση συμμετοχής στο Συνέδριο αφορά :**

- Επιστημονικό δυναμικό των Πανεπιστημίων, Ιδρυμάτων και Ινστιτούτων, όλων των βαθμίδων, με ειδίκευση στην Αρχαιολογία, Ιστορία, Γεωλογία, Βιολογία,

Ανθρωπολογία, Χημεία, Πληροφορική, Φυσική, Μαθηματικά, Πολιτισμική Πληροφορική, Πολυτεχνεία (Ηλεκτρολόγοι Μηχανικοί, Πολιτικοί Μηχανικοί, Αρχιτέκτονες κ.ά.), Συντηρητές Ανασκαφικών Ευρημάτων και Έργων Τέχνης, Γραφιστικές Τέχνες κ.α., ειδικότητες δηλαδή, που εμπλέκονται με οποιονδήποτε τρόπο στο μεγάλο θέμα της Ψηφιοποίησης της Πολιτιστικής Κληρονομιάς.

- Στελεχιακό δυναμικό του Υπουργείου Ψηφιακής Πολιτικής, Τηλεπικοινωνιών και Ενημέρωσης, του Υπουργείου Παιδείας, Έρευνας και Θρησκευμάτων, του Υπουργείου Πολιτισμού και Αθλητισμού, του Υπουργείου Τουρισμού, Εφορειών Αρχαιοτήτων, CIPA, ICOMOS Ελλάδος και Κύπρου, Μουσείων, Γενικών Αρχείων του Κράτους, κρατικών και ιδιωτικών βιβλιοθηκών, Ιερών Μητροπόλεων της Εκκλησίας της Ελλάδος και άλλων Εκκλησιών, Ιερών Μονών, ομοσπονδιών, Συλλόγων Επιστημόνων, Ένωση Ελλήνων Συντηρητών, Ελληνική Αρχαιομετρική Εταιρεία, Ένωση Αρχαιολόγων, Σύλλογο Αρχιτεκτόνων, Συλλογικοτήτων, Μελετητικών Εταιριών, Φορείς υλοποίησης Εθνικών και Ευρωπαϊκών Προγραμμάτων, Μη Κυβερνητικών Οργανώσεων κ.ά. όπως και τους αντίστοιχους Φορείς της Κύπρου.
- Στελέχη άλλων Υπουργείων και ΟΤΑ Α' και Β' Βαθμού.
- Έλληνες και Κύπριους που εργάζονται σε Ελληνικά και Ξένα Πανεπιστήμια, Ερευνητικά Κέντρα σχετικά με τον Πολιτισμό.
- Ανεξάρτητους Επιστήμονες και Ερευνητές στην Ελλάδα, Κύπρο και όλο τον κόσμο.
- Έλληνες και Κύπριους Φοιτητές Ελληνικών και Ξένων Πανεπιστημίων.
- Γενικά ,κάθε ενδιαφερόμενο σε θέματα ψηφιοποίησης της Πολιτιστικής Κληρονομιάς.

### Θεματικές Ενότητες Συνεδρίου Ψηφιοποίησης

Οι ενδεικτικοί θεματικοί άξονες προβληματισμού του Συνεδρίου είναι οι ακόλουθοι:

1. Νέες τεχνολογίες στις ανθρωπιστικές επιστήμες
2. Η ψηφιοποίηση στην Αρχαιολογία και τον τουρισμό
3. Ψηφιακή Πολιτιστική κληρονομιά και η διαχείριση της
4. Συντήρηση, Προστασία και ανάδειξη της πολιτιστικής κληρονομιάς στο ψηφιακό πολυμεσικό περιβάλλον και διαδίκτυο (Εκπαίδευση, Τουρισμό, κτλ)
5. Νομικό πλαίσιο και ψηφιοποίηση της Πολιτιστικής Κληρονομιάς (συμβάσεις, προγράμματα, πνευματικά δικαιώματα)
6. Εμπειρίες, νέες προκλήσεις και προοπτικές για την ψηφιακή κοινωνία της Πολιτιστικής Κληρονομιάς.

### **ΠΡΟΓΡΑΜΜΑΤΙΣΜΟΣ ΥΠΟΒΟΛΗΣ ΕΠΙΣΤΗΜΟΝΙΚΩΝ ΕΡΓΑΣΙΩΝ**

<i>6 Οκτωβρίου 2017</i>	<i>Καταληκτική ημερομηνία υποβολής περιλήψεων εργασιών ή POSTERS από τους συγγραφείς</i>
<i>Α' δεκαπενθήμερο Οκτ 2017</i>	<i>Αξιολόγηση εργασιών από Επιστημονική Επιτροπή</i>
<i>15 Οκτωβρίου 2017</i>	<i>Ενημέρωση συγγραφέων σχετικά με αποδοχή εργασιών από την Επιστημονική Επιτροπή</i>
<i>30 Οκτ 2017</i>	<i>Καταληκτική ημερομηνία υποβολής full paper από τους συγγραφείς</i>
<i>Α' 10ήμερο Νοε2017</i>	<i>Αξιολόγηση εργασιών από Επιστημονική Επιτροπή</i>

<i>10 Νοεμβρίου 2017</i>	<i>Ενημέρωση συγγραφέων σχετικά με σχόλια / διορθώσεις από την Επιστημονική Επιτροπή</i>
<i>20 Νοεμβρίου 2017</i>	<i>Υποβολή Τελικών κειμένων εργασιών - Διαμόρφωση τελικού προγράμματος συνεδρίου</i>

### **Συνεργασίες σε εθνικό επίπεδο**

Τα **Πανελλήνια Συνέδρια Ψηφιοποίησης Πολιτιστικής Κληρονομιάς-EuroMed** έχουν ως κεντρικές έννοιες τον Πολιτισμό, την Παιδεία, την Έρευνα, την Καινοτομία, τις Ψηφιακές Τεχνολογίες και την τουριστική προβολή προορισμών, μέσω της ανάδειξης της Πολιτιστικής μας Κληρονομιάς (αρχαιολογικών και θρησκευτικών Μνημείων κ.ά.), χαρακτηρίστηκαν ως ένα εξαιρετικό εγχείρημα που πέτυχε και, ήδη, συγκεντρώνουν το έντονο ενδιαφέρον επιστημόνων πολλών ειδικοτήτων, που χρησιμοποιούν αλλά και αναπτύσσουν τις επιστήμες της Ψηφιοποίησης και των Νέων Τεχνολογιών, αλλά και κάθε άλλη επιστήμη που άπτεται την Πολιτιστικής μας Κληρονομιάς (αρχαιολογία, Βυζαντινολογία, πολυτεχνεία, εξειδ. επιστήμονες πληροφορικής και νέων τεχνολογιών αιχμής, συντηρητές μνημείων, ιστορικούς, κ.ά.).

**Επίσης, θεωρούνται πολύ επίκαιρα, αν λάβουμε υπόψη ότι εξαιτίας των διενέξεων και των κοινωνικοπολιτικών αναδιατάξεων**, αλλά και τρομοκρατικών ενεργειών και φυσικών καταστροφών (π.χ. σεισμοί κλπ.) που συμβαίνουν γύρω μας, αλλά και σε όλο τον κόσμο, πολλά από τα Μνημεία μας, τα οποία και αποτελούν τη βαριά μας Πολιτιστική Κληρονομιά, κινδυνεύουν να καταστραφούν, χωρίς να έχουμε ακόμα μεριμνήσει να μπορούμε να τα αποκαταστήσουμε, όπως είναι στην αρχική τους μορφή (αρχαιολογικοί χώροι, Βιβλία, ιερά κειμήλια, Μονές, Εκκλησίες κ.ά.) .

**Όλη η επιστημονική κοινότητα, αλλά κυρίως η Πολιτεία, θεωρούμε ότι πρέπει να δείξει μεγαλύτερη ευαισθησία**, έχοντας την υποχρέωση να λάβει όλα εκείνα τα αναγκαία μέτρα, έτσι ώστε αυτή η θαυμάσια πολιτιστική και θρησκευτική μας κληρονομιά, να ερευνηθεί, να καταγραφεί, να διασωθεί, να ψηφιοποιηθεί και να αναδειχθεί σε όλο τον κόσμο, με όλα τα σύγχρονα μέσα, που μας προσφέρει σήμερα η Τεχνολογία.

**Πέρα από αυτό, μέσα από συνέργειες μεταξύ των Φορέων Διοργάνωσης των Συνεδρίων μας** (που ήδη συνεργάζονται με πολλά πανεπιστήμια από όλες τις χώρες της Ευρώπης και υλοποιούν σημαντικά Ευρωπαϊκά Προγράμματα χρηματοδοτούμενα από την Ε.Ε.) **και όλων των Πανεπιστημίων, ερευνητικών κέντρων, Φορέων και της Εκκλησίας**, μπορούμε να αξιοποιήσουμε τους Ευρωπαϊκούς πόρους, οι οποίοι είναι στη διάθεση των χωρών και των Φορέων που υποβάλλουν τεκμηριωμένες και σοβαρές προτάσεις.

**Με τον τρόπο αυτό, όχι μόνο θα δώσουμε την ευκαιρία σε εξειδικευμένους επιστήμονες να εργαστούν πάνω στην Πολιτιστική μας Κληρονομιά, αλλά το κυριότερο, θα προστατεύσουμε και θα αναδείξουμε, ότι μας άφησε ως παρακαταθήκη ο Πολιτισμός του Ανθρώπου, αλλά, κυρίως, ο Ελληνικός Πολιτισμός.**

Πιστεύουμε ότι σε εποχές, που και οι δύο αυτοί πυλώνες βάλονται από παντού, έχουμε ιερή υποχρέωση να συμπράξουμε και να παραδώσουμε την Κληρονομιά μας, ακέραιη στις επόμενες γενιές.

Με τη μεγάλη μας αυτή συνεργασία, αναδεικνύουμε και χαιρετίζουμε τη μεγάλη συνάντηση της Επιστήμης με την Πολιτιστική μας Κληρονομιά και την αναγκαιότητα δημιουργίας ενός Διακρατικού **Φορέα για τη χάραξη ενός Επιχειρησιακού Σχεδίου για την Ψηφιοποίηση της Πολιτιστικής μας Κληρονομιάς**, πρόταση που, ήδη, έχει διαβιβαστεί από τους Φορείς μας, προς τους ηγέτες Ελλάδας και Κύπρου, προς μελέτη και υλοποίηση.

Αυτή η τεκμηριωμένη πρόταση υποβλήθηκε μετά από μια σημαντική Στρογγυλή Τράπεζα, με την παρουσία δεκάδων σημαντικών επιστημόνων, που διοργανώθηκε στις 3 Ιουνίου 2016 στην Πρεσβεία της Κύπρου στην Αθήνα, με πρωτοβουλία των Διοργανωτών Φορέων των Συνεδρίων Ψηφιοποίησης EuroMed και του πρέσβη της Κυπριακής Δημοκρατίας κ. Κυριάκου Κενεβέζου..

### **Μια Υπερεθνική προσπάθεια με πολλά μηνύματα**

Πιστεύουμε, ότι από τη μεγάλη αυτή προσπάθεια που δεν έχει προηγούμενο, κατά τη δική μας γνώμη, **δεν μπορεί και δεν πρέπει να απουσιάζει κανείς και ακόμα, το σημαντικό αυτό Συνέδριο:**

- 1. αποτελεί ιστορική αναγκαιότητα** για την Ψηφιοποίηση της Πολιτιστικής Κληρονομιάς, κάθε μορφής.
- 2. θα συγκεντρώσει τους καλύτερους Έλληνες και Κύπριους επιστήμονες** που εργάζονται στο ερευνητικό πεδίο της Ψηφιοποίησης απ' όλο τον κόσμο
- 3. θα μεταδοθεί ζωντανά ολόκληρο το Συνέδριο, μέσω Live Streaming**, σε όλη την υφήλιο, όπως συνέβη και το 2015 στο 1ο Πανελλήνιο Συνέδριο ΨΠΚ
- 4. θα φέρει κοντά όλους τους Έλληνες επιστήμονες** με τη δημιουργία συνεργασιών και συμπράξεων
- 5. θα παρουσιαστούν όλες οι τελευταίες εξελίξεις στις νέες τεχνολογίες** και όλα τα Ευρωπαϊκά Προγράμματα εν όψει και του έτους Πολιτιστικής Κληρονομιάς για την Ευρώπη, που είναι το 2018
- 6. θα αναδείξει τον Ελληνικό Πολιτισμό**, αλλά και όλα τα Μνημεία σε όλο τον κόσμο, με απώτερο στόχο τη δημιουργία Πολιτιστικού και προσκυνηματικού Τουρισμού

**Όλες τις πληροφορίες για τα Συνέδρια Ψηφιοποίησης Πολιτιστικής Κληρονομιάς μπορείτε να αντλήσετε από :**

- 1. Για το 1ο Πανελλήνιο Συνέδριο ΨΠΚ-** Βόλος 24-26/9/2015 Πανεπιστήμιο Θεσσαλίας στο LINK <http://euromed2015.eu/el/index.php>
- 2. Για το 2ο Πανελλήνιο Συνέδριο ΨΠΚ** - Βόλος 1-3 Δεκεμβρίου 2017 στο LINK <http://euromed2017.eu/>
- 3. Μπορείτε να αντλήσετε τα Πρακτικά του 1ου Πανελλήνιου Συνεδρίου ΨΠΚ** στο LINK <http://euromed2015.eu/documents/euromed2015.eu-conference-proceedings.pdf>

**Στους Συνέδρους θα δοθούν Πιστοποιητικά Συμμετοχής.**

**Πληροφορίες-Συνεννοήσεις για κάθε θέμα : Δίκτυο "ΠΕΡΡΑΙΒΙΑ" - Κων. Σκριάπας**  
**-Πρόεδρος- Τηλέφ. 0030-6974-881944**

**E-Mail: [skriapask@gmail.com](mailto:skriapask@gmail.com)**

**ΓΙΑ ΑΜΕΣΗ ΕΓΓΡΑΦΗ ΣΤΟ ΣΥΝΕΔΡΙΟ ΠΑΤΗΣΤΕ**



## **ΕΓΓΡΑΦΗ**

**Οι ενδεικτικοί θεματικοί άξονες προβληματισμού του Συνεδρίου είναι οι ακόλουθοι:**

1. Νέες τεχνολογίες στις ανθρωπιστικές επιστήμες
2. Η ψηφιοποίηση στην Αρχαιολογία και τον τουρισμό
3. Ψηφιακή Πολιτιστική κληρονομιά και η διαχείριση της
4. Συντήρηση, Προστασία και ανάδειξη της πολιτιστικής κληρονομιάς στο ψηφιακό πολυμεσικό περιβάλλον και διαδίκτυο (Εκπαίδευση, Τουρισμό, κτλ)
5. Νομικό πλαίσιο και ψηφιοποίηση της Πολιτιστικής Κληρονομιάς (συμβάσεις, προγράμματα, πνευματικά δικαιώματα)
6. Εμπειρίες, νέες προκλήσεις και προοπτικές για την ψηφιακή κοινωνία της Πολιτιστικής Κληρονομιάς.

**Στους συμμετέχοντες θα δοθεί ΠΙΣΤΟΠΟΙΗΤΙΚΟ συμμετοχής .**

Όλες τις πληροφορίες για Για το 2ο Πανελλήνιο Συνέδριο Ψηφιοποίησης Πολιτιστικής Κληρονομιάς

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Βόλος 1-3 Δεκεμβρίου 2017 στο LINK :

<http://euromed2017.eu>

Επικοινωνία -Πληροφορίες : Δίκτυο "Περραιβία" -

Κων. Σκριάπας Mobile: 6974-881944

[info@euromed2017.eu](mailto:info@euromed2017.eu)

## **Με Εκτίμηση**

### ***ΕΚ ΜΕΡΟΥΣ ΤΩΝ ΔΙΟΡΓΑΝΩΤΩΝ ΦΟΡΕΩΝ***

ΤΕΧΝΟΛΟΓΙΚΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΚΥΠΡΟΥ

ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΙΑΣ

ΑΕΙ ΠΕΙΡΑΙΑ ΤΕΧΝΟΛΟΓΙΚΟΥ ΤΟΜΕΑ

ΔΙΚΤΥΟ "ΠΕΡΡΑΙΒΙΑ"

### **Η Οργανωτική Επιτροπή του Συνεδρίου**

- ΜΑΡΙΝΟΣ ΙΩΑΝΝΙΔΗΣ -Πανεπιστήμιο ΤΕΠΑΚ-ΚΥΠΡΟΣ
- ΘΕΟΔ.ΓΚΑΝΕΤΣΟΣ- Καθηγητής ΑΕΙ Πειραιά Τ.Τ.,
- ΙΩΑΝΝΗΣ ΒΑΡΑΛΗΣ-Επικ. Καθηγητής Πανεπιστημίου Θεσσαλίας ,
- ΗΛΙΑΣ ΝΟΜΠΙΛΑΚΗΣ -Ομ. Καθηγητής ΤΕΙ Αθηνών ,
- ΚΩΝ/ΝΟΣ ΣΚΡΙΑΠΑΣ -Οικονομολόγος -Σύμβουλος Ανάπτυξης ΕΛΛΑΔΑ

**SESSION “ANCIENT NEAR EASTERN AND  
NEIGHBORING REGIONS: ENLARGING  
RESEARCH HORIZONS THROUGH DIGITAL  
AND COMPUTATIONAL PRACTICES”, THE  
COMPUTER APPLICATIONS AND  
QUANTITATIVE METHODS IN  
ARCHAEOLOGY (CAA), TÜBINGEN, MARCH  
19-23, 2017**

We invite you to submit an abstract for the session « Ancient Near Eastern and Neighboring Regions: Enlarging Research Horizons through Digital and Computational Practices » at the Computer Applications and Quantitative Methods in Archaeology (CAA) in Tübingen (March 19-23).

**SESSION DESCRIPTION:**

In the latest years, the use of quantitative and qualitative methods in ancient Near Eastern studies is experiencing an impressive expansion. This is partly due to the situation of the increasing endangerment of the heritage in Western Asiatic and Eastern Mediterranean regions. But this results in two separate profiles of Humanities scholars who hardly work together: some use “traditional” methods, while the others — mostly “young” researchers — digital and computational practices.

Thus, the question arises of how to build bridges in order to facilitate dialogue with colleagues who are not accustomed to these “new” practices? This is especially important, since the digital and computational approaches in Humanities are not a field, but methods, and as such their goals are sometimes to optimise the available funds (digitized or not) or the acquirement of information from the available materials and field recordings. Among other answers, one could be to develop open archives and open linked data projects in order to focus on the specific nature of the challenges of ancient Near Eastern and neighboring regions’ studies, e.g.: the particular issues related to Sumerian studies; the specific features of ancient languages and writing systems; the consequences on the archaeological record of the continuous cultural contacts and exchanges in regions like Syria and northern Mesopotamia; the movements of materials and people through differently structured societies, including the (semi-)nomadic ones.

To pursue the aims expressed here, it is essential that the contributions that will be presented are able to show the actual progress potential that the application of digital and computational methods and tools can bring. This requires a clear explanation of the theory and performing processes of the systems used in Digital Humanities, but also an explicit comparison between the “new” Humanities’ processes and results and those of other methods.

This session is open to all scholars — including non-digital researchers who look to enhance cooperation — of Prehistory through Late Antiquity, whose proposals are

related to the adoption of digital tools and theories in any sector of the mentioned fields of study (epigraphy, archaeometry, philology, historical geography, ceramic studies, art history, etc.). The presentation of in progress projects, experimental proposals, and theoretical explanations are also welcome.

Abstract should not be longer than 250 words excluding title, affiliations and 3 – 5 keywords, and must be submitted electronically by October 29th:  
<http://2018.caaconference.org/2017/09/29/call-papers-posters-open/>

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Vanessa Juloux  
École Pratique des Hautes Études (EPHE), Paris Sciences et Lettres (PSL) Research  
University <mailto:vanessa.juloux@ephe.sorbonne.fr>

Alessandro di Ludovico  
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**HISTORICAL METALLURGY SOCIETY**  
**RESEARCH IN PROGRESS MEETING,**  
**THURSDAY 9<sup>TH</sup> NOVEMBER 2017, SCHOOL**  
**OF THE ARTS LIBRARY, 19 ABERCROMBY**  
**SQUARE, UNIVERSITY OF LIVERPOOL,**  
**L69 3BX**

Deadline for registering for the meeting is the 2nd of November, so if you are intending to come please do book online using the University Page: <http://payments.liv.ac.uk/conferences-and-events/events-at-liverpool/school-of-histories-languages-and-cultures/historical-metallurgy-society-research-in-progress-meeting>. If you have any problems booking using the university web page please contact the organiser by emailing [ponting@liverpool.ac.uk](mailto:ponting@liverpool.ac.uk).

The cost is only £15 which includes refreshments and lunch, and a day of talks on the latest metallurgy research going on in the UK and abroad.

The provisional programme for the event is available on the HMS website <http://hist-met.org/meetings/2017-research-in-progress-meeting.html>

Best Wishes  
Eleanor Blakelock  
HMS events officer

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**ASSOCIATION FOR ENVIRONMENTAL  
ARCHAEOLOGY, AUTUMN CONFERENCE  
2017, GRAND CHALLENGE AGENDAS IN  
ENVIRONMENTAL ARCHAEOLOGY,  
UNIVERSITY OF EDINBURGH (UK), 1-3  
DECEMBER 2017**

**Conference abstract**

How do we approach today's great themes in international environmental archaeology? How will this feed into the next research agenda? What are environmental archaeology's grand challenges? 'Grand challenges for archaeology' have recently been proposed to focus the disciplines efforts and capabilities on the most important scientific challenges (Kintigh *et al.* 2014, *PNAS* 111, 879-80). Those identified focus on investigating the dynamics of complex socio-ecological systems, addressing key questions of emergence, complexity, demography, mobility, identity, resilience, and human-environment interactions. Environmental archaeology is ideally situated to contribute directly to these challenges, concerned, as it is, with the human ecology of the past – the relationship between past human populations and their physical, biological and socio-economic environments – through the analysis and interpretation of animal and plant remains within the depositional environment of the archaeological site and its surrounds. These approaches allow analysis of the dynamics of socio-ecological systems at varying spatial and temporal scales. Combined with the continued advancement of scientific methodological applications this is enabling increasingly powerful insights into human paleoecology, for example via analyses of palaeodiets, disease ecology, and past climatic change. Particular challenges lie in how to integrate data generated from diverse methodological approaches, and how to model and test cultural and ecological agency in the past, and how to tap the full potential that lies in increasingly large and disparate datasets being generated by the different practitioners of environmental archaeology. Public and fiscal responsibility also challenges environmental archaeological research to contribute to debates of relevance to the modern world, with its important potential insights on human-environment interactions, biodiversity, food security, and societal resilience.

This conference seeks to explore the grand challenge agendas for environmental archaeology that confront its methods, approaches, contributions and relevance, including (but not limited to):

- the ways in which the discipline can contribute to the major research foci of archaeology
- advances in method, and integration of methods, that are permitting more robust and nuanced insights in these areas
- approaches to modelling and testing past socio-ecological relationships, and exploring issues of cause and effect in these systems
- the ways in which environmental archaeological research is relevant and contributes to the contemporary world

The organising committee invites oral and poster presentations that examine these themes. We are particularly keen to encourage comparative research that show how regional case studies can make essential contributions to globally-important questions, or indeed help to shape them and set new agendas for research.

Please send proposals for papers and posters to [AEA2017@ed.ac.uk](mailto:AEA2017@ed.ac.uk) by **Friday 13 October 2017**. Abstracts should be sent as Word documents, be a maximum of 200 words and contain a clear description of the topic. Please include a title, complete name(s) of author(s), affiliation(s), and full postal and email addresses.

**Conference organisers:**

Dr Robin Bendrey, School of History, Classics and Archaeology, University of Edinburgh

Prof Andrew Dugmore, School of Geosciences, University of Edinburgh

Dr Eva Panagiotakopulu, School of Geosciences, University of Edinburgh

Dr Xavier Rubio-Campillo, School of History, Classics and Archaeology, University of Edinburgh

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**ΠΡΟΓΡΑΜΜΑ ΗΜΕΡΙΔΑΣ ΣΥΝΤΗΡΗΣΗΣ**  
**ΑΜΘ 2017, «ΔΙΑΓΝΩΣΗ: ΑΝΑΛΥΤΙΚΕΣ**  
**ΤΕΧΝΙΚΕΣ ΚΑΙ ΣΥΝΤΗΡΗΣΗ ΤΗΣ**  
**ΠΟΛΙΤΙΣΤΙΚΗΣ ΚΛΗΡΟΝΟΜΙΑΣ»**,  
**ΠΑΡΑΣΚΕΥΗ 3 ΝΟΕΜΒΡΙΟΥ 2017**

09:00 - 11:00 *Προσέλευση – Εγγραφές*

11:00 - 11:30 *Προσφωνήσεις – Κήρυξη έναρξης ημερίδας*

11:30 - 11:50 **B. Αργυροπούλου, Μ. Γιαννουλάκη** “*Σχεδιασμός Νέων Μεθοδολογιών Επεμβάσεων Συντήρησης για Ενάλια Τεχνουργήματα από μέταλλο και οργανικά υλικά με τη χρήση διαγνωστικών εργαλείων*”

11:50 - 12:10 **A. Γ. Καρύδας, X. Μπρεκουλάκη, S. Stocker, B. Κανταρέλου, C. Romano, F. P. Romano** “*Η συμβολή σύγχρονων τεχνικών της Φασματομετρίας ακτίνων X στην Πολιτιστική Κληρονομιά: Επιτόπια διάγνωση, 2D/3D απεικόνιση, και διερεύνηση του τρόπου κατασκευής και διάβρωσης αρχαιοτήτων και έργων τέχνης*”

12:10 - 12:30 **X. Κατσίφας, N. Καντηράνης, I. Καραπαναγιώτης, Γ.Α. Ζαχαριάδης** “*Συνδυαστική εφαρμογή αναλυτικών τεχνικών για τη φυσικοχημική μελέτη γαιωδών κτερισμάτων από τον τάφο Β' του Δερβενίου*”

12:30 - 12:50 **A. Αλεξοπούλου** “*Απεικονιστικός έλεγχος αρχαιολογικών αντικειμένων και ιστορικών κτηρίων. Νέα διάσταση-δυνατότητες-προοπτικές*”

12:50 - 13:20 *Διάλειμμα*

13:20 - 13:40 **Σ. Μπογιατζής** “*Χρήση της φασματοσκοπίας υπερύθρου στην παρακολούθηση της αποτελεσματικότητας των μεθόδων συντήρησης*”

13:40 - 14:00 **E. Κουλουμπή, A. Μουτσάτσου, A.B. Τερλιζή, M. Δουλγερίδης** “*Θετικές επιστήμες και συντήρηση έργων ζωγραφικής*”

14:00 - 14:20 **B. Τορνάρη** “*Φορητό σύστημα ολογραφικής συμβολομετρίας και εφαρμογές στο πεδίο της δομικής διάγνωσης*”

14:20 - 14:50 *Διάλειμμα*

14:50 - 15:10 **A. Καραμάνου, Δ. Μουσσίδου, B. Χρυσικόπουλος, Γ. Φακορέλλης, Σ. Μπογιατζής, A. Βελεγράκη, M. Νικολοπούλου, E. Κυριαζή, O. Κορδαλή, M. Κουλούκουσα** “*Προκαταρκτική μελέτη με αναλυτικές τεχνικές δύο αιγυπτιακών μουμιών από το Ανθρωπολογικό Μουσείο Αθηνών*”

15:10 - 15:30 **Π. Δημητριάδου, Π. Μαραβελάκη, Π. Δανιά** “*Προστασία και στερέωση ασβεστόλιθων και ασβεστοκονιαμάτων με ένα καινοτόμο νανοϋλικό, εμπνευσμένο από τα συστατικά της «πατίνας»*”

15:30 - 15:50 **N. Ζαχαριάς** “*Ιστορίες από την μελέτη υαλωδών και κεραμικών υλικών και τέχνηργων με σύγχρονες μη-καταστροφικές προσεγγίσεις*”

15:50 - 16:10 *Συζήτηση - Συμπεράσματα*

Η Ημερίδα θα πραγματοποιηθεί στην αίθουσα Ιουλία Βοκοτοπούλου  
του Αρχαιολογικού Μουσείου Θεσσαλονίκης

Οργανωτική υποστήριξη: Αρχαιολογικό Μουσείο Θεσσαλονίκης – Τμήμα Συντήρησης,  
Χημικών και Φυσικών ερευνών και Αρχαιομετρίας  
Μ. Ανδρόνικου 6, ΤΘ 506 19540 13 Θεσσαλονίκη, Τηλ. 2313 310 200, Fax 2310  
861306 [www.amth.gr](http://www.amth.gr)

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## ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ – JOB VACANCIES/FELLOWSHIPS

### POST-DOCTORAL RESEARCH GRANTS VENI 2018 - NETHERLANDS ORGANISATION FOR SCIENTIFIC RESEARCH (NWO)

#### Purpose

The post-doctoral grants *VENI* (Netherlands Organisation for Scientific Research) are targeted at outstanding researchers who have completed their PhD within the last three years (though there may be a possibility of an extension in some cases). The purpose of the grants is to allow researchers to conduct independent research and develop their ideas for a period of three years. **Researchers from outside the Netherlands may apply, but need to do so through a Dutch host institution.**

The Research Chair of Greek Archaeology at the Groningen Institute of Archaeology is looking for *VENI* candidates in the fields of **Aegean prehistory, Classical Archaeology, digital archaeology, osteoarchaeology and public archaeology.**

#### Criteria

The assessment criteria are:

- quality of the researcher
- quality, innovative character and academic impact of the research proposal
- knowledge utilisation

These post-doctoral grants are highly competitive. In practice, only candidates who already have a distinguished educational career, a number of peer-reviewed articles or other substantial publications, an international research network and excellent interviewing skills are encouraged to apply. The candidates who will pass through a first selection will be provided coaching and training for their application to NWO.

#### What to apply for

The maximum grant is 250,000 euros.

#### When to apply

The NWO deadline will be in January 2018.

Candidates who wish to do their *VENI* in Groningen should send a research proposal (2000 words) and a *curriculum vitae* to Prof Sofia Voutsaki, [s.voutsaki@rug.nl](mailto:s.voutsaki@rug.nl), **by 27 October 2017.**

#### Links

*VENI* grants: <https://www.nwo.nl/en/funding/our-funding-instruments/nwo/innovational-research-incentives-scheme/veni/sgw/innovational-research-incentives-scheme-veni-sgw.html>

Research Chair Greek Archaeology, Groningen: <http://www.rug.nl/research/groningen-institute-of-archaeology/research/research-groups/greek-archaeology>

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## **ANCIENT SCIENCE POSITION AT TORONTO**

Assistant Professor - Ancient Science - 1701616

**Job Field: Tenure Stream**

Faculty / Division: Faculty of Arts and Science

**Department: Classics**

**Campus: St. George (downtown Toronto)**

**Job Posting: Sep 15, 2017**

**Job Closing: October 31, 2017**

**Description:**

The Department of Classics at the University of Toronto invites applications for a tenure-stream position in Ancient Science at the rank of Assistant Professor. The appointment will commence on 1 July 2018.

Candidates must hold a PhD in Classics, or a relevant discipline, by the time of appointment or shortly thereafter. They must demonstrate excellence in both research and teaching with a demonstrated interest of continued development. Evidence of excellence in teaching will be shown by strong letters of reference and a teaching dossier that includes student evaluations and syllabi. The successful candidate must be able to teach a wide range of courses from the introductory to advanced levels, at both the undergraduate and graduate levels. A demonstrated ability to teach in the program of Classical languages at all levels is required.

The candidate will be expected to conduct innovative research at the highest international level. She or he will have an emerging record of outstanding scholarly accomplishments, demonstrated by publications in leading journals and/or with leading academic presses relevant to the field, or a research pipeline that is at high international levels, presentations at significant conferences, and strong endorsements by referees of high standing. The successful candidate's research will focus on ancient science in its intersection with ancient philosophy, that is, natural philosophy broadly conceived, including fields such as medicine, mathematics, and natural science. The successful candidate will be fully qualified to contribute as a regular member in the Collaborative Program in Ancient and Medieval Philosophy (CPAMP), a vibrant graduate collaborative program between the Departments of Classics and Philosophy and the Centre for Medieval Studies.

The Department of Classics (<http://classics.utoronto.ca>) is among North America's largest in the field and has a thriving graduate program in classical literature, history, material culture, and philosophy. Faculty members collaborate with colleagues in many other departments and we welcome candidates who combine a thorough training in Classics with an expertise in other disciplines.

Salary will be commensurate with qualifications and experience.

All qualified candidates are invited to apply online by clicking the link below. Applications must include a cover letter, curriculum vitae, a sample of academic writing, as well as a research statement and a teaching dossier. Questions about the position

should be addressed to the Chair of the Search Committee, Professor Christer Bruun, Chair, Department of Classics ([chair.classics@utoronto.ca](mailto:chair.classics@utoronto.ca)) or to the Business Officer of the Department of Classics, Mrs. Ann-Marie Matti ([a.matti@utoronto.ca](mailto:a.matti@utoronto.ca)).

Submission guidelines can be found at: <http://uoft.me/how-to-apply>. We strongly recommend combining documents into one or two files in PDF/MS format.

Applicants should also ask three referees to send letters, signed and on letterhead, directly to the Department of Classics via email to [chair.classics@utoronto.ca](mailto:chair.classics@utoronto.ca) by 31 October 2017.

The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of colour, women, Indigenous / Aboriginal People of North America, persons with disabilities, LGBTQ persons, and others who may contribute to the further diversification of ideas.

As part of your application, you will be asked to complete a brief Diversity Survey. This survey is voluntary. Any information directly related to you is confidential and cannot be assessed by search committees or human resources staff. Results will be aggregated for institutional planning purposes. For more information, please see <http://uoft.me/UP>.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.

**Please visit the site:**

<https://utoronto.taleo.net/careersection/10050/jobdetail.ftl?job=1701616>

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## **AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS, STUDY IN GREECE 2018-2019, ASCSA PROGRAMS AND FELLOWSHIPS**

<http://www.ascsa.edu.gr/>

The American School of Classical Studies at Athens, one of America's most distinguished centers devoted to advanced teaching and research, was founded in 1881 to provide American graduate students and scholars a base for their studies in the history and civilization of the Greek world. Today, over 135 years later, it is still a teaching institution, providing graduate students a unique opportunity to study firsthand the sites and monuments of Greece. The School is also a superb resource for senior scholars pursuing research in many fields ranging from prehistoric to modern Greece, thanks to its internationally renowned libraries, the Blegen, focusing on all aspects of Greece from its earliest prehistory to late antiquity, and the Gennadius, which concentrates on the Greek world after the end of antiquity. (Note: For the 2018-2019 academic year, the Blegen and Gennadius libraries may be closed for up to six months between January and June for reorganization; members of the School will continue to have access to other facilities of the School and other libraries in Athens).

### **FUNDING FOR GRADUATE STUDENTS FOR STUDY AT THE ASCSA (FULL ACADEMIC YEAR AND SUMMER PROGRAMS)**

**REGULAR MEMBER FELLOWSHIPS:** Up to twelve fellowships are available for the School's Regular Members. Fellowships provide a stipend of \$11,500 plus room and board at Loring Hall on the School grounds and waiver of School fees. Regular Member fellowships are awarded for the entire nine-month program. All awards are made on the recommendation of the Committee on Admissions and Fellowships and are based on the results of the qualifying examinations and materials submitted with the application.

Fellowships include the Heinrich Schliemann and the John Williams White Fellowships in archaeology, the Thomas Day Seymour Fellowship in history and literature, and nine Fellowships unrestricted as to field — the Virginia Grace, the Michael Jameson, the Philip Lockhart, the Lucy Shoe Meritt, the Fowler Merle-Smith, the Martin Ostwald, and the James Rignall Wheeler. The Bert Hodge Hill is unrestricted, but with a preference for a student in art history, and the Emily Townsend Vermeule is unrestricted, but with a preference for Bronze Age archaeology. \$50 application fee. **DEADLINE: JANUARY 15, 2018.**

**STUDENT ASSOCIATE MEMBERSHIP:** Advanced graduate students who plan to pursue independent research projects, who do not wish to commit to the full Regular Program. **DEADLINE: ROLLING.**

**ADVANCED FELLOWSHIPS:** Several fellowships for the full academic year at the School with a stipend of \$11,500 plus room, board, and waiver of School fees are

available to students who have completed the Regular Program or one year as a Student Associate Member and plan to return to the School to pursue independent research, usually for their Ph.D. dissertation.

Advanced Fellowships awarded by the School: the Samuel H. Kress Fellowship in art and architecture of antiquity; the Gorham Phillips Stevens Fellowship in the history of architecture; the Ione Mylonas Shear Fellowship in Mycenaean archaeology or Athenian architecture and/or archaeology; the Homer A. and Dorothy B. Thompson Fellowship in the study of pottery; and three Fellowships unrestricted as to field: the Edward Capps, the Doreen Canaday Spitzer, and the Eugene Vanderpool Fellowships. DEADLINE: FEBRUARY 15, 2018.

**FULBRIGHT FELLOWSHIPS:** Contact the Institute of International Education, at 809 United Nations Plaza, NY 10017 or <http://us.fulbrightonline.org> for application and stipend information.

Candidates must submit ASCSA application for Student Associate Membership by due date for Fulbright application. Student Associate membership is the only category eligible for the Fulbright grants.

DEADLINE: OCTOBER 11, 2017.

**SUMMER SESSION:** Six-week session to explore the sites and museums in Greece for graduate and undergraduate students, and secondary school and college teachers. Fee of \$4,900 includes tuition, travel within Greece, room, and partial board. Scholarships available. \$25 application fee. DEADLINE: JANUARY 15, 2018.

**SUMMER SEMINARS:** Two 18-day sessions designed for those who wish to study specific topics in Greece and visit major monuments with exceptional scholars as study leaders, and to improve their understanding of the country's landscape, archaeology, material culture, history, literature, and culture. Enrollment is open to graduate and advanced undergraduate students, and to high school and college instructors of classics and related subjects. Each seminar is limited to twenty participants. Fee of \$2,750 includes tuition, travel within Greece, room, partial board in Athens, and museum and site fees. Scholarships available. DEADLINE: JANUARY 15, 2018.

#### FUNDING FOR GRADUATE STUDENTS AND POSTGRADUATES FOR STUDY AT THE ASCSA (FULL ACADEMIC YEAR)

**THE M. ALISON FRANTZ FELLOWSHIP:** Ph.D. candidates and recent Ph.D.s for work in the Gennadius Library. A stipend of \$11,500 plus room, board, and waiver of School fees. DEADLINE: JANUARY 15, 2018.

**THE JACOB HIRSCH FELLOWSHIP:** For projects carried out in Greece, U.S. or Israeli citizens, Ph.D. candidate, writing a dissertation or recent Ph.D. revising a dissertation for publication. A stipend of \$11,500 plus room, board, and waiver of School fees. DEADLINE: JANUARY 15, 2018.

#### FUNDING FOR GRADUATE STUDENTS OR POSTGRADUATES FOR STUDY AT THE ASCSA (SHORT-TERM FELLOWSHIPS)

ARCHAEOLOGICAL INSTITUTE OF AMERICA (AIA) ANNA C. AND OLIVER C.

**COLBURN FELLOW:** Ph.D. candidates and recent Ph.D.s whose field is classical archaeology. Contact the AIA, Boston, MA for information.

Simultaneous application to both the AIA and the ASCSA is required.

Applications completed on website: [www.archaeological.org](http://www.archaeological.org) and <http://www.ascsa.edu.gr/index.php/admission-membership/student-associate-membership>.

Stipend of \$5,500. DEADLINE: JANUARY 15, 2018.

**THE HARRY BIKAKIS FELLOWSHIP:** North American or Greek graduate students researching ancient Greek law or Greek graduate students working on a School excavation. The \$1,875 fellowship is awarded periodically. School fees are waived. DEADLINE: JANUARY 15, 2018.

**COTSEN TRAVELING FELLOWSHIP FOR RESEARCH IN GREECE:** Short-term travel-to-collections award of \$2,000 for senior scholars and graduate students for projects and research at the Gennadius Library. At least one month of residency required. School fees are waived. DEADLINE: JANUARY 15, 2018.

**THE GEORGE PAPAIOANNOU FELLOWSHIP:** Ph.D. candidates or recent Ph.D.s researching Greece in the 1940's and the post-war period. Fellows are required to make use of and refer to the George Papaioannou Papers housed at the Archives of the Gennadius Library. Open to all nationalities. Stipend of €1,000. School fees are waived for a maximum of two months. DEADLINE: JANUARY 15, 2018.

**THE HENRY S. ROBINSON CORINTH RESEARCH FELLOWSHIP:** Ph.D. candidate or Ph.D. for research on a doctoral dissertation or primary publication specifically on Corinth, requiring the use of the resources, archaeological site, and collections at the ASCSA excavations at Ancient Corinth. Open to all nationalities. The Robinson Fellowship may not be held concurrently with another School fellowship. One or more grants for up to three months, maximum amount of stipend is \$4,000. School fees are waived. DEADLINE: JANUARY 15, 2018.

**WIENER LABORATORY RESEARCH ASSOCIATE APPOINTMENTS:** Short-term funding for Ph.D. candidates and postdoctoral scholars from colleges and universities worldwide pursuing archaeological research related to the ancient Greek world at the Wiener Laboratory. Variable amounts up to \$7,000. Term variable, up to nine months. DEADLINE: JANUARY 15, 2018.

#### TRAVELING AND EXCHANGE FELLOWSHIPS FOR GRADUATE STUDENTS AND POSTGRADUATE STUDY

**COULSON/CROSS AEGEAN EXCHANGE, Program of the Council of American Overseas Research Centers (CAORC):** Short-term fellowships for Greek nationals and scholars to pursue research in Turkey under the auspices of the American Research Institute in Turkey (ARIT). Stipend of \$250 per week plus up to \$500 for travel expenses. Submit online application to ASCSA. DEADLINE: MARCH 15, 2018.

**MULTI-COUNTRY RESEARCH FELLOWSHIPS, Council of American Overseas Research Centers (CAORC):** Ph.D. candidates and postdoctoral scholars with research in

the humanities, social sciences, or allied natural sciences requiring travel to several countries with an American overseas research center. Consult CAORC website for application and deadline: [www.caorc.org](http://www.caorc.org).

**THE PAUL REHAK MEMORIAL TRAVELING FELLOWSHIP:** Regular members and Student Associate members already attending the School for the entire academic year. Grant of \$1,000 or grants of lesser amounts. School fees are waived. The purpose is to allow individuals to travel in Greece and Magna Graeca to conduct a research project during the current academic year from September 1, 2016 to July 1, 2017.  
DEADLINE: MARCH 1, 2018.

#### FUNDING FOR SENIOR SCHOLARS FOR STUDY AT THE ASCSA

**KRESS PUBLICATIONS FELLOWSHIPS:** Postdoctoral scholars working on assigned material from excavations at Ancient Corinth, Ancient Agora, Lerna, and affiliated projects of the ASCSA to support research for publication of the excavated material. Grants for at least three months (up to \$10,000) to a maximum of nine months (up to \$30,000).  
DEADLINE: JANUARY 15, 2018.

**NEH FELLOWSHIPS:** Awards for postdoctoral scholars and professionals in the humanities. Terms: Two to four fellowships, five to ten months in duration. Maximum stipend for a five-month project, \$21,000; for a ten-month project, \$42,000. School fees are waived. U.S. citizens or foreign nationals being U.S. residents for three years before application deadline. Applicants must hold their Ph.D. or equivalent terminal degree at the time of application. Submit online application to ASCSA. DEADLINE: OCTOBER 31, 2018.

#### WIENER LABORATORY PROGRAMMATIC POSTDOCTORAL FELLOWSHIP (2018-2021):

Project proposals are welcomed from any archaeological project affiliated with the ASCSA. Both current and former permit holders are eligible to apply. A specific candidate for the fellowship must be named in the application who has received their PhD and has a demonstrable record of research and publication directly relevant to the project. Stipend of \$35,000 per year for three-year term.  
DEADLINE: JANUARY 15, 2018.

For more information about each program or fellowships, please visit <http://www.ascsa.edu.gr/index.php/admission-membership/fellowships-and-grants>

ASCSA programs are generally open to qualified students and scholars at colleges or universities in the U.S. or Canada; restrictions may apply for specific fellowships and programs. The American School of Classical Studies at Athens does not discriminate on the basis of race, age, sex, sexual orientation, color, religion, ethnic origin, or disability when considering admission to any form of membership.

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## ***ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS***

# **THE ANALYSIS OF LATE BRONZE AGE GLASS FROM NUZI AND THE QUESTION OF THE ORIGIN OF GLASS-MAKING**

A. J. Shortland, S. Kirk, K. Eremin, P. Degryse, M. Walton

First published: 25 October 2017 Full publication history

DOI: 10.1111/arc.12332 View/save citation Cited by (CrossRef): 0 articles Check for updates Citation tools

### **Abstract**

This paper re-analyses a considerable corpus of glass from the Late Bronze Age site of Nuzi, found near Kirkuk in Iraq. SEM–WDS and Sr and Nd isotopic analysis were applied, in addition to cataloguing the glass. The work showed that the glass technology at Nuzi was subtly different from contemporary Egyptian sites, using different ways of opacifying and working glass. At least two, perhaps three, Near Eastern production sites are postulated. The range of glass colours and the skill of their application at Nuzi was perhaps not on a par with the Egyptian sites. This led to a reconsideration and review of the accepted wisdom that the Near East is the source of the innovation that is glass-making. This opinion is based on limited textual and iconographic sources and is dominated by an erroneous early date for a very developed Nuzi glass industry along with a few finds of glass vessels in early contexts. Some of this evidence has now been at least questioned, suggesting that glass-making in Egypt, at least as early as the middle of the 15th century bc, and probably earlier, is no later than that in the Near East. It is argued that it is far from clear that the Near East was the source of the innovation and that a more cautious approach would better fit the evidence.

**Please visit the site:**

<http://onlinelibrary.wiley.com/doi/10.1111/arc.12332/abstract?campaign=wolearlyview>

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## ***EIAHΣEΙΣ - NEWS RELEASE***

### **WHO INVENTED ‘ZERO’? BY MANIL SURI**

Carbon dating of an ancient Indian document, the Bakhshali manuscript, has recently placed the first written occurrence of the number zero in the third or fourth century A.D., about 500 years earlier than previously believed. While the news has no practical bearing on the infrastructure of zeros (and ones) underlying our high-tech civilization, it does remind us how indebted we are for this invention. But to whom is this debt owed? And how should it be repaid?

Chauvinistic politicians might loudly trumpet India’s role (as they have, more controversially, in the case of the Pythagorean theorem), but the history of zero remains unsettled enough to still be the subject of continuing quests. The Babylonians used it as a placeholder, an idea later developed independently by the Mayans. The Chinese, at some point in time, indicated it by an empty space in their counting-rod system. Some claim the Greeks flirted with the idea but, finding the concept of the void too frightening in their Aristotelian framework, passed it on to the Indians. The Hindus are generally acknowledged as being the first to formulate it as an independent number — the key to using it in mathematical calculations or binary code. What’s clear is that this history is dominated by non-European civilizations. Truly an alt-right nightmare.

Obviously, there were no intellectual property rights in force back then. Had there been a patent office, it might have ruled, as courts do now, that mathematical advances uncover pre-existing knowledge rather than create anything new — and are hence unpatentable. The conundrum of whether mathematics is discovered or invented is as old as Plato. Certainly, zero displays this duality: The void is as old as time, but it was a human innovation to harness it with a symbol.

In recognition of this innovation, and ignoring all practicalities, suppose someone, somehow, had figured out how to put a price tag on zero. The royalties generated would be staggering — imagine the tab for just your personal use alone! This might lead to a significant redistribution of wealth, most of it going to the developing world.

One difficulty is splitting the payments, since no one could claim exclusive “ownership” of zero’s creation. I asked my “History of Mathematics” class to come up with an exact breakdown based on zero’s provenance, something that, coincidentally, we had just discussed when the carbon dating news broke. Not unexpectedly, India fared best, with 42 percent of the proceeds, though students directed it be split with neighboring countries — after all, the manuscript was found in what is now Pakistan (I can already hear the Indian ministers howl their protests).

Babylon ended up with 18 percent, which if allotted to Iraq, the present-day country of its location, might be just compensation for the years of war endured. Greece came next, with a surprising 15 percent — perhaps my class felt the country was getting shortchanged for all its other mathematical contributions. The Mayans raked in 14 percent, which means Mexico would be rolling in so much money from its share that it might be the one clamoring (and paying) for a wall. My class’s most left-leaning group declared it wouldn’t disburse the money at all, “so as not to encourage capitalism.”

Of course, the exercise was pure fantasy for many reasons; any compensatory scheme would be dead on arrival based on the mention of “reparations.” And yet it highlighted the fact that there were cultures and peoples that parented zero, whose descendants may not be doing as well now. If not financial recompense, is at least some enhanced ethical responsibility toward them owed?

If so, the primary onus might fall on tech companies, arguably the biggest users of this resource. Right now, their prize target is India, with Microsoft, Google and Facebook all vying to bring its enormous population online. These giants might point out that they’re already being altruistic by offering free connectivity, through schemes that will plug in rural areas, vitalize the economy and transform the country — and just happen to add hundreds of millions of potential customers to their rosters for a variety of ads and e-products. Could it be a coincidence that Microsoft, for instance, has also been investing heavily in future cloud services, cybersecurity and e-commerce for India?

Think of it. The companies will use the indigenously developed resource of zeros and ones (the Arabs got their numerals from India, after all), package them into new services and products, and sell them back. India has lived through such irony before. The British Empire took her raw cotton and sold it back as finished garments, destroying the local textile industry and helping lower India’s share of the world gross domestic product to 3 percent from 23 percent.

Fortunately, the parallel flounders. The finished e-products will mostly be manufactured in India, even if backed by foreign investment.

Also, the country is wiser: It will not succumb easily to a new cyber-colonialism. Last year, under a broader “net neutrality” decision, the government banned Facebook’s “Free Basics” plan, which offered free Wi-Fi but only to websites of the company’s choosing (Facebook, undeterred, is already marketing a replacement). This year, it also declined a bid from Microsoft to offer connectivity through old television bands. Instead, under pressure from Indian cellular operators, the bands will be auctioned off.

Whether Indian tech companies will prevail remains to be seen. What’s clear is that vigorous market competition is underway to control all those zeros and ones. Despite my liberal student group’s disapproval, zero encourages capitalistic forces, after all.

In fact, zero is essential to much of human endeavor; it has become a fundamental part of our legacy, too seemingly immutable for any kind of compensatory reckoning. And yet the Bakhshali manuscript reminds us that zero wasn’t always at hand. Rather, it was the intellectual product of cultures perhaps far different from our own, of peoples and regions that may have subsided but could once again rise to dominance.

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Manil Suri, the author of the novel “The City of Devi,” is a mathematics professor at the University of Maryland, Baltimore County.

Please visit the site: <https://www.nytimes.com/2017/10/07/opinion/sunday/who-invented-zero.html>

# **ANCIENT GRAIN REVEALS THE DEVELOPMENT OF THE EARLIEST CITIES - HOW WERE THE FIRST CITIES ESTABLISHED AND HOW DID THEY DEVELOP? THE ANALYSIS OF 8,000 YEARS OLD GRAIN FROM ANCIENT MESOPOTAMIA HAS SOME ANSWERS, BY RASMUS KRAGH JAKOBSEN**

A new study shows that the Mesopotamian farmers during a food crisis did not try to farm their land more intensively, but converted more land to arable land. (Photo: Shutterstock) Ancient grain from the Middle East has given scientists an insight into how some of the world's first cities developed.

Small, charred remains of grain that are at least 8,500 years old provide a fingerprint of ancient farming and how villages suddenly expanded over the course of a few hundred years into the large city states in ancient Mesopotamia—a historical area in present-day Syria and Iraq.

The grain can now reveal that as cities expanded and the need for food grew, so did the land dedicated to growing crops.

“It’s very exciting because until now the theory was that as the towns grew, they cultivated the land more intensively,” says archaeobotanist Mette Marie Hald from the National Museum of Denmark, who participated in the study.

“The study gives us an indirect indication of the political control of cities and how we imagine cities were established,” she says.

## **New knowledge on early city life**

Arable farming made the cultivatable land valuable, and when land was inherited it could have laid the ground for a ruling elite of farmers and the beginnings of social inequality.

“It’s exciting and groundbreaking research, and the study strikes to the heart of many years of debate surrounding the economy and organisation of the early city societies,” says Tim Skuldbøl, archaeologist from the University of Copenhagen who also studies early urbanism but did not take part in the new study.

“Today, most people live in a city but don’t understand how they came about and why cities are organised the way they are. This archaeological research is important to understand the basic sociological building blocks that helped to form our urban societies today,” says Skuldbøl.

The study is published in the scientific journal, Nature Plants.

### **Villages shot up as settlement mounds**

In the Khabur Valley in Northeast Syria, runs one of history's most important rivers, the Euphrates. Together with the Tigris River, they define the region of Mesopotamia—which also means land between the rivers—where the world's first civilisations emerged.

In the valley, archaeologists have found several ancient cities. One of them is Tell Brak, which was described by British archaeologist Sir Max Mallowan in the 1930s.

At first glance, Tell Brak looks like a small hill, but preserved under the surface are houses built upon houses.

“They have torn down houses and built on top of the old foundations, so the occupation level has risen over thousands of years. Now, it's 40 to 60 metres high and like a small mountain,” says Hald.

### **Food for 30,000 inhabitants**

Among the remains, archaeologists have discovered temples, large administrative buildings, and even long sewage pipes. But how the city grew to be so big, was still a mystery.

Eight thousand years ago, arable farming was just beginning with grain fields of wheat and barley. At this time, animals, such as cows, goats, and sheep, were domesticated.

At this time, people lived in villages of perhaps 100 to 200 people, and then suddenly, some 6,000 years ago, over a period of a few centuries, these villages grew to cities of more than 10,000 inhabitants.

The development of arable farming, which provided food for all these people, is a key piece of the puzzle to understand how these cities grew so quickly.

### **Atomic physics meets archaeology**

In recent years, archaeologists have obtained a new peep-hole that allows them to see back in time. Amazingly enough, packets of information have survived 8,000 years in the form of grain from burned down houses.

“It's a bit mean, but when a house burns down, we archaeologists are really happy because then grains are burnt and don't rot. They can lie in the earth for thousands of years,” says Hald.

Most of us think of fire as a frightful, destructive power, but grain is strong enough to survive and save its secrets.

In the early days of arable farming, farmers made their own decisions about what to grow and how to grow it. (Photo: Shutterstock) Every little grain records a piece of history of the conditions under which it was cultivated, in the form of stable isotopes of nitrogen and carbon.

### **Two routes to large towns**

The scientists measured isotopes in 276 samples of grain discovered in Tell Brak and four other ancient cities in the northern region of Mesopotamia, dating to between 8,000 and 4,000 years ago: Tell Leilan, Tell Sabi Abyad, Tell Zeidan, and Hamoukar.

They compared the analysis with modern samples from test fields in France, Spain, Morocco, and Denmark, where old varieties of grain are grown under controlled conditions with manuring and irrigation.

Together with the knowledge of ancient climate, scientists can estimate very precisely how much or how little manure or irrigation was used. By comparing this with the archaeological layer which the samples came from, they could follow the development of agricultural practices through time.

The bigger the cities became, the less manure they used, which is surprising as further south in Iraq, they used widespread irrigation and farmed the land very intensively.

But now they know that practices to the north were very different, which means that there were at least two ways in which cities could expand.

Farmers made their own choices about their grain. The differences are probably closely related to the climate: Not enough rain in the dry south requiring irrigation versus the wetter northern region requiring less work-intensive input, where food output was boosted by converting more of the landscape to fields.

The grains also held clues of the socio-economic system of the time, revealing who held power in these early cities.

“It’s interesting that we find large pots filled with different crops in private homes, and from the isotope values we can see that they had very different manuring levels, so they must have come from different fields,” says Hald.

“It shows us that individual households had different fields around the town, where some were manured and others weren’t,” she says.

In other words, the grain suggests that there was no centralised arable economy, but that each farmer made their own choices.

### **Large farmers had power**

If a king or nobleman controlled the fields, then all of the harvest would probably be collected centrally and then distributed. In this case, archaeologists might expect to see more consistent isotope values in the grain found in various households.

“Later, we see massive grain stores, where the crops must have come in from all the fields and stored in these large rooms, and distributed among the population,” says Hald.

“So what we see here is an indirect indication of how a town became controlled, and it doesn’t look like there was a strong centralised power at this time, and the society—at least agriculturally speaking—is still rather egalitarian,” she says.

In later deposits, the archaeologists found remains of temples, large storerooms, and administrative buildings, which suggests a central power had developed from the early agribusiness.

So it appears that the development began with a collective of important farmers.

“The extensive agriculture paved the way for some powerful families. You can say roughly that instead of a central royal power, in terms of economy, these cities may have been controlled by a team of large families,” says Hald.

**Please visit the site: <http://sciencenordic.com/ancient-grain-reveals-development-earliest-cities>**

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## **CATCH THE BUZZ - WORLD'S OLDEST BEEHIVES FARMED IN ISRAEL AT TIME OF PROPHET ELISHA, BY ADAM ELIYAHU BERKOWITZ**

“My son, eat honey, for it is good; Let its sweet drops be on your palate.” Proverbs 24:13  
(The Israel Bible™)

Beeswax was found at the bottom of the ancient beehives excavated at Tel Rehov in the Jordan Valley, the oldest ever discovered.

An Israeli archaeologist made a remarkable and rare discovery to ensure that all of Israel has a year as sweet as honey, while helping understand the Bible just a little bit better.

Hebrew University professor Amihai Mazar was exploring an archaeological dig at a site in the Jordan Valley called Tel Rehov when he found evidence of beekeeping 3,000 years ago, the oldest evidence of this industry ever discovered.

“Beekeeping is not described in the Bible and Israel is not especially suited for beekeeping, no more or less than any other place with flowers,” Professor Mazar said. “But even today, if you go out to the fields in that region, there are hives in the field.”

Biblical scholars believe that when the Bible mentions honey, it is usually referring to honey made from dates. Professor Mazar pointed to his discovery as evidence that the Bible could also be referring to honey from bees.

Just last week, Jews around the world dipped apples in honey in hopes of a blessedly sweet New Year. This find may indicate that the link between Jews and honey is more ancient than previously thought.

The archaeologists did not expect to find beehives while digging, but there was no other explanation for the discovery.

“We found a long row of clay cylinders, each one of them approximately two and a half feet long and about one foot in diameter,” Professor Mazar told Breaking Israel News. The clay pots, made of unbaked clay mixed with straw, were piled three high.

At least 180 hives were found. (Courtesy Amihai Mazar)

The researchers eventually concluded they had discovered the oldest beehives in the world. Sealed with removable lids at one end, the other end of the cylinder had a small hole for the bees to enter. The discovery was unprecedented, and no other ancient hives have been found in Israel.

“This is the only archaeological dig in Israel at which beehives have been found,” Dr. Mazar said. “It was also unusual since normally, beehives are kept outside of the city.



We were surprised when we found the hives where they were – inside a large and thriving city.”

Many archaeologists believe the site is where the Prophet Elisha lived at approximately the same time bees were buzzing around.

“Though it was not mentioned in the Bible, this was a very large and important city in the time of King Achav and Elijah the prophet,”

Professor Mazar said. He estimated that at the time, the city was home to approximately 2,500 people.

Researchers believe there were at least 180 hives housing more than a million bees, with each hive producing about 11 pounds of honey each year.

“These are the most ancient bees ever found in the world,” Professor Mazar said. “They did not arrive in Israel by themselves, so there had to be thriving trade between Israel and Turkey at the time.”

**Please visit the site: <http://www.bee-culture.com/catch-buzz-worlds-oldest-beehives-farmed-israel-time-prophet-elisha> [Go there for pix]**

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## **HOW AERIAL THERMAL IMAGERY IS REVOLUTIONIZING ARCHAEOLOGY DARTMOUTH-LED STUDY PRESENTS GUIDE ON HOW TO USE AERIAL THERMOGRAPHY**

A Dartmouth-led study has demonstrated how the latest aerial thermal imagery is transforming archaeology due to advancements in technology. Today's thermal cameras, commercial drones and photogrammetric software has introduced a new realm of possibilities for collecting site data. The findings, published in *Advances in Archaeological Practice*, serve as a manual on how to use aerial thermography, as the co-authors hope to inspire other researchers to apply this methodology in their work.

Archaeologists have long used thermal infrared images to locate buried architecture and other cultural landscape elements. The thermal infrared radiation associated with such archaeological features depends on several variables, including the make-up of the soil, its moisture content and vegetation cover. Past conventional geophysics methods, such as fieldwalking, enabled archaeologists to obtain field data across one hectare of a site per day. But now, aerial thermography makes it possible to gather field survey data across a much larger area in much less time.

New aerial thermography has other advantages, as well. Older cameras were unable to record full spectrum data or temperature data for every pixel of an image. Today's radiometric thermal cameras coupled with small inexpensive, easy to fly drones, which can be controlled by a smartphone or tablet, have made aerial thermography more accurate, comprehensive and accessible. Mapping multiple aerial images together has also become easier through new photogrammetric software, which automatically aligns images and features ortho-image capabilities, which corrects an image to make the scale uniform.

The researchers conducted case studies at six archaeological sites in North America, the Mediterranean and the Middle East, to assess the effectiveness of aerial thermal surveys. They analyzed how weather, environment, time of day, ground cover, and archaeological features may affect the results, and compared their findings to earlier research and historical images.

For example, at an ancestral Pueblo settlement in Blue J, N.M, the researchers were able to map detailed architectural plans of a dozen ancient house compounds-- a discovery enabled by the site's optimal conditions, the soil matrix, low density ground cover, and the environmental conditions at the time of the aerial thermography. They were also able to recognize traces of long-removed historic buildings and pathways at the Shaker Village in Enfield, N.H.

"A lot of what we've learned from our research to date shows how much local environmental conditions and the timing of surveys can impact how well thermal imagery will reveal archaeological remains. Yet, the more we understand these issues,

the better we are able to deploy the technology. I think our results demonstrate aerial thermography's potential to transform how we explore archaeological landscapes in many parts of the world," says Jesse Casana, an associate professor of anthropology at Dartmouth, who has been using drones in aerial thermography for five years in his archaeological research.

Casana is available for comment at: [jesse.j.casana@dartmouth.edu](mailto:jesse.j.casana@dartmouth.edu).

Please visit the site: [https://www.eurekalert.org/pub\\_releases/2017-09/dc-hat092117.php](https://www.eurekalert.org/pub_releases/2017-09/dc-hat092117.php)

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## **AMBITIOUS PROJECT AIMS TO REUNITE ANCIENT CITY OF EPHEBUS WITH SEA**

Ambitious project aims to reunite ancient city of Ephesus with sea The ancient city of Ephesus, three kilometers southwest of the present-day town of Selçuk in the western province of İzmir, is set to once again have a harbor on the Aegean coast, according to an ambitious new project.

In the ancient era Ephesus, which is today one of Turkey's top tourist attractions, was connected to a harbor on the Aegean Sea with a broad canal, but the port and the canal have silted up by the Cayster River (Küçük Menderes) in the years since. The area around Ephesus has turned into near-swampland and currently the city is six kilometers from the sea.

The 2nd regional director at State Hydraulic Works, Ali Fuat Eker, was quoted as saying by state-run Anadolu Agency that an "Antique Canal Project" would refill the canal and eventually link the ancient harbor to the sea once again. A 6,130-meter section of the canal has been covered with alluvium over the centuries.

Eker said the project would also deepen and enlarge the canal, adding that the tender for the project will be held on Oct. 19 this year, with construction starting in February or March 2018.

He claimed that it would be carried out "carefully in order to not damage the historic fabric."

"We have received the environmental impact assessment report needed for the tender process ... The first stage of the project will be finished by March 2019," Eker said.

The first stage of the project is forecast to cost around 30 million Turkish Liras (\$8.5 million), he added.

"With the realization of the Antique Canal Project, we will return the region to its situation 2,500 years ago," ruling Justice and Development Party (AKP) İzmir deputy Atilla Kaya claimed, saying the project would further boost tourist numbers visiting Ephesus as they would be able to visit via the new canal route.

Ephesus, which is a UNESCO World Heritage Site, was one of the seven churches of Asia that are cited in the Book of Revelation, and the Gospel of John may have been written in the ancient city. The city, the library façade of which is particularly famous, was also the site of several 5th-century Christian councils.

The ruins of Ephesus are a favorite international and local tourist attraction, partly owing to their easy access from Adnan Menderes Airport and via the port of Kuşadası. Officials praise Ephesus as a key "advertisement" for Turkey, the tourism sector of which has struggled amid political troubles in recent years.

Please visit the site: <http://www.hurriyetdailynews.com/ambitious-project-aims-to-reunite-ancient-city-of-ephesus-with-sea-118416>

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## **OLDEST RECORDED SOLAR ECLIPSE HELPS DATE THE EGYPTIAN PHARAOKS**

Researchers have pinpointed the date of what could be the oldest solar eclipse yet recorded. The event, which occurred on 30 October 1207 BC, is mentioned in the Bible and could have consequences for the chronology of the ancient world.

If these words are describing a real observation, then a major astronomical event was taking place - the question for us to figure out is what the text actually means.

Using a combination of the biblical text and an ancient Egyptian text, the researchers were then able to refine the dates of the Egyptian pharaohs, in particular the dates of the reign of Ramesses the Great.

The results are published in the Royal Astronomical Society journal *Astronomy & Geophysics*.

The biblical text in question comes from the Old Testament book of Joshua and has puzzled biblical scholars for centuries. It records that after Joshua led the people of Israel into Canaan – a region of the ancient Near East that covered modern-day Israel and Palestine – he prayed: “Sun, stand still at Gibeon, and Moon, in the Valley of Aijalon. And the Sun stood still, and the Moon stopped, until the nation took vengeance on their enemies.”

“If these words are describing a real observation, then a major astronomical event was taking place - the question for us to figure out is what the text actually means,” said paper co-author Professor Sir Colin Humphreys from the University of Cambridge’s Department of Materials Science & Metallurgy, who is also interested in relating scientific knowledge to the Bible.

“Modern English translations, which follow the King James translation of 1611, usually interpret this text to mean that the sun and moon stopped moving,” said Humphreys, who is also a Fellow of Selwyn College. “But going back to the original Hebrew text, we determined that an alternative meaning could be that the sun and moon just stopped doing what they normally do: they stopped shining. In this context, the Hebrew words could be referring to a solar eclipse, when the moon passes between the earth and the sun, and the sun appears to stop shining. This interpretation is supported by the fact that the Hebrew word translated ‘stand still’ has the same root as a Babylonian word used in ancient astronomical texts to describe eclipses.”

Humphreys and his co-author, Graeme Waddington, are not the first to suggest that the biblical text may refer to an eclipse, however, earlier historians claimed that it was not possible to investigate this possibility further due to the laborious calculations that would have been required.

Independent evidence that the Israelites were in Canaan between 1500 and 1050 BC can be found in the Merneptah Stele, an Egyptian text dating from the reign of the Pharaoh Merneptah, son of the well-known Ramesses the Great. The large granite block, held in

the Egyptian Museum in Cairo, says that it was carved in the fifth year of Merneptah's reign and mentions a campaign in Canaan in which he defeated the people of Israel.

Earlier historians have used these two texts to try to date the possible eclipse, but were not successful as they were only looking at total eclipses, in which the disc of the sun appears to be completely covered by the moon as the moon passes directly between the earth and the sun. What the earlier historians failed to consider was that it was instead an annular eclipse, in which the moon passes directly in front of the sun, but is too far away to cover the disc completely, leading to the characteristic 'ring of fire' appearance. In the ancient world, the same word was used for both total and annular eclipses.

The researchers developed a new eclipse code, which takes into account variations in the Earth's rotation over time. From their calculations, they determined that the only annular eclipse visible from Canaan between 1500 and 1050 BC was on 30 October 1207 BC, in the afternoon.

If their arguments are accepted, it would not only be the oldest solar eclipse yet recorded, it would also enable researchers to date the reigns of Ramesses the Great and his son Merneptah to within a year.

“Solar eclipses are often used as a fixed point to date events in the ancient world,” said Humphreys. Using these new calculations, the reign of Merneptah began in 1210 or 1209 BC. As it is known from Egyptian texts how long he and his father reigned for, it would mean that Ramesses the Great reigned from 1276-1210 BC, with a precision of plus or minus one year, the most accurate dates available. The precise dates of the pharaohs have been subject to some uncertainty among Egyptologists, but this new calculation, if accepted, could lead to an adjustment in the dates of several of their reigns and enable us to date them precisely.

#### Reference

Colin Humphreys and Graeme Waddington. 'Solar eclipse of 1207 BC helps to date pharaohs.' *Astronomy & Geophysics* (2017). DOI: 10.1093/astrogeo/atx178.

**Please visit the site: <https://www.cam.ac.uk/research/news/oldest-recorded-solar-eclipse-helps-date-the-egyptian-pharaohs>**

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## **SHIPWRECK DISCOVERED OFF OMAN REVEALS SECRETS OF 500-YEAR-OLD NAVIGATION DEVICE, BY CALLUM PATON**

Experts studying treasures recovered from a rare shipwreck off the coast of Oman have identified one of the mysterious objects as the oldest navigation device ever found.

Marine archaeologists working with artefacts from the late 15th century ship, the Esmeralda, have said the round metal object is an astrolabe, an instrument used by Renaissance navigators to measure the altitude of the Sun.

The BBC reported the object was recovered from one sunken ship that had been part of a fleet led by Portuguese explorer Vasco de Gama, the first individual to navigate directly to India from Europe.

David Mearns, who led the excavation of the sunken ship, said he felt honored to have been involved in the discovery. "It's a great privilege to find something so rare, something so historically important, something that will be studied by the archaeological community and fills in a gap," he said.

The navigation device was one 3,000 items brought back from the sea bed by the Blue Water Recovery team in 2014. The bronze disk emblazoned with heraldic emblems measures 6.8 inches in diameter.

"It was like nothing else we had seen and I immediately knew it was something very important because you could see it had these two emblems on it," Mearns said.

"One I recognized immediately as a Portuguese coat of arms...and another which we later discovered was the personal emblem of Don Manuel I, the King of Portugal at the time," he added.

Experts from the University of Warwick in the United Kingdom had to be brought on board to prove the object was an astrolabe. The item's shape and size indicated its use in navigation, however, because it had no scientific markings the excavators had to investigate to confirm their suspicions.

Laser scanning analysis carried out on the artifact showed indentations around the disk, each of which was separated by five degrees. Mariners would have used the grooves to measure the height of the sun above the horizon. Using the measurement, they could ascertain their location on long voyages.

Astrolabes of the kind discovered are remarkably rare. Only 108 are known to modern historians and this particular find appears to be the earliest example by a couple of decades.



"We know it had to have been made before 1502, because that's when the ship left Lisbon and Dom Manuel didn't become King until 1495, and this astrolabe wouldn't have carried the emblem of the king unless he was king," Mearns said

"I believe it's probably fair to say it dates roughly to between 1495 to 1500. Exactly what year we don't know—but it is in that narrow period," he added.

**Please visit the site: <http://www.newsweek.com/shipwreck-discovered-oman-reveals-secrets-500-year-old-navigation-device-691280> [Go there for pix]**

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## **HUNDREDS OF MYSTERIOUS STONE** **‘GATES’ FOUND IN SAUDI ARABIA’S** **DESERT, BY NICHOLAS ST. FLEUR**

Google Earth has unlocked the gates to ancient mysteries around the world.

For years, amateur and professional archaeologists have used the search engine’s satellite imagery to discover mysterious earthworks in Kazakhstan, Roman ruins, a forgotten fortress in Afghanistan and more.

In the past decade, Google Earth also has helped identify thousands of burial sites and other “works of the old men,” as they’re called, scattered across Saudi Arabia.

Now, archaeologists have uncovered nearly 400 previously undocumented stone structures they call “gates” in the Arabian desert that they believe may have been built by nomadic tribes thousands of years ago.

“We tend to think of Saudi Arabia as desert, but in practice there’s a huge archaeological treasure trove out there and it needs to be identified and mapped,” said David Kennedy, an archaeologist at the University of Western Australia and author of a paper set to appear in the November issue of the journal *Arabian Archaeology and Epigraphy*.

“You can’t see them very well from the ground level, but once you get up a few hundred feet, or with a satellite even higher, they stand out beautifully.”

Since 1997, Dr. Kennedy has flown planes and helicopters over Saudi Arabia’s neighbor Jordan, photographing the angular and wheel-like structures scattered over its lava field or harrat. Not much is known about the people who built the edifices, but they are thought to have constructed them at least 2,000 years ago and maybe as far back as 9,000 years ago, according to Dr. Kennedy. They are believed to be the ancestors of the modern-day Bedouin people in the region.

The most well-known of the basalt boulder structures are the “kites,” which were first identified by air pilots in the 1920s. Each looks like a child’s kite, complete with strings and long fluttering tails that are two-dimensionally flattened into the ground.

Archaeologists think ancient nomadic tribes used the kites, which can be more than a mile long, for hunting. The structure’s two long converging walls would funnel stampedes of gazelles into the body of the kite, where they would be slaughtered.

But the lava fields extend beyond Jordan’s borders into countries like Syria and Saudi Arabia. So do their mysteries. Saudi Arabia in particular offers a wealth of harrats that are just out of Dr. Kennedy’s reach.

“We would have loved to fly across into Saudi Arabia to take images. But you never get the permission,” he said. “And then along comes Google Earth.”

In 2004, Dr. Abdullah Al-Saeed, a neurologist and founder of the Desert Team, a group of amateur archaeologists in Saudi Arabia, explored the bleak lava field known as Harrat Khaybar. He saw walls of stones stacked about three feet high, but said that he did not appreciate their unique design at that time.

Then in 2008 he returned to the same spot from his desktop computer.

“When I saw the updated images of Harrat Khaybar from Google Earth, I was literally stunned and could not sleep that night,” Dr. Al-Saeed said in an email. “Flying like a bird all over the Harrat from one enigmatic structure to another! How come we passed by these structures without appreciating their design?”

He spoke to his colleagues, and they set out to investigate the most striking structure they saw in person. The Harrat Khaybar was more than 550 miles from Riyadh, the capital of Saudi Arabia. So they took a plane to a nearby city, rented a car and set out for the volcanic domes. In order to navigate the rocky terrain, they had to do much of their exploration on foot through the lava field.

“The question we always discuss while investigating them is, why here? Why in this stony, frightful, rugged land?” he said. He snapped several photos and sent them along with the Google images to archaeologists like Dr. Kennedy for feedback.

“Absolute bafflement.” That’s what Dr. Kennedy said he felt when he first saw the satellite images. Suddenly, he was confronted with structures quite different from anything he had ever seen before. He called them gates because when looked at horizontally, they resemble a simple fence with two thick upright posts on the sides connected by one or more long bars.

“They don’t look like funerary, for disposing of dead bodies. They don’t look like structures where people lived, and they don’t look like animal traps,” he said. “I don’t know what they are.”

For nearly a decade, he has painstakingly cataloged nearly 400 gates.

In 2011, his work was featured by Google in a video (for which he was paid). The longest gate he had identified was more than 1,600 feet long, though most were between 160 and 500 feet long. Sometimes the posts were as thick as 30 feet. One gate is intertwined with a kite.

Next he hopes to get accurate dating of the gates, which he suspects may in some cases be older than the kites, and perhaps the oldest man-made structures in the landscape. He invites armchair archaeologists to search the harrats online and share any finds with him.

“More will be found as more people get involved in scouring the landscape from satellite imagery,” he said.

Stephan Kempe, a retired professor of physical geology at Technische Universität Darmstadt in Germany, who was not involved in the paper, called the gate structures interesting and said that the new study was one of a series of papers describing previously unnoticed structures in the Saudi Arabian lava fields.

“There are many other features that have only recently been understood as forming classes of prehistoric ‘geoglyphs’ that were widespread in an area thought to be very barren and devoid of human impact,” he said in an email.

He added that he would have liked to have seen some suggestions from Dr. Kennedy as to what the gates may have been used for, if only to dissuade people from speculating as to extraterrestrial origins, as they have regarding the Sphinx and the Nazca Lines in Peru.

Still, the new findings tell of a time when the climate and ecology of Saudi Arabia was most likely much different from today, he said. Given the differences, “the mind of people in the past is not that easily read.”

**Please visit the site: <https://www.nytimes.com/2017/10/19/science/saudi-arabia-gates-google-earth.html> [Go there for pix]**

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## **THE STORY BEHIND THAT 2,000-YEAR-OLD THRACIAN CHARIOT YOU SAW ON REDDIT, BY OWEN JARUS**

The photo of an ancient Thracian chariot alongside the bones of two horses and a dog has quickly risen to the top of Reddit today (Oct. 13), with more than 65,000 likes. But what is so exciting about the discovery, and who was buried within the chariot?

A team of archaeologists led by Veselin Ignatov, of the Istoricheski muzej Nova Zagora, a museum in Bulgaria, discovered the 2,000-year-old wooden chariot in 2008. It was covered in bronze and would have been decorated with scenes from Thracian mythology that are now difficult to see. Its exact age is uncertain and may be closer to 1,800 years old.

In 2009, Ignatov and his team also found a brick tomb, containing the remains of a man dressed in what appears to be armor, near the chariot. The man was buried with several items, including gold coins, gold rings and a silver cup showing a depiction of the Greek god Eros (the Roman equivalent was Cupid). He would have been a nobleman or possibly even a ruler who lived in ancient Thrace, in what is now Bulgaria. [In Photos: Early Bronze Age Chariot Burial]

Chariot burials like this are commonly found in Bulgaria. The practice of noblemen being buried near chariots seems to have started in Bulgaria about 2,500 years ago, Ignatov wrote in a paper published in 2007 in the journal *Archaeologia Bulgarica*. He noted that the practice was especially popular during the time of the Roman Empire, which lasted from roughly 2,100 to 1,500 years ago.

Though the people of some other regions of the Roman Empire also sometimes buried their noblemen near chariots, this practice was "by far most popular and long-standing in Thrace," Ignatov wrote in the journal article. "In all cases, the chariots represent prestige, power and authority," Ignatov wrote, noting that the chariots were probably intended to be used by the deceased in the afterlife.

At the time of the burial, the horses that pulled the chariot likely would have been killed. Animal offerings such as pigs, dogs, sheep and deer would have been made to the gods, along with libations (such as wine), Ignatov wrote. Sometimes, the chariots themselves were dismantled or smashed apart before being buried, Ignatov wrote.

Because chariot burials are common in Bulgaria, and sometimes have rich burial goods, looters try to find them and sell the artifacts on the black market, Ignatov noted. This means that archaeologists in Bulgaria are often racing to discover and excavate chariot burials before looters find and pillage them.

Since the archaeologists excavated this chariot burial before looters got to it, the artifacts can be displayed publicly in a museum, and pictures showing the chariot burial are being shared publicly on Reddit and other forms of social media.

Please visit the site: <https://www.livescience.com/60678-thracian-chariot-on-reddit-explained.html>

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**ASP – OR ASH? CLIMATE HISTORIANS**  
**LINK CLEOPATRA'S DEMISE TO VOLCANIC**  
**ERUPTION - STUDY OF ICE-CORE RECORDS**  
**AND ANCIENT EGYPTIAN DOCUMENTS**  
**SUGGESTS ENVIRONMENTAL FORCES**  
**HELPED SEAL THE LAST PTOLEMAIC**  
**RULER'S FATE IN 30BC,**  
**BY HANNAH DEVLIN**

The fall of Cleopatra's Egypt to Augustus, the first Roman emperor, is usually told as a melodramatic power struggle between elites on the world stage.

Cleopatra famously forged a doomed political alliance with the Roman general Mark Antony, who was also her lover. But when their combined forces were defeated at the battle of Actium, the pair killed themselves and Egypt became a province of the newly formed Roman empire.

However, a new analysis suggests the seeds of Cleopatra's defeat may have been sown a decade earlier by environmental forces beyond her control. It links a massive volcanic eruption – which probably happened somewhere in the Tropics, although the team is not sure – with severe disruption to the seasonal flooding of the Nile, and devastating consequences for Egyptian agriculture.

The study, based on evidence from ice-core records of eruption dates, the Islamic Nilometer (an ancient history of Nile water levels) and Ancient Egyptian documentation of social unrest, suggests that a giant volcanic eruption in 44BC may have suppressed rainfall, leading to famines, plague and social unrest. Ultimately, the authors argue, this may have weakened Cleopatra's hold on power a decade before her defeat in 30BC, changing the course of world history.

The team found a strong correlation between more recent volcanic eruptions and severe dips in Nile flooding

Francis Ludlow, a climate historian at Trinity College Dublin, and co-author of the study, said: "We've shown evidence that the failure of these floodwaters are connected to things like revolt and sales of land, and these are triggering social stresses."

Previously historians have focused on the downward spiral of the 300-year Ptolemaic dynasty, of which Cleopatra was the final ruler, driven by infighting, decadence and incest, with siblings routinely married for political reasons.

"They are portrayed as these horrible, drunken, womanising despots, literally drunken idiots who can't run the country," said Joe Manning, a historian at Yale University and also a co-author. "The Romans took a really grim view of these guys. Probably unfairly."

“We have a more complex story,” Manning added. “We’re saying that the environment and Nile behaviour was important for understanding the economy.”

Egyptian agriculture was critically dependent on the annual flood of the Nile, due the almost total absence of rainfall inland. “If the flood doesn’t rise high enough, you just don’t grow anything,” said Ludlow. “It can be catastrophic.”

Ancient Egyptian treasures uncovered in tomb near Valley of the Kings

### **Read more**

Ptolemaic rulers developed extensive grain stores to buffer against annual variation in flooding, but extreme water shortage remained a vulnerability.

The new paper links shows that the biggest volcanic eruption in 2,500 years, marked by a spike in the sulphate content in ice-core records, occurred somewhere in the world in 44BC. Separately, the team found a strong correlation between more recent volcanic eruptions and severe dips in Nile flooding, as shown in data from the Islamic Nilometer, the longest-known annually recorded hydrological record, which started in 622 AD.

Giant eruptions inject vast quantities of sulphur dioxide into the stratosphere, which form aerosols that block sunlight. This reduces the amount of water evaporating from oceans and lowers rainfall.

The team also found references to famines, revolts and the desertion of land in numerous papyrus records, linked to other eruptions seen in ice-core data in 209BC and 238BC. And Cleopatra’s doctor wrote a treatise on the plague following the 44BC eruption, which could have been triggered by mass migration to cities during a famine.

New research may resolve a climate ‘conundrum’ across the history of human civilization

The paper comes as a growing number of academics are turning to climate records, genetic and disease data to reinterpret some of the most significant events in history – although the conclusions are not universally accepted.

“There’s a distrust among historians of attributing big historical events to an environmental influence,” said Ludlow. “People don’t like to feel that what’s happening in society is beyond their control. They have preferred to explain history through what the great men of history were doing.”

“We’re not saying ‘throw out the history books’ – we’re just saying here’s a new angle,” he added.

The findings are published in the journal Nature Communications.

**Please visit the site: <https://www.theguardian.com/science/2017/oct/17/asp-or-ash-climate-historians-link-cleopatra-demise-volcanic-eruption-nile>**



## **ROMAN AUDITORIUM UNEARTHED UNDER WESTERN WALL IN JERUSALEM, BY SARAH GIBBENS**

Jerusalem Find May Have Been Ancient Music Hall

While excavating near the Western Wall, archaeologists discovered a public space capable of seating 200 people.

What can an unfinished Roman theater tell us about a tumultuous period in ancient Jerusalem? Quite a lot, say archaeologists.

The Israeli Antiquities Authority recently chipped away at understanding the region's distant past by announcing this week that recent excavations uncovered the remains of what they believe was once a small theater or public space. The discovery was made as archaeologists were excavating parts of the Western Wall, one of the most revered structures in the Jewish faith.

The ancient wall encases what the Jewish people refer to as the Temple Mount and what Muslims refer to as Haram esh-Sharif. Today, the religious site has major significance for Christian, Jewish, and Muslim faiths.

Archaeologists began excavations in the hopes of dating the Wilson's Arch, an ancient stone bridge that led to the Temple Mount site. Bits and pieces of relics, such as pottery and coins, have been found under the arch before, but archaeologists were surprised when excavations revealed an entire Roman theater. It's the first Roman public structure of its kind to have been found in the city.

"We did not imagine that a window would open for us onto the mystery of Jerusalem's lost theater," the IAA said in a release. "There is no doubt that the exposure of the courses of the Western Wall and the components of Wilson's Arch are thrilling discoveries that contribute to our understanding of Jerusalem. But the discovery of the theater-like structure is the real drama."

"It's in this completely enclosed space. It's a very small, but very fine theater," said Jodi Magness, an archaeologist and professor at the University of North Carolina at Chapel Hill. She was visiting the city with a tour group and was coincidentally able to view the structure shortly after it was announced.

The remains were unearthed from more than 26 feet of rubble, which covered stones that hadn't seen the light of day in nearly 2,000 years. Initial dating of the Roman stones suggests the site was likely built during the second century A.D. Archaeologists concluded the structure would have been able to seat about 200 people, a relatively small number. By comparison, the Colosseum in Rome can seat an estimated 50,000 people.

Due to its small size, archaeologists theorized the structure may have been used as an odeon, a small concert venue, or a bouleuterion, an assembly house used by public figures.

The find provides physical evidence of what was written in ancient records about life in Jerusalem under the Roman Empire's rule. That era was a pivotal political time for Jerusalem. In 70 A.D. the city was sieged by the Roman Empire, and then it was rebuilt as the Roman colony of Aelia Capitolina.

Magness said the theater is associated with the period during which the city was steeped in Roman control and built as a pagan city that payed homage to the Roman god Jupiter.

"We have found some forums that [Roman Emperor] Hadrian built in the city. Until now, we haven't found theaters," she said.

#### ABANDONED PROJECT

While archaeologists have some idea about the structure's intended purpose, they also believe it was likely abandoned before it was ever used. That's because some stones show marks where workers carved where they intended to cut, but never did, and some staircases in the arena were never hewn.

Magness noted that the Roman Emperor Hadrian banished the Jewish people from living in Aelia Capitolina. The IAA says the theater may have been unfinished because resources were diverted to suppress the Bar Kokhba Revolt, during which time the Jewish people attempted an uprising.

The IAA plans to continue excavating the site to find physical evidence of written Jewish history in the region, a move that has at times ignited controversy with Palestinian groups that also claim these holy sites.

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**Please visit the site: <https://news.nationalgeographic.com/2017/10/ancient-roman-theater-discovery-jerusalem-video-spd/>**